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Early Grade Writing Assessment

A report on development of an instrument



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Early Grade Writing Assessment

A report of development of an instrument

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All Figures and Tables were created by the author based on the collected data within the framework of the project on development of Early Grade Writing Assessment, except for Table 5. The present annexes were also developed by the author within the framework of the EGWA project.

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Abbreviations

ADHD	Attention deficit hyperactivity disorder
ANOVA	Analyses of variance
APA	American Psychiatric Association
BTS	Bartlett test of sphericity
CEIP	Colegio de Educación Infantil y Primaria (in Spanish) (Public kindergarten and primary school)
CUE	Centre for Universal Education
CVC	Consonant–vowel–consonant
CCV	Consonant–consonant–vowel
CVCV	Consonant–vowel–consonant–vowel
DEAP&NT	Learning Disabilities, Psycholinguistics and New Technologies Team
EFA	Education for All
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
EGWA	Early Grade Writing Assessment
FTI	[Education for All] Fast-Track Initiative
GEQAF	General Education System Quality Analysis/Diagnosis Framework
GPC	Grapheme–phoneme correspondence
GPE	Global Partnership for Education
GPI	Gender Parity Index
IARLD	International Academy for Research in Learning Disabilities
ICC	Intra-class correlation coefficient
IEA	International Association for the Evaluation of Educational Achievement
KMO	Kaiser–Meyer–Olkin measure of sampling adequacy
LD	Learning disabilities
LDA	Linear discriminant analysis
LDW	Learning Disabilities Worldwide
LLECE	Latin American Laboratory for Assessment of the Quality of Education
MANOVA	Multivariate analyses of variance
MDG	Millennium Development Goal
MICINN	Ministry of Science and Innovation (Spain)
NAEP	National Assessment of Educational Progress
NELP	National Early Literacy Panel
NER	Net enrolment ratio
NGO	Non-governmental organization

OECD	Organisation for Economic Co-operation and Development
OREALC	UNESCO Regional Office for Latin America and Caribbean
PASEC	Programme d'Analyse du Système Éducatif de la CONFEMEN
PCR	Primary completion rate
PGC	Phoneme-grapheme correspondence
PIRLS	Progress in International Reading Literacy Studies
PISA	Programme for International Student Assessment
READ	Russia Education Aid for Development
RTI	Research Triangle Institute
SATS	Standard Assessment Tasks and Tests
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SESN	Specific Educational Support Needs
TEVET	Test Estandarizado para la Evaluación Inicial de la Escritura con Teclado (Spanish Digital Writing Test)
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute for Statistics
ULL	Universidad de La Laguna
ULPGC	Universidad de Las Palmas de Gran Canaria
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN	United Nations
USAID	United States Agency for International Development
WLD	Writing learning disabilities

Glossary of terms

Alphabet knowledge:	Knowledge of the names and sounds associated with printed letters.
Allograph:	Each of two or more alternative forms of a letter of an alphabet or other grapheme, for example the capital, lower case, italic, and various handwritten forms of a letter.
Ceiling effect:	A statistical term indicating that high scores are bunched with a small range of variability. If a test is set to assess knowledge in a subject and everyone gets the maximum score of 10, there is a ceiling effect (if everyone gets 0, it is described as a floor effect).
Correct word sequence:	An index of the frequency of two adjacent, correctly spelled words, acceptable within the context of the phrase to a native speaker (that is, two adjacent words that are syntactically correct, grammatically correct, and they are correctly spelled, capitalized and punctuated).
Compositional fluency:	The total number of words written in a period of time.
Compositional spelling:	The percentage of correctly spelled words in a composition.
Consonant cluster:	A group of two consecutive consonants in the initial position in a syllable (such as ‘tr’ in the Spanish word <i>tren</i>).
Cursive handwriting style:	Any writing style with the basic characteristic that letters are written at an inclined angle and all letters in a word are joined together.
Decoding:	See Alphabet knowledge.
Digraph:	A group of consecutive letters whose phonetic value is a single sound. In Spanish, digraphs that correspond to sounds not represented by a single letter are ‘ch’, ‘ll’, ‘qu’, ‘gu’ (before ‘e’ or ‘i’) and ‘rr’. Some digraphs are graphemes (see Grapheme).
Fluency:	The ability to carry out the motor movements required for handwriting smoothly, easily, comfortable and readily.
Formative assessment:	Assessment conducted throughout the educational process to enhance student learning. It implies eliciting evidence about learning to close the gap between current and desired

performance, providing feedback to students, and involving students in the assessment and learning process.

Global structure:	An index of the extent to which children can infer the causal relationships between events in a story, as opposed to simply describing a series of pictures.
Grapheme:	The smallest unit of a writing system. A grapheme is a letter or group of letters that represents a phoneme (see Phoneme). Several graphemes may represent a single phoneme (see Digraph).
Handwriting speed:	The number of legible letters written correctly per minute.
Handwriting legibility:	The ease with which the writer can discern the handwriting on the page, which is directly related to how well formed the letters are.
Invented spelling:	A system that uses sound–symbol relations but not necessarily orthographic rules to write words (such as ‘TB’ for table).
Manuscript (or printscript) handwriting style:	A writing style consisting of unjoined, almost vertical letters. Manuscript strokes are separately formed using circles and straight lines. Gradually, this manuscript style develops into cursive writing, or joined letters (see Cursive handwriting style).
Morpheme:	The smallest linguistic unit with meaning. A morpheme is different from a word because words can be composed of one or more morphemes (for instance, the Spanish word <i>mar</i> comprises one morpheme, while the word <i>contradicción</i> contains three morphemes, contra-dic-ción), and not all morphemes can stand alone and form a word. Morphemes that can make a word by themselves (such as <i>mar</i>) are called <i>free morphemes</i> , while those that only appear as part of a larger word are <i>bound morphemes</i> . For instance, ‘niñ’ and ‘o’ are two morphemes making up the Spanish word <i>niño</i> , but neither is in itself a word. The same is true of niñ+a = <i>niña</i> ; niñ+ite = <i>niñita</i> , and so on.
Onset:	The initial part of a syllable preceding its vowel nucleus, which can be formed of one or two consonants (such as g- or gr in Spanish).

Opaque orthography:	A writing system in which there is a high irregularity in phonological correspondences, because they also represent morphological units. An example is English.
Phonemes:	Speech sounds that distinguish between different words in a language. For example, the sounds / p / and / b / are phonemes of Spanish because there are words such as <i>pala</i> and <i>bala</i> which have different meanings and whose pronunciation differs only in relation to these two sounds.
Phonological awareness:	The ability to detect, manipulate or analyse the auditory aspects of spoken language (including the ability to distinguish or segment words, syllables and phonemes) independent of meaning.
Pseudoword:	A unit of speech or text that respects the phonotactic restrictions of a language, but is not part of the lexicon.
Rapid automatic naming:	The ability to rapidly name a sequence of random letters or digits, pictures or colours.
Spelling:	The ability to use sound–symbol relations and orthographic rules to write words using conventional spelling.
Shallow orthography:	A writing system where there is a high degree of consistency of the correspondences between graphemes and phonemes: that is, each phoneme corresponds to a unique and specific grapheme. Among the languages that have shallow systems are Spanish, German and Italian.
Writing or writing name:	The ability to write letters in isolation on request or to write one's own name.
Written latency:	The time between the presentation of a given stimulus and the occurrence of the first contact of the pen with the digitizer tablet.
Writing duration/ intervals duration:	The total time needed to produce a given segment of writing and the time between the productions of two different segments, respectively.
T-units:	A single clause which consists of a subject and a predicate.

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Executive Summary

This report presents main outcomes of a project on assessment of writing skills in early grades of primary school (EGWA), implemented by UNESCO in collaboration with Professor Juan E. Jiménez and his team from the Universidad de La Laguna in the Canary Islands, Spain, with the support of the Russian Federation. It provides findings of a literature review on early literacy development from a cognitive sciences perspective and a model instrument developed to assess writing skills in the Spanish language, as well as an account of how this instrument had been developed.

Literacy is an integral part of knowledge, skills and competences required in our knowledge-oriented society. While our skills to read, understand, analyze and produce written text and digital materials associated to varying contexts can be continuously developed throughout our lives, acquisition of basic literacy skills, possibly at an early stage of life, is critically important as a foundation of our lives, work and further learning. Writing skills, together with reading and mathematics, are an essential part of basic literacy skills. During the past decade, however, such skills have been less measured, compared to reading skills and mathematics. It was this concern and a related recommendation made in 2009 by an UNESCO-led International Working Group on Assessing and Improving Quality Learning that laid the ground for this project. Several years later, today, however, the need for better gauge of writing skills still exists, for which this report is expected to make a contribution.

The main target audience of the report is those who are concerned with a global learning crisis, where some 617 million children and adolescents worldwide – 56 per cent of children of primary school age and 61 per cent of adolescents of lower secondary school age – are not achieving minimum proficiency levels in reading and mathematics. It is especially for teachers, curriculum developers, assessment experts, and other types of practitioners, who are keen to improve their understandings of children's writing skills and teaching and learning practice in early grades of primary education. Due to its formative nature, the main purpose of this EGWA is not for the comparative and bench-marking purposes, while EGWA has the potential to enrich policy dialogue.

This project benefited from accumulated knowledge through a literature review and peer reviews conducted by a number of experts in related fields, including those who have worked on early grade reading assessment (EGRA).

The structure of the report is as follows.

Chapter 1 - Introduction: explains some background, locating this project in global education agendas and providing some rationale for this work on early grade writing assessment.

Chapter 2 - Conceptual framework and research foundations: examines existing knowledge regarding early literacy development and related issues, providing a conceptual foundation for developing an instrument for early grade writing assessment (EGWA). Starting with the early precursor skills that impacts on later literacy learning, it first

explores issues related to a writing process and learning to write, the state of writing skills in some developed countries, written systems and language, as well as the relationships between reading and writing in English and Spanish. It then explains a developmental model of writing adapted (Berninger and Amtmann, 2003) which has the following three components, related to working memory: 1) transcription (handwriting, keyboarding and spelling); 2) executive functions (supervisory attention, planning, reviewing, revising, strategies for self-monitoring and regulations); and 3) text generation (words, sentences, discourse). In this model, the transcription process, which enables a writer to translate internal language into external written system, is the first to develop for mastering of both fluency and accuracy in handwriting, as well as a thorough knowledge of spelling. Both the transcription processes and executive processes that follow the former, support text generation to turn ideas into appropriate language. The report first elaborates the transcription processes, touching upon issues such as handwriting legibility and speed, spelling acquisition, which are of fundamental importance in the early stages of writing. It then look into text generation, illustrating major phases of development from forming individual letters and spelling words to constructing phrases, sentences, paragraphs and stories. This Chapter also analyzes key issues in teaching of writing skills. Finally, the Chapter explores writing assessment, stating that both an output and a process of writing should be assessed in order to help children become better writers ultimately.

Chapter 3 - Expert Meeting on Formative Writing Assessment in Early Grades of Primary Education: provides a record of the Expert Meeting held in Canary Islands held in 2012.

Following the completion of the literature review and the development of the draft instrument of EGWA, the Expert Meeting was organized jointly by UNESCO and the Universidad de La Laguna in Spain, to review these drafts and define possible next steps. The main outcomes of the meeting were: 1) constructive and useful comments provided by the experts for finalizing the drafts; 2) an agreement reached on an immediate next step, namely the piloting of the EGWA instrument in the Canary Islands with around 800 primary school children; and 3) recommendations on potential future action to build on this project on EGWA, including exploring possible adaption of EGWA into non-formal learning settings and a possibility of coordinating items of EGWA and EGRA.

Chapter 4 - Early Grade Writing Assessment (EGWA): provides the details of the instrument, including description of tasks, administration and scoring procedures for each of the ten tasks, ranging from copying letters to story writing. The first four tasks consist of copying (copying letters, copying words and copying a sentence). The next four tasks consist of dictating activities (writing down dictated words and pseudowords, and dictated sentences). Tasks 9 and 10 are free-writing tasks (writing sentences and writing a story). A child is prompted to copy or write each letter, word or sentence exactly as it is shown in the test protocol or dictated by the evaluator.

Chapter 5 - EGWA Pilot Study in the Canary Islands: presents how the EGWA instrument was piloted and its results. The Chapter starts with the study design. As a sampling strategy, probability sampling was selected to involve 1,653 pupils in the first, second and third grades from twelve primary schools randomly selected in the Canary Islands. It also describes the procedure of EGWA administration. Managed by the Canary Islands Department of Education in coordination with the twelve schools, the EGWA was

administered individually by trained university students from the Educational Psychology Department at the Universidad de La Laguna over three sessions (thirty minutes per session). This Chapter then presents results of the assessment in light of four main components of writing which were measured by EGWA: handwriting fluency; spelling; sentence production; and text production. 1) handwriting fluency is measured by the number of letters written correctly per minute in alphabet copying and letters written correctly per minute in allograph selection; 2) spelling is measured by the number of words spelled correctly in word and sentence dictation tasks and the number of pseudowords with correct graphical representation of the sounds in the pseudoword dictation task; 3) sentence production is measured by the number of words written, the number of words spelled correctly and spacing between words; and 4) text production is measured by the number of written words, the number of words with correct spelling, word sequence, and global structure. The results show the reliability of the EGWA measures, EGWA's inter-rater reliability, its concurrent and predictive validity, and its ability to make multiple comparison of performance between grades. It also concludes that the standardization of writing assessment for the early grades (Grade 1, 2, and 3) is possible. Finally, the Chapter also explains how EGWA's preliminary results have been disseminated and the short version of EGWA has been piloted with teachers.

Chapter 6 - Using EGWA: implications for policy dialogue: illustrates areas where EGWA can make a difference. Recognizing the weak link between policy and research, it states that the knowledge and insights generated through writing skills assessments could inform not only teaching and learning practice in school but also policy dialogue. It then suggests possible ways of strengthening this link, notably improved communication between policy-makers and researchers, and involving policy-makers and other stakeholders in joint research activities. It also reflects on experiences of early grade reading assessment (EGRA) which has generated interest of policy-makers and officials. Learning from EGRA's experiences would help make the appropriate and wise use of EGWA in the future. Finally, the Chapter suggests multiple ways of using EGWA in school for improving the effectiveness of pedagogy, teaching and curriculum, as well as better accountability and resource allocation.

Annexes – include both short and full version of EGWA, standardized norms for EGWA tasks and a study on 'Teaching of writing skills in the Canary Islands'.

Early Grade Writing Assessment

1. Introduction

1.1 Learning outcomes in the global education agenda

Global education agendas and learning outcomes

The international community committed to ‘Transforming our world: the 2030 Agenda for Sustainable Development’ in 2015 for the betterment of humanity and our planet. This 2030 agenda sets the plan to address the seventeen Sustainable Development Goals (SDGs), including the SDG 4 to ‘ensure inclusive and quality education for all and promote lifelong learning’. Underpinned by a humanistic and holistic vision of education that transforms the lives of individuals, communities and societies, the 2030 global agenda for education builds on the previous internationally agreed goals, notably the Education for All movement and the Millennium Development Goals (MDGs).

Literacy is a vital element for this global agenda and its corresponding SDG4. Reading, understanding, analyzing and producing written text and digital materials are increasingly part of daily life. While literacy skills are acquired, used and advanced throughout our lives in family and social environments, building a solid foundation, possibly at an early stage of our lives, is critical not only for the further advancement of basic literacy skills but also for the acquisition of broader knowledge, skills, values and attitudes required in the contemporary world.

It is these basic literacy skills, particularly writing skills, on which this report focuses. This report presents the main outcomes of a project on the assessment of writing skills in early grades of primary school (EGWA), implemented by UNESCO in collaboration with Professor Juan E. Jiménez and his team from the Universidad de La Laguna in the Canary Islands, Spain, with the support of the Russian Federation. It provides findings of a literature review on early skills development, describes an instrument of EGWA developed in Spanish through this project, and provides an account of how this instrument had been developed. Although the project was implemented in the pre-SDG4 era, its results could be a useful contribution to ongoing global efforts to improve assessments for the enhancement of the quality of education and learning. This EGWA instrument, together with other assessments, is highly pertinent today, especially in the following senses described below.

Firstly, the SDG4 reaffirmed the vital importance of basic literacy skills – reading, writing and computing for all. As the data released by the UNESCO Institute for Statistics brings to our attention, however, that our world is still home to 263 million out-of-school children and adolescents, including 63 million of primary school age, 61 million of lower secondary age and 139 million of upper secondary age (UIS, 2018). Some 617 million children and adolescents worldwide – 56 per cent of children of primary school age and 61 per cent of adolescents of lower secondary school age – are not achieving minimum proficiency levels

in reading and mathematics (UIS, 2017c). If no additional measures are taken, these children and adolescents will be part of the slow-shrinking adult illiterate populations, which is currently estimated to be at least 750 million (UIS, 2017b). Behind this project, therefore, lies the strong concern about the need to build the solid basic literacy skills in both developing and developed countries.

Secondly, the report's focus on writing skills reminds us of the critical importance of a holistic approach to literacy development, encompassing reading, writing and arithmetic skills that are closely interlinked. As the literature review shows, in the past few decades, systematic research on the writing process and assessments has been conducted less than that on reading and arithmetic skills. The report explains that both reading and writing skills rely on common knowledge and cognitive processes and that improving writing skills can make positive impacts on children's reading, more so than vice-versa. Better knowledge about writing thus helps promote holistic and effective development of the foundational skills.

Thirdly, the EGWA instrument developed will be a valuable contribution to global efforts for improving measurement of learning outcomes, within and beyond, monitoring the SDG4. The Education 2030 Framework for Action, a guiding document to implement the Incheon Declaration adopted at the World Education Forum in May 2015 and the SDG4, clearly states that global efforts towards 2030 will focus on 'access, equity and inclusion, quality and learning outcomes, within a lifelong learning approach' (UNESCO, 2016b). This version of EGWA can be taken forward, together with other instruments, for its optimal adaption, taking into consideration specificity of a surrounding environment and the orthographic and linguistic contexts. Because of its essentially formative nature as other assessments at early grade, this EGWA is principally intended to improve teaching and learning practice by providing a better gauge of writing skills and to inform policy debates. Its use for a summative purpose may be limited due to its restricted comparability, including cross-language comparability and bench-marking capacity.

Fourthly, the knowledge and insights generated through this project from a cognitive sciences perspective can be useful for those who are engaged in enhancing the quality of education. Generating ideas, translating them into a written text and revising it, for instance, requires coordination of a variety of elements and processes, including 'lexical knowledge and retrieval, phonological and semantic coding, use of syntactic structures, self-monitoring, and ortho-motor skills'. Adapting a writing development model, this report states that in the early stages of writing development, a transcription process that involves both handwriting/typing and spelling, is fundamental, through which ideas are translated into a written text.

The main outcomes and insights obtained through this project, which was funded by the Russian Federation and implemented by UNESCO in collaboration with the Universidad de La Laguna in the Canary Islands in Spain, were a significant contribution to global efforts towards improving children's basic literacy skills. Their relevance and importance is even higher today when millions of children are still denied their rights to basic education. The following parts of the Introduction provide a brief account of the background and rationale of this project.

Background

During the EFA and MDG era (2000-2015), the quality of education had become a more important priority at the national, regional and global levels, especially in developing countries. To monitor the progress towards the six EFA goals and the MDGs, sets of indicators were defined, including the net enrolment ratio (NER), the Gender Parity Index (GPI) and the primary completion rate (PCR), by UNESCO, the Global Partnership for Education (GPE) (former EFA Fast-Track Initiative, FTI) and other organizations as well as countries and individual experts. While these indicators are valuable and have had a positive impact on collective efforts in moving forward towards the realization of universal primary education, they are not comprehensive enough to have a full picture, and indicators to measure the *quality* of learning, including learning outcomes and processes that lead to such outcomes, remain far more elusive.

Increasing awareness of the insufficient quality of learning and its monitoring led to the recognition of the need for additional quality learning outcome indicators that provide deeper insights into learning, but nonetheless remain relatively easy to handle in order to mobilize further the attention and the political will of governments, civil society, non-governmental organizations (NGOs), international and regional organizations, private technical assistance providers and experts.

This need has been addressed on many occasions at different levels, including the EFA-FTI Partners Meeting (Cairo, 2006), following which the EFA-FTI Quality of Learning Outcomes Task Team was established in 2007 under the leadership of the Russian Federation. In collaboration with several major international and bilateral organizations, UNESCO also responded to the increasing concern about the quality of education by establishing the Learning Counts initiative in 2008. As one of the initiative's activities and at the request of the EFA-FTI Quality of Learning Outcomes Task Team, UNESCO undertook a comprehensive desk review (UNESCO, 2009) of 1) international and regional approaches to conceptualizing quality education; 2) major international and regional assessments of quality, including assessments of learning outcomes; and 3) perceptions of quality-related factors and indicators in EFA-FTI country plans. It also convened an International Seminar on Assessing and Improving Quality Education for All (Paris, 28–30 October 2008), bringing together a group of leading international experts to act as a forum for open exchange of ideas and experiences on how quality learning is conceptualized, implemented, measured and enhanced in different countries, especially those with resource constraints.

The 2008 Learning Counts seminar led to the establishment of an International Working Group on Assessing and Improving Quality Learning, under the leadership of UNESCO, in order to 1) reach a consensus on common core indicators of quality education, and 2) address the broader dimensions of quality issues, including the identification of enabling conditions for quality learning. Composed mostly of leading international experts in the area of learning outcomes and quality education, the International Working Group represented the first concrete expression of interest on the part of the international community to create indicators for education quality to. It also demonstrated a considerable growth of interest in this area. The International Working Group decided to

adopt a pragmatic approach, and to concentrate on quality indicators of literacy and numeracy as a first step.

Subsequently, UNESCO launched several other initiatives to improve the quality of learning and measurements. For instance, UNESCO, in collaboration with countries and other partners, has developed a General Education System Quality Analysis/Diagnosis Framework (GEQAF), a generic and comprehensive framework for monitoring and improving the quality of basic education. A systemic and holistic tool provided by the framework is meant to help countries diagnose their education systems to improve the quality of education. Some other examples include conceptualisation of the quality of education by the UNESCO Regional Office for Latin America and the Caribbean (UNESCO-OREALC, 2008) in Santiago, Chile, and the Learning Metrics Task Force, co-convened by UNESCO through its Institute for Statistics (UIS) and the Brookings Institution, which aimed to improve the learning outcomes of all children and young people. The UNESCO-OREALC seeks to contribute to the reflection on the quality of student learning in an area not studied so far by its Latin American Laboratory for the Evaluation of the Quality of Education: writing. In 2010, OREALC-LLECE published the study of the Second Regional Comparative and Explanatory Study (SERCE) on the ability of children to write texts in Latin America and the Caribbean , which completes a series of reports designed to assist those who make educational policy decisions, design curricula and recommend pedagogical practices.

1.2 Formative assessment in early grades

At its meeting held in Paris on 5 and 6 March 2009, the International Working Group made several recommendations on education quality indicators. Some of them referred to the measurement of learning outcomes and the use of learning outcomes data as indicators of quality. They recommended that countries 1) ‘improve the assessment of learning outcomes in key skills at the end of the primary cycle. These assessments would ideally be widely reported, have a relatively summative nature, could be sample-based, and would lead to policy decisions’; and 2) ‘improve their assessments earlier in the cycle (grade 2 or 3), but with a more formative, instruction-oriented purpose, and with less interest in international reporting and internationally comparable data’ (UNESCO, 2009).

The first recommendation, which was related to the EFA goal 6 on quality of education, is extremely important now for attaining the SDG4 Target 4.1 to achieve universal completion of free, equitable and quality primary and secondary education, which leads to relevant and effective learning outcomes.

A range of activities have been undertaken to this effect by UNESCO and other partners, including curricular reviews and international and regional assessments such as the Organisation for Economic Co-Operation and Development’s (OECD’s) Programme for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS), the International Association for the Evaluation of Educational Achievement’s Progress in International Reading Literacy Studies (PIRLS), the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ), le Programme d’Analyse du Système Éducatif de la CONFEMEN (Conference of the Ministers of Education

of French speaking countries) (PASEC), the Latin American Laboratory for Assessment of the Quality of Education (LLECE), and the Russia Education Aid for Development (READ) Trust Fund programme of the World Bank.

The second recommendation made by the International Working Group, related to more formative measurement in the early grades, was perceived innovative and in line with global trends in the measurement of skills in the early stage of the learning cycle. For example, various development partners such as the World Bank and the United States Agency for International Development (USAID) have contributed to the development of instruments such as the Early Grade Reading Assessment (EGRA) (RTI International, 2009), which uses oral measurement to assess early reading (and in some case pre-reading) skills. This tool has been used in various countries, including South Africa, the Gambia, Kenya and Liberia, to drive policy dialogue around the issue of quality of education, and specifically to drive experiments in improving reading instruction in the early grades. Also developed is an instrument for early-grade mathematics assessment (EGMA), which has been piloted in Kenya with satisfactory results. Moreover, the results framework of the GPE (the former EFA-FTI) has included an indicator on ‘the proportion of children who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text’ as one of its key performance indicators (GPE, 2013). All this responds to the need to measure skills at the early stage of the learning cycle.

The International Working Group, therefore, also recommended that tools to measure writing abilities be developed along with guidelines for assessing writing skills in the early grades. These tools would be helpful for policy-makers, providing small national samples, while they would also be useful for teachers in monitoring learning and obtaining fast feedback on their performance.

1.3 Formative assessment of writing in early grades

The task of assessing writing ability is no less important than the task of assessing reading and mathematics. Writing assessment can be performed for different purposes, such as for ‘diagnostic evaluation’ in order to help teachers plan instruction, ‘screening assessment’ to help identify children who are at risk of academic failure and in need of additional writing instruction, ‘progress monitoring’ to help determine whether children are making adequate progress or need more intervention to achieve grade-level writing outcomes, and ‘outcome assessment’ to offer information on the effectiveness of the writing programme in relation to established performance levels. Assessment is key for decision-making at the policy level as well, specifically regarding how to allocate resources more efficiently to improve quality and reduce inequality in education. Policy-makers and administrators need information on the overall performance of the education system (diagnostics), the existing gaps between schools and student subpopulations (screening), the progress being made by schools or school districts with the resources available (monitoring) and the impact of government-mandated and alternative programmes (outcome evaluation) so that they can make decisions.

Writing assessment, therefore, should be used formatively to improve learning and teaching. An example of formative assessment is a classroom-based writing assessment:

Such formative assessment allows teachers to gauge the effectiveness of their instructional practices, modify instruction as needed, and provide students with feedback on writing strengths and areas in need of further development. These assessments can be administered in a variety of ways in the classroom, including teachers assessing students' writing, students assessing their own writing, and peers assessing others' writing (Graham, Harris and Hebert, 2011, p.5).

These authors have identified best practices in writing assessment that enhance children's writing, and also best practices for assessing writing in the classroom. All of these recommendations are presented in their book, *Informing Writing*, and all of them are based on strong empirical evidence. Regarding the use of formative writing assessment to enhance children's writing, the best practices identified have been that writing improves when teachers and peers provide children with feedback about the effectiveness of their writing; when children are taught to evaluate the effectiveness of their own writing; and when teachers monitor children's progress on an ongoing basis. Regarding best practices for assessing writing in the classroom, writing improves when children are assessed in the format with which they are most experienced (pen/pencil and paper, or word processing); when teachers judge the quality of child writing and do not allow factors such as handwriting or computer printing to bias their judgement; when teachers do not allow their knowledge of who wrote a paper to influence their judgement; when teachers score papers randomly rather than allowing a previous paper's score to influence their judgement; when teachers assess children's writing in a variety of genres; and when teachers use procedures for ensuring that particular aspects of writing, such as quality and its basic attributes, are measured reliably.

Writing, however, is inherently more difficult to assess than reading, as it is a more 'productive' than 'receptive' activity. In addition, the difficulty in producing summative results also derives from dealing with early grades. For these reasons, it may be difficult to produce summative or highly comparable policy-relevant results across a whole country. Nonetheless, the International Working Group on Assessing and Improving Quality Learning recommended that it is important to round out the three key skills, and to provide at least formative, classroom-based protocols for assessing writing development. Accordingly, UNESCO started to work on writing assessment, adopting a working method similar to the one successfully used in the development of other basic, formative, early-grades tools for reading and mathematics. This method consists of several steps for developing a practical but rigorous and research-based measurement tool for writing skills, based on the curriculum-based measure approach. (The process is laid out step by step in Table 1). The main aspects of these measures that make them useful are that they can provide information that is immediately actionable at the classroom level, that they are often based on measures whose direct relationship to the skill being measured is fairly obvious, and that they can be marked fairly easily.

Table 1 The working method adopted

Step	Target
1	- Conduct a study on writing assessment in early grades (EGWA), including a review of the literature, school curriculum, and making recommendations for developing an instrument. - Develop an instrument for EGWA based on the recommendations
2	Carry out an expert review of the study and an initial draft instrument by convening a scientific panel with several world-leading experts who are rigorous researchers with peer-reviewed publications in significant journals, and are experienced clinicians or practitioners, with considerable and recent experience and interest in working at school level, or at least with school-level data. The scientific panel aims to come up with concrete, actionable recommendations for improving the instrument and also for its field-testing or piloting.
3	The initial drafters improve the instrument in line with the panel's recommendations.
4	Conduct a pilot study in at least one country, with about 15–20 schools and about 200 children in each grade (for grades 1–3) in each country.
5	Reassess the instrument through analysis of the data and preparation of a report on the pilot study.
6	Expert panel consultation to finalize and approve the recommendations.
7	Disseminate results and recommendations for consideration by country experts who might apply them in their systems. These country implementations should be monitored, assessed and reported on to further validate the recommendations.

Source: Author (Jiménez)

Table 2 Summary of the main activities and timing

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1. First draft recommendations		X						
- Literature review		X						
- Draft recommendations		X						
2. Expert group meeting								
- Identification of experts								
- Meeting in the Canary Islands								
3. Final draft recommendations			X	X				
- Adding expert panel inputs to the draft recommendations			X					
- Final draft recommendations								
4. Piloting the recommendations				X				
- Identification of volunteer countries			X					
- Pilot-testing			X					
- Reassess the instrument through analysis of the data and preparation of a report on the pilot				X				
5. Second expert group meeting					X		X	
- Expert panel consultation to finalize and approve the recommendations					X			
- Final recommendations							X	
6. Adoption of the recommendations						X		X
- Seminar with Member States to discuss/adapt/adopt the recommendations						X		
- Identification of priority countries to apply the recommendations								X
7. Technical support						X		X
- Provide technical support in the application of the recommendations to Member States								

Source: Author (Jiménez)

It is also important to note that the overall aim is to produce not a single assessment instrument, but a ‘model’ or ‘prototypical’ assessment instrument that can be adapted in any given country setting. The production of guidelines on how to adapt the instrument was also an integral part of the EGWA to be in an accompanying toolkit or user’s guide (see Annex H).

1.4 Measuring learning outcomes: development of the Early Grade Writing Assessment (EGWA)

The Early Grade Writing Assessment (EGWA) was conceived as a simple instrument that could report on the foundation levels of child learning, including assessment of the first steps children take in learning to write: writing the alphabet, writing words, writing sentences, and writing a story. Development of EGWA began when UNESCO commissioned Professor Juan E. Jiménez from the Universidad de La Laguna (Canary Islands, Spain), who adapted the EGRA to Spanish, to develop an instrument for writing assessment in early grades (EGWA).

The main objective was to help UNESCO partner countries begin the process of measuring, in a systematic way, how well children in the early grades of primary school are acquiring writing skills. This can then help them improve existing processes, and ultimately spur more effective efforts to improve performance in this core learning skill.

Based on a literature review and existing writing tools and assessments, a model instrument for an individual assessment of children's foundational writing skills was developed. The intent of the EGWA is to document learners' basic writing skills, mapped in composing units of increasing complexity (letters, words, sentences and stories). It started with an interest in developing a tool for writing assessment based on analytic scoring procedures that demonstrate adequate technical features for screening and progress monitoring.

The first draft of EGWA contained ten tasks, ranging in difficulty from copying letters to story-writing. The first four tasks consist essentially of copying: that is, copying letters, copying words, copying sentences, and writing out the alphabet in order from memory. The next four tasks consist of dictated activities (writing down dictated words, pseudowords and dictated sentences). Tasks 9 and 10 are free-writing tasks (writing sentences and writing a story). The child is prompted to copy or write each letter, word or sentence exactly as it is shown in the test protocol or dictated by the evaluator. Table 3 outlines the tasks, and identifies what learning each one seeks to measure.

Table 3 Description of EGWA tasks and targets before the piloting study

Task	Target
1. Write out the alphabet in order from memory	To identify whether the child is able to reproduce all the letters of the alphabet from memory.
2. Alphabet copying and allograph selection	Two purposes: 1) to see whether the child has acquired the motor patterns for writing letters, and 2) to see whether the child is able to identify the allograph (the lower-case letter) that matches each capital letter.

3. Word copying

To determine whether the child has acquired the motor patterns needed for writing words. In addition to visuo-motor skills these tasks may require orthographic coding, vocabulary, grammatical and other skills.

4. Sentence copying

To determine whether the child has acquired the motor patterns needed for writing sentences. In addition to visuo-motor skills, these tasks may require orthographic coding, vocabulary, grammatical and other skills.

5. Writing dictated words with inconsistent spelling

Some words, in some languages, are spelled in ways that do not correspond in any simple way to their spoken form. If children are able to write such words correctly, this indicates that they have memorized the word and remember its orthographic representation. The assumption here is that children have learned to associate the written representation with the spoken word and its meaning, but not necessarily to break the word down into phonemes (sound units) or graphemes (writing units). Therefore, we expect to know the child makes use of the direct or the lexical route.

6. Writing words that conform to spelling rules from dictation

Once children have memorized spelling rules, they should be able to apply them to new words. The aim here is to check whether the child has achieved this.

7. Writing pseudowords from dictation

A pseudoword is a form (a unit of speech or text) that, from its phonological construction, might be perceived as a word in the relevant language, but is actually not part of the lexicon (for example, 'sutapola' in Spanish). Pseudowords follow the rules of spelling-to-sound correspondence, so if children can identify the phonemes in the word, and match these to the corresponding graphemes, they should be able to guess at the pseudoword's 'correct' spelling. If children make many more mistakes in writing pseudowords than in writing common real words, it suggests they are having difficulties in using the phonological route.

8. Writing sentence from dictation	To identify whether children are able to write down a sentence that is read out to them.
9. Writing an independently composed sentence	To identify whether children are able to write down a sentence that they have composed for themselves. This task assesses the ability of the child to convert oral language into written language.
10. Writing a story	Children need to move beyond single words and sentences and learn how to deal with text. Therefore, the aim of this task is to assess whether the child has acquired a narrative writing ability. Narrative structure has well-defined components that children begin to understand from an early age: for example, a beginning, an event, an outcome of that event.

Source: Author (Jiménez)

The draft tool was then presented and discussed during the Expert Meeting on Formative Writing Assessment in Early Grades of Primary Education (Canary Islands, 19–20 January 2012). Based on the experts' comments, the draft was revised to be pilot-tested in primary schools in the Canary Islands in Spain. This report will present main outcomes obtained at each step of the project, as well as the final tool for EGWA.

2. Conceptual framework and research foundations

2.1 Early literacy development

Children vary greatly in their attainment of the early precursor skills that provide the launching pad for later literacy learning. But what are the skills and abilities of young children that predict later reading, writing or spelling outcomes? The US National Early Literacy Panel (NELP) report (National Institute of Literacy, 2008) represents a systematic and extensive synthesis of the published research literature concerning children's early literacy skills. It provides educators and policy-makers with important information about the early skills that are implicated in later literacy learning.

The panel set out first to establish which early skills or abilities could properly be said to be the precursors of later literacy achievement. Across three different outcome domains – decoding, reading comprehension and spelling – a consistent collection of predictor variables emerged that possess moderate to strong relationships with these important outcomes. On one hand, the panel defined conventional literacy skill in the receptive and expressive domains, which provide a symmetric classification for decoding or encoding print. Receptive skills include the ability to decode print, which has such outcomes as decoding words, decoding nonwords, decoding fluency and measures of reading comprehension. Expressive skills include spelling and composition. On the other hand, the panel established early skills or abilities that could properly be said to be the precursors of later literacy achievement, such as alphabet knowledge, phonological awareness, rapid automatic naming, writing words or writing their name, phonological memory, concepts about print, print knowledge, reading readiness, oral language and visual processing. All of these variables or precursors are usually more predictive of literacy achievement at the end of kindergarten or beginning of first grade than of later literacy growth. The meta-analysis provides results for two receptive conventional literacy skills (decoding and reading comprehension) and one expressive conventional literacy skill (spelling). Overall, the panel concluded that:

There is a strong evidence for the importance of knowledge of letter names or letter sounds, phonological awareness, and rapid naming tasks, 'writing or writing name', and phonological short-term memory (STM) as predictors of later reading and writing skills. Less consistent evidence exists for the importance of oral language and concepts about print as predictors of later reading and writing skills, mainly because these variables do not always continue to predict literacy outcomes once other variables, such as knowledge of letter names or letter sounds or phonological awareness, are controlled. There was weak evidence for the importance of visual perception skills as a predictor of later reading and writing skills, because a moderate relationship emerged for only one outcome variable and because it did not continue to predict literacy outcomes once other variables, such as knowledge of letter names or letter sounds or phonological awareness, are controlled (National Early Literacy Panel, 2008, p. 78).

2.2 Learning to write

Learning to write is an issue that worries parents, teachers, children and researchers. The World Health Organization (WHO) (2001) recently included writing difficulties as one of the problems considered to constitute an impediment to school participation, a significant

element in the normal developmental process of the child. Writing is an essential activity that enables children to express their knowledge and thoughts, and to participate in most types of academic activity (Berninger, 1994). Writing is not a simple activity because it involves a multiplicity of processes, and children have to invest much time in learning and developing this rather complex skill. The transformation from idea to orthographic representation involves conceptual, linguistic and motor processes.

The activity begins with a planning stage, in which writers organize the ideas and concepts they want to communicate. This stage is very complex, because writers have to devote most of their time to making decisions (Gould and Boies, 1978). The next stage involves linguistic processes that transform the abstract ideas into propositions. Here syntactic and lexical processes are critical. First, the writer organizes the grammatical structures that will allow them to convey their message. These general grammatical structures are empty of meaning. The writer is selecting a frame, not specific words to be used; therefore this phase then gives way to the lexical process, of selecting the right words to fill the frame that has been constructed. In choosing words, writers are effectively selecting the corresponding graphemes to give them particular linguistic form. The process culminates in the writing itself, which involves fine motor processes. Inadequate handwriting can affect many areas of life, resulting in a loss of self-confidence, and may have serious consequences for career prospects and even personal relationships. In fact, a series of studies have indicated that difficulties with handwriting in the early years might be used as a predictor of more general learning difficulties later on (Harvey and Henderson, 1997).

Systematic research on the writing process has lagged behind, compared to analysis of reading processes, which is clearly reflected in the results of bibliometric studies. Recently, however, the body of knowledge on the writing process has gradually been strengthened. As suggested by Brown and Ellis (1994), the proportion of scientific papers published on writing processes has been increasing over recent years. For example, in the 1970s for every fifteen articles about the reading, one was about writing. But since the 1990s, for every seven articles published on reading, there has been one about writing. Many authors agree that one of the most important contributions, which is considered responsible for bringing about this new trend, was the publication in the 1980s of Uta Frith's *Cognitive Processes in Spelling*. This was the first handbook with input from researchers who were using the tools and methods of cognitive psychology to study the normal development of writing, and learning disabilities (LD) in this specific academic domain.

Overall, the increased volume of research on the writing process in recent years has been influenced by (Brown and Ellis, 1994):

- the incorporation of new methodological techniques that allow study of the cognitive processes involved in the activity of writing in a similar way to how they have been studied for reading processes
- the demand for applied research to develop new teaching methods

- theoretical interest in the relationship between reading and writing processes, and a growing realization that we cannot understand the processes of reading without reference to how we develop the ability to write, and vice versa.

Proficiency levels in writing across countries

The recent findings of various studies conducted across different countries justify further research into learning to write as a specific area of the school curriculum. Many published national reports have revealed a high proportion of children who do not meet the required proficiency levels in writing. For example, in Spain, in 2001, the National Institute for Quality and Evaluation (INCE) released the results of the evaluation of the 1999-2000 Primary and Secondary Education Assessment¹. In both cases of the assessment, the performance of children in writing was not only below expectations, but also reflected significant deficiencies in classroom instruction and training. In Spain, a General Diagnostic Assessment Report 2009 released by the Spanish Ministry of Education also revealed levels of basic skills in the fourth year of primary education.² This also showed a worrying situation in Spain, especially for language skills.

The United States National Assessment of Educational Progress 2002 also reported that high proportions of children did not meet proficiency levels in writing. It found that 72 per cent of grade 4, 69 per cent of grade 8, and 77 per cent of grade 12 children were performing below the designated level (National Center for Education Statistics, 2003). In the United Kingdom, Beard and Burrell reported that:

over the past 10 years the writing of primary schoolchildren in England has been the focus of national concern. The concerns are focused on the general ‘under-attainment’ of children in writing compared with their attainment in reading. Each year large numbers of primary schoolchildren are not attaining the ‘national expectation’ benchmark for writing for 11-year-olds set by national curriculum tests. Although 86% of pupils now attain the benchmark in reading, only 67% reach it in writing (Beard and Burrell, 2010, p. 77).

There is also considerable concern in the United Kingdom about boys' underachievement in writing (United Kingdom Literacy Association/Primary National Strategy, 2004). A significant proportion (approximately 10 to 20 per cent) of school-aged children has been reported to suffer from writing difficulties (Smits-Engelsman et al., 1996). It has been reported that the prevalence of handwriting difficulties among school-age children varies between 10 and 34 per cent (Rubin and Henderson, 1982; Smits-Engelsman, van Galen and Michels, 1995; Smits-Engelsman, Niemeijer and Van Galen, 2001).

Handwriting difficulties are especially prevalent among children diagnosed with developmental coordination disorder (DSM-5, American Psychiatric Association [APA], 2013) and LD (Waber and Bernstein, 1994), and those not diagnosed with a specific condition, but described as clumsy by their teachers (Laszlo, 1990; Laszlo et al., 1988).

Some national surveys based on teacher estimates in the United States have estimated that between 12 and 20 per cent of school-age children experience handwriting difficulties

¹ www.ince.mec.es

² www.institutodeevaluacion.educacion.es/

(Graham and Weintraub, 1996), and other estimates have been as high as 44 per cent (Alston, 1985). According to findings from the latest National Assessment of Educational Progress (NAEP; Salahu-Din et al., 2008), only 33 per cent of grade 8 children and 24 per cent of grade 12 children performed at or above the ‘proficient’ level in writing.

Another relevant issue is related to the aspects of writing, on which teachers focus in different countries. In many countries handwriting education focuses primarily on producing well-formed, joined-up handwriting, while speed of handwriting and handwriting fluency or even automaticity are neglected. For example, the attainment target for writing at level 4 (intended for 11-year-olds) in the National Curriculum for England is that ‘Handwriting style is fluent, joined and legible’, but no mention is made of speed (Medwell and Wray, 2007).

Medwell and Wray (2007) pointed out that handwriting is statutorily assessed as part of the Standard Assessment Tasks and Tests (SATs) for English. These same authors have criticized the focus in national testing in England on neatness of handwriting, and the neglect of handwriting speed. The assessment is made on a sample of handwriting produced during a composition assessment, and is a product analysis. Fluency is taken to mean evidence of the effective joining-up of letters, and speed of writing is not included in the assessment. The authors concluded that the assessment is of handwriting style, and not of efficiency.

Written systems and languages

Alphabetical written language systems vary widely in the consistency of correspondence between graphemes and phonemes. According to Wydell and Butterworth (1999), any orthography can be described on two dimensions: the transparency of print-to-sound translation, and the size of the smallest orthographic unit that represents sound (in other words, granularity). In a continuum for the predictability of grapheme–phoneme relationships, at one extreme are languages (such as Serbo-Croat, Spanish and Finnish) with a high degree of orthographic transparency, in which the mapping between graphemes and phonemes is largely consistent; at the other extreme are languages (such as English) with an opaque orthography, in which there are many ways of sounding out graphemes, and many of the correspondences cannot be predicted from context-dependent grapheme–phoneme rules.

Orthography–phonology (reading) mapping

Spanish has a shallow and fine-grained orthography. The Spanish orthography has twenty-four graphemes (five vowels and nineteen consonants) which represent a unique sound. Therefore, the process of translating print to sound is never ambiguous because each letter of the alphabet has a unique pronunciation, except for the letters ‘c’, ‘g’ and ‘r’. (For example, ‘c’ is pronounced as /k/ when followed by the vowels ‘a’, ‘o’ and ‘u’, and as /θ/ or /s/ [depending on the region] when followed by the vowels ‘e’ and ‘i’. The letter ‘g’ is pronounced as /g/ when followed by the vowels ‘a’, ‘o’ and ‘u’, and as /x/ when followed by the vowels ‘e’ and ‘i’. And ‘r’ is pronounced as /ɾ/ when it appears at the beginning of the

word or when it is preceded by the letters ‘l’, ‘n’ and ‘s’, or as /r/ in the middle of a word or at the end of a word.) Moreover, phonological errors can result from a misapplication of stress mark rules (such as pronouncing *melón* as ‘mélon’). Some Spanish words must have an acute stress mark (‘) on the last, second to last, or third to last vowel.

Phonology–orthography (spelling) mapping

Many languages with alphabetic orthographies vary in the level of regularity between grapheme–phoneme correspondences (GPC, used to read) and phoneme–grapheme correspondences (PGC, used to spell). GPC in French are much more regular than in English, but there are significant differences between GPC and PGC in French. French GPC are clearly more regular than French PGC; however French PGC are not as irregular as English PGC (see for statistics on GPC and PGC in English and French, Peereman and Content, 1998; for statistics on GPC and PGC in French, Peereman, Lété et al., 2007; Peereman, Sprenger-Charolles et al., 2013). Italian is quite consistent in both directions; English has considerable inconsistency in both directions. Spanish orthography shows a significant asymmetry between spelling and reading transparency. For example, the orthography–phonology (reading) mapping can be more reliable than the mapping for phonology to orthography (spelling). Some phonemes can be represented by more than one grapheme, and some graphemes can represent more than one phoneme (the inconsistent graphemes were mentioned above). In this sense, it has been suggested that Spanish is shallower in the GPC direction than in the PGC direction.

In Spanish, there are inconsistent phoneme–grapheme relationships because a phoneme can be represented by several graphemes, but there is no phonological rule that specifies the appropriate grapheme for the correct word spelling. For example, the phoneme /ʎ/ can be transcribed as ‘y’ or ‘ll’ (in words such as *pollo* [chicken] and *poyo* [windowsill]), and both are pronounced /poʎo/; the phoneme /b/ can be represented by ‘v’, ‘b’ or ‘w’ (as in *vaca* [cow] and *baca* [roof rack], both pronounced /baka/); and the phoneme /x/ accompanied by /e/ or /i/ can be represented as ‘g’ or ‘j’ (as in *genio/Jerusalen* [genius/Jerusalem]; *jirafa/jilguero* [giraffe/goldfinch]). Hence, simple phonological representation is not enough to enable people to spell correctly words containing these sounds.

On the other hand, the representation of a consonantal phoneme depends on the sound of the accompanying vowel. This happens with the phonemes /x/, /g/ and /k/. So, for instance, when the phoneme /k/ is followed by the vowels /a/, /o/, /u/, it is spelled as ‘c’ (as in *cama* [bed] /kama/), and if it is followed by /e/, /i/, it is spelled as ‘qu’ (as for *quemadura* [burn] /kemadura/). When the phoneme /g/ is followed by /a/, /o/ or /u/, it is spelled with a ‘g’ (for example, *goma* [rubber] /goma/), and if it is followed by /e/, /i/, it is spelled with ‘gu’ (as in *gueto* [ghetto]). Also, the representation of the phoneme depends on its position in the word. For example, /r/ is spelled as ‘r’ when it appears at the beginning of the word and ‘rr’ in the inter-vowel position (as in *risa* [laughter] and *carro* [cart]). This is also true of /n/, which is only spelled ‘m’ when it comes before /p/ and /b/ (as for *sombrero* [hat] /sombrero/).

In some cases the correspondence is 1:2: that is, a phoneme is represented by a grapheme formed by two letters. For instance, the Spanish digraphs (two-letter graphemes) are GU (/g/) as in *guitarra* [guitar], RR (/r/) *perro* [dog], QU /k/ *queso* [cheese], LL (/ʎ/) *llave* [key] and CH (/ʃ/) *chozo* [hut].

Finally, there are silent letters in Spanish. For example, a written ‘h’ is sometimes not pronounced, so in these instances it has no corresponding phoneme.

Other languages such as English and French also show orthographies characterized by highly inconsistent relationships. For instance, the vowel sound /i/ is spelled in many different ways, as is apparent from English words such as *eel*, *tea*, *theme*, *thief*, *people* and *me*. There are many irregular and some almost arbitrarily spelled words in English (such as *pint* and *yacht*) and (but to a lesser extent) in French (such as *monsieur* and *femme*), because for GPC, the number of irregular words is low in French. The GPC in *fraise* is regular, but not the PGC. Indeed, ‘ai’ is almost always pronounced /E/ (with two exceptions: *nous faisons* [we do] and *faisan* [pheasant]); ‘s’ in an intervocalic position is almost always /z/ (with very few exceptions: there is one in the pluri-morphemic word *parasol*); ‘f’ is almost always /f/ (with very few exceptions: ‘f’ is silent in *clef*, which can also be written *clé*). Alternatively, there are different graphemes for the phoneme /E/, the most frequent being ‘e’ and è/é (for the phonemes /f/ and /s/ the most frequent graphemes are those used in *fraise*).

These linguistic differences between alphabetical written language systems have an influence on the prevalence of reading and spelling disabilities. For instance, Wydell and Butterworth (1999) suggested that orthographies with fine granularity and opaque print-to-sound translation would have a high incidence of phonological dyslexia. In contrast, orthographies with fine granularity and shallow print-to-sound translation (such as Serbo-Croat, Spanish and Finnish) would have a low incidence of phonological dyslexia. The fact that there are phonemes that have more than a graphical representation makes spelling certain words correctly a difficult task for many children. Therefore, linguistic differences with respect to phoneme-grapheme consistency are responsible for the ease with which children in shallow orthographies, in comparison to opaque orthographies, learn to spell (Wimmer and Landerl, 1997). Nevertheless, more cross-linguistic research is necessary because the study of spelling has been dominated by studies of one kind of writing system, the alphabetic, and one orthography, English (Perfetti, 1997).

2.3 Writing to read

Does writing have an impact on reading? There are two advantages of writing identified in the Graham and Herbert (2010, 2011) review: first, teaching writing had a positive impact on how well children read, and second, increasing how much children wrote improved their ability to read text.

There are three theoretical perspectives in understanding the possible impact of writing on reading (Fitzgerald and Shanahan, 2000; Tierney and Shanahan, 1991). First, the functional view of reading-writing connections postulates that writing should facilitate

comprehension. The main premise is that writing provides children with a tool for visibly and permanently recording, connecting, analysing, personalizing and manipulating key ideas in a text. Second, in the shared knowledge view of reading-writing connections, reading and writing are not identical skills, but both rely on common knowledge and processes. Third, the rhetorical relations view of reading-writing connections postulates that the process of composing text should enhance one's skills at comprehending text. Graham and Hebert (2011) conducted a meta-analysis of the impact of writing and writing instruction on reading. They examined the robustness of each of these theoretical viewpoints about the impact of writing on reading in grades 1–12. These authors made a number of predictions based on the three theoretical views of reading-writing connections: that is, they anticipated that writing about reading would enhance children' comprehension of text, that writing instruction would improve children' reading skills, and that increasing how much children wrote would improve their reading.

Regarding the first prediction, the meta-analysis showed that, first, having children in grades 2–12 write about material they read enhanced their comprehension of it, for both normally achieving readers or writers, and those with difficulties. This finding applied across both expository and narrative texts, and across subject areas (language, arts, science and social studies). Four types of writing activities were found to be effective: extended writing, summary writing, note-taking and answering/generating questions. For the second prediction, the authors found that teaching writing has a positive effect on reading. In addition, multicomponent writing instruction resulted in improved reading comprehension for normally achieving readers and writers in grades 4–12. Finally, increasing how much children write has also a positive effect on how well normally achieving children in grades 1–6 read.

However, to date the research on the relationship between reading and writing has been done in English, with its opaque orthography. The findings will not necessarily also apply to a language such as Spanish which is more regular and consistent (Berninger, Vaughan et al., 2002; Eisterhold, 1991; Shanahan and Lomax, 1986, 1988). In a shallow orthography like Spanish the impact of writing on reading would be greater than the reverse. One possible explanation is that in a language with opaque orthography, the learning process relies more on visual-orthographic processes than on phonological processes. In other words, children acquire knowledge of spelling patterns through reading which they then use to advance their ability to represent words orthographically through writing. Both reading and writing at the lexical level demand a greater involvement of visual-orthographic processes in orthography, since there is no regularity between spelling patterns and phonological patterns. In contrast, in a shallow orthography like Spanish where there is greater regularity, the learning process demands a greater involvement of phonological processes than of visual-orthographic processes.

For the English language, Shanahan and Lomax (1986) conducted a study comparing and evaluating three models of the relationship between reading and writing as a function of school grade. All the models included only reading and writing variables: these were skills related to word recognition and reading comprehension, spelling, syntax, vocabulary, and narrative writing. The results showed that the interactive model had the highest goodness of fit of the three. Nevertheless, the reading-to-writing model was superior to the writing-

to-reading model and the authors suggested that it happened because children used information from reading more in writing than vice versa. One possible explanation for this result might be that the children were not given as many opportunities to write. It is possible that there might be different results in an instructional context with more emphasis on writing.

Jiménez, García and colleagues (accepted for publication) tested a model explaining the relationship between reading and writing in Spanish-speaking students in the Canary Islands, Mexico, Chile and Guatemala. The study sample included a total of 2,450 children. The authors analysed the relationship between reading and writing using three models: 1) a model of reading to writing, which posits that reading has a direct influence on writing; 2) a model of writing to read, which posits that writing influences reading; and 3) an interactive model, which postulates that both skills reciprocally influence each other.

The three models were evaluated by a structural analysis of covariance in different age levels, to determine the relationship between the skills and to suggest whether pedagogical practices should be continued or changed during the period of primary education. The assessment of reading competence included four components or latent variables: word reading time, pseudoword reading time, syntactic processing and reading comprehension. Assessment of writing also included four latent variables: word production, pseudoword production, syntactic production and narrative writing. In addition, the model included other language, cognitive and metacognitive variables which are of great importance and influential for both reading and writing: these are alphabetical knowledge, speech perception and phonological awareness.

The third of the proposed models is an interactive model. The components of the model are the same as in the two previously proposed models. This model proposes, broadly, that there is interplay between reading and writing.

In this study, the structural equation modeling revealed that all models appear to fit the data well. However, SEM analysis revealed a minor value for BIC, AIC, and RMSEA indexes for the interactive model. These findings are very similar to those found for English. Therefore, these findings would suggest that the differences between the orthographic systems would not appear to modulate the relationships between reading and writing, and that the flow of information between reading and writing may be of a more universal nature based in the alphabetic systems.

2.4 What does the construct of writing include?

Writing involves several major activities, including generating and organizing ideas, translating those ideas into written form, and revising the written product (Hayes and Flower, 1980). These activities require the coordination of a variety of processes, including lexical knowledge and retrieval, phonological and semantic coding, use of syntactic structures, self-monitoring, and ortho-motor skills (McMaster and Espin, 2007).

Handwriting performance, as a subset of writing in general, is influenced by the demands of the writing task. Composing tasks, such as writing a story or describing an event, are presumably more demanding than copying tasks, because the child must carry out a

number of other mental operations, such as planning what to say, figuring out the correct spelling for a word, and thinking about how to construct a sentence. Furthermore, writing the alphabet in order from memory should be more demanding than copying, because it requires drawing information from long-term memory (the sequence of letters) rather than reproducing letter forms from a model. It should not be as demanding as composing, which requires not only productions of letter forms but also conventional spelling, vocabulary choice, construction of sentences, and the creation of coherent, novel text and discourse structures.

Developmental models of writing, like the Simple View of Writing (Juel, 1988; Juel, Griffith, & Gough, 1986), and the ‘Not-So-Simple View of Writing’ (Berninger & Winn, 2006), highlight the role of transcription skills (i.e., handwriting/typing and spelling) in the development of early written text production. This conceptual framework states that in the early stages of writing development, transcription processes are foundational and both handwriting and spelling are the basis from which the writer can translate the ideas into written text. A modification of the simple view of writing, given by Berninger and Amtmann (2003).

According to this model, transcription processes are the first to develop. They provide the foundation for writing, as they directly allow the writer to convert ideas and language into a written form on the page. Transcription development refers to the growth of a fluent and accurate form of handwriting and a thorough knowledge of spelling. The executive processes develop after transcription, and move from being externally regulated to self-regulated. Both executive processes and transcription processes support text generation, where ideas are turned into appropriate language. What follows will provide more detailed explanation about two main components, namely transcription and text generation.

Transcription

The first component, *transcription*, incorporates both handwriting (letter production) and spelling (word production) as tools needed for transcribing oral language into written text. This theoretical foundation has been supported by factor analyses indicating that handwriting and spelling use separate but correlated factors (Berninger, 2000).

Transcription is a basic cognitive process in writing that enables the writer to translate internal language into external written symbols to express ideas in written language. Transcription ability may be especially important in beginning and developing writing in the primary school years. Thus, the ‘simple view of writing’ model predicts that if children are slow or inaccurate at transcription (for instance, they have slow handwriting and poor spelling), then the overall quality of their compositions will suffer, as they will have to devote more resources to this area than the others. In addition, transcription ability has been found to uniquely predict composing length and quality in developing writers (Berninger, Abbott et al., 2009).

Nevertheless, now that computers are widely available both at home and at school, letter production is not achieved solely through handwriting, and typing on a keyboard has become a widely used mode of transcription (Berninger et al., 2009).

During the last two decades, research with beginning writers of the English language has been accumulating evidence about the impact of transcription on written expression during early and middle childhood (Berninger & Swanson, 1994) and in adults as well (Hayes & Chenoverth, 2006). However, English is usually regarded as one of the most complex of all alphabetic writing systems (Share, 2008). More recently, some researchers have argued that the mechanisms of transcription could differ qualitatively between orthographical systems (Babayigit & Stainthorp, 2010, 2011).

Since most of the current empirical evidence on transcription comes from English, a language with deep orthography, it is very relevant to investigate the contribution of transcription and its specific components to the production of written texts by speakers of Spanish, a language with a shallow and fine-grained orthography (Jiménez, Rodríguez, & Ramírez, 2012).

Jiménez and Hernández-Cabrera (submitted for publication) used structural equation modeling to test the contribution of transcription and its specific components to these Spanish pupils' written text production. They tested models of writing development by pen and by keyboard to analyze the contribution of transcription as a higher-order factor and its specific components (i.e., handwriting/typing and spelling) to text production (i.e., writing fluency and narrative writing). They found that handwriting fluency and spelling contributed directly to the overall fit of the writing by pen transcription mode in the primary grades. According to these results, they concluded that in the primary grades, both handwriting and spelling contributed to the prediction of writing fluency. However, the path from handwriting fluency to narrative writing was non-existent; this was not the case for the spelling component. They also concluded that in keyboard transcription mode, both skills (i.e., typing and spelling) contributed to the prediction of writing fluency in the primary grades.

Handwriting

Handwriting is a complex human activity that entails an intricate blend of cognitive, kinaesthetic and perceptual-motor components (Reisman, 1993). Handwriting is often regarded as a low-level skill which is easily mastered at early primary levels. According to Van Galen's model, handwriting production is the result of a series of processing stages organized in a hierarchical manner. The higher-order processing levels – activation of intentions, semantic retrieval and syntactic construction – deal with the more abstract aspects of linguistic production, and are common to the production of other linguistic tasks such as speech. Writing and speech processes differ at the spelling module, which stores the orthographic representations that code information on the spelling of words, and is at the interface between the high- and low-level modules. The low-level modules that van Galen called 'motor modules' are involved in processing allograph selection, size control and muscular adjustment.

There is now a growing body of research suggesting that handwriting is critical to the generation of creative and well-structured written text, and has an impact not only on fluency but also on the quality of composing (Berninger and Swanson, 1994; Graham, Berninger et al., 1997).

A review of research undertaken over the last two decades (e.g. Berninger, 1994; Berninger and Graham, 1998; Berninger, Abbott et al., 2006) has investigated the role of handwriting in writing. It has been established that handwriting is far from a purely motor act, and orthographic and memory processes (the ability to recall letter shapes) contribute more to handwriting than do motor skills. Therefore, the role of orthographic–motor integration and automaticity in handwriting is now seen as of key importance in composing.

Orthographic–motor integration refers to the way in which orthographic knowledge is integrated with the motor demands of handwriting in order to produce letters and words. In other words, it is the ability to call to mind and write letter shapes, groups of letters and words efficiently and effectively, without allocation of cognitive attention. A lack of automaticity in orthographic–motor integration means that writers do not have sufficient cognitive resources to accomplish the more demanding aspects of text production, such as ideation, text monitoring and pragmatic awareness. Therefore, this lack of automaticity can seriously hamper the ability of young children to express ideas in text (Berninger and Swanson, 1994; Graham, 1990). Thus, in order to write letters, words and sentences, children need to integrate motor skills and orthographic information.

Also, working memory is conceived as a limited information-processing resource that enables the integration and coordination of the multiple components of writing. If young writers have to devote large amounts of working memory to the control of lower-level processes such as handwriting, they may have little working memory capacity left for higher-level processes such as the generation of ideas, vocabulary selection, monitoring the progress of mental plans and revising text against these plans. In fact, transcription and working memory skills are closely related to both writing fluency and writing quality among primary school children (Berninger, Yates et al., 1992). Furthermore, as transcription skills become more automated with increasing age, the effect of transcription skills on writing declines, while that of working memory remains relatively stable across time (Berninger, Yates et al., 1992). Several studies have also found handwriting fluency to play a more central role in composition writing than spelling accuracy, further underscoring the importance of automaticity of transcription skills (e.g. Graham, Berninger et al., 1997). In sum, the quality of handwriting has a significant effect on the writing and academic performance of school-age children, a finding that reinforces the importance of identifying handwriting difficulties as early as possible. Competence in handwriting is usually described in terms of legibility and speed (Graham, 1986; Graham and Weintraub, 1996).

Handwriting: legibility

An essential ingredient in the development of handwriting competence is learning how to write correctly the letters of the alphabet. Some letters of the alphabet are more difficult to master than others, as letters differ in the number, direction and types of stroke.

Various studies have produced a growing list of attributes that contribute significantly to the prediction of text legibility: letter legibility, neatness, letter formation, uniformity of slant, size of letters, compactness of space in and between words, steadiness of letter and word alignment, lightness and darkness of print, and type of script. Researchers have also considered the variables of writer characteristics (such as gender), type of assignment, and characteristics of the examiner (Rosenblum et al., 2003b).

Research on handwriting legibility has focused primarily on children in grades 2–6 (Graham et al., 2001b). Elements of handwriting that may contribute most to overall legibility include spacing between words, spacing between letters in words, alignment, letter size, slant, and errors in letter formation (Graham and Weintraub, 1996). Some research reported that the legibility of the handwriting of children improved at each of these grade levels (Hamstra-Bletz and Blote, 1993; Mojett, 1991; Ziviani and Elkins, 1984), particularly in grades 3 and 4. However, other studies did not find a relationship between handwriting legibility and grade (Graham et al., 2001b; Maeland and Karlisdottir, 1991; Sovik and Arntzen, 1991; Tarnopol and Feldman, 1987). Graham (1986) has suggested that this discrepancy reflects differences in how handwriting has been assessed across different studies. So, for instance, whereas some studies used a holistic measure of legibility to assess handwriting (e.g. Graham et al., 2001a), others focused on more specific components of legibility such as letter formation, alignment, size and smoothness.

Let me put emphasis here on two different studies with direct implications for handwriting assessment. Some recent research has focused on testing a model of the mechanisms that contribute to handwriting legibility. For instance, Graham, Struck and colleagues (2006) evaluated the following production model for the legibility of the handwriting of young children:

In a first stage students access the motor program for a selected letter (motor program stage), and then they decide where to place the letter on the page (visual spatial arrangement parameter setting stage). Then they set the parameters for executing the motor program (letter production parameter setting stage). If accessing the motor program contributes to differences in handwriting legibility among young children, then frequency of handwriting errors that reflect corrupted or incomplete motor programs (e.g., letters with added strokes and letters with missing strokes) will predict whether children are good or poor handwriters. If visual spatial parameter setting influences handwriting legibility, then measures that assess the alignment of letters on the page as well as spacing between letters within a word should also add to the prediction of handwriting status beyond the contribution of the handwriting errors reflective of motor programs alone. Finally, if letter production parameter setting plays a role in handwriting legibility, then measures of letter size should improve the prediction of handwriting legibility beyond the first two set of variables alone (Graham, Struck et al., 2006, pp. 45–6).

They tested these predictions for both copying and composing. Overall, they used a coding scheme to evaluate different elements of legibility classified into different dimensions: visual-spatial elements (spacing between words and between letters within words), alignment (letter placement on lines), letter height and slant, and letterform errors (reversals, added strokes, missing strokes and missing letters). They were interested in knowing how the handwriting of more and less legible writers differed during the early primary grades. There were statistically significant differences between good and poor hand writers in all but one of the areas (slant) that were assessed. The researchers concluded that early differences between more and less legible hand writers occur because of variations in processing at the motor programme level, planning on where to place the letter, and setting parameters for executing the motor programme.

Another study with implications for handwriting assessment focused on children in grades 1–3 who were asked to write the letters of the alphabet from memory (Graham, Weintraub et al., 2001). Each letter produced on the alphabet-writing task was scored on seven criteria: the legibility of lowercase manuscript letters, and whether each written

letter included all expected parts, was correctly formed, was correctly proportioned, contained no line breaks, included no additional lines or strokes, and contained no reversals or rotated parts. The researchers also examined whether each of these formation characteristics, a measure of alphabet fluency (time spent writing the alphabet), and three child characteristics (grade, gender and right or left handedness) contributed to the predictions of children's skills in writing manuscript letters legibly.

Three variables (no rotations, correct formation, and all parts) made a significant and unique contribution to the prediction of letter legibility after all of the other formation characteristics, grade, gender, handedness and alphabet fluency, were controlled for. This means that when assessing the legibility of a manuscript letter, it may be especially useful to determine whether letter parts are rotated or reversed, all parts are present, and each part is correctly formed. Each of these formation characteristics made a significant and unique contribution to the prediction of letter legibility.

A small number of letters – between four and eight at each grade level – accounted for 50 per cent or more of all illegibilities. The problem letters were 'q', 'z', 'g', 'u', 'n', 'k', 'j' and 'y' in grade 1; 'q', 'u', 'z' and 'a' in grade 2; and 'q', 'j', 'z', 't' and 'y' in grade 3. The researchers noted that five of these eight letters ('q', 'g', 'k', 'j' and 'y') had been among the seven letters identified as most difficult in a study by Lewis and Lewis (1964). Two of the four letters ('u' and 't') that were found most difficult for primary grade children in Stennett and colleagues' (1972) study also proved difficult for the children in their investigation. Perhaps the explanation why there was not greater overlap involves the methods used to collect samples of manuscript letter writing. In the prior studies children copied the letters of the alphabet but not from memory.

Handwriting: speed

The terms 'fluency' and 'automaticity' refer to a general distinction between two broad classes of processes:

On the one hand, there are automatic processes that are executed rapidly and with minimal conscious effort. On the other hand, controlled processes have been described as effort demanding. Handwriting is a task that at first requires attentional control but becomes automatic with increasing practice (Sassoon, 1993) (Tucha et al., 2008, p. 145).

When handwriting becomes automated, cognitive resources are freed up. These resources can be used for higher-level processes such as the generation of ideas or vocabulary selection (Berninger and Swanson, 1994).

Recent studies have shown that while handwriting plays an important role in the learning of written composition, writing speed explains a more significant proportion of the variance in written composition (Graham, Berninger et al., 1997). Graham, Berninger and colleagues (2001b) pointed out that is surprising only a total of four studies since the 1980s have focused attention on handwriting speed (number of letters written per minute) at two or more grade levels. The variability in their results was significant, primarily because of several uncontrolled variables, such as failure to exclude children with special needs, the level of educational support, and right or left handedness.

Graham and Weintraub (1996) suggested a number of ways in which the mechanical demands of handwriting might interfere with the higher-order processes involved in composing text. First, when letter production is not fully automatic, the act of handwriting makes increased demands on memory and attentional resources, and this constrains the higher-level cognitive processes required for composition. That is, if children's handwriting is very slow, they might not be able to keep up with their thoughts and ideas, so that they forget them before they get them down on paper. Second, switching attention from planning to handwriting may affect the coherence and complexity of the product. Children who experience difficulty in the orthographic–motor demands of writing letters and words are likely to have difficulty expressing their ideas in the form of written text. Many studies have demonstrated that low-level developmental skills, as well as component skills such as handwriting and spelling, may provide a critical foundation in the early stages of writing that influences the degree to which a child subsequently develops higher-level composition skills (Jones and Christensen, 1999). These same authors found that in grade 1, approximately 67 per cent of the variance in story-writing scores was accounted for by speed and accuracy in writing letters. Therefore, they concluded that for children in the early years, the orthographic skills involved in handwriting have a significant effect on their ability to generate written text.

Graham and Harris (2000) reviewed the evidence on the role of handwriting in children's development as writers. They found that handwriting skills, particularly handwriting fluency (the amount of text that can be copied correctly per minute), improve with age and schooling, and that individual differences in handwriting fluency predict how much and how well children write.

Graham, Berninger and colleagues (2001*b*) found that children's handwriting speed typically increased from one grade to the next, but the relationship between grade and speed was not linear. For grades 1–4, the pace of development was relatively constant for boys and girls, averaging thirteen to sixteen letters per minute increase at each grade. Between grades 4 and 5, however, the rate of development slowed; boys and girls averaged an increase of only nine and ten letters per minute, respectively.

Handwriting: is there relationship between speed and legibility?

Overall, researchers have found little association between legibility and speed (Graham and Berninger, 1998; Rubin and Henderson, 1982; Sovik and Arntzen, 1991; Weintraub and Graham, 1997). So, for instance, Graham and Berninger (1998) found that speed and legibility did not follow a parallel course of development. They suggested that handwriting speed is of little value in predicting legibility, and there is a trade-off between these two skills when children consciously attempt to speed writing up or write more neatly. This means that when children were directed to write quickly, there was a corresponding decline in legibility. By contrast, when the children were asked to write neatly, the speed of their handwriting decreased. Also, the results obtained by Parush and colleagues (2010) suggest that handwriting speed and overall legibility are separate constructs, and that different components underlie writing during copying and dictation.

Spelling

Writing down from dictation involves both central processes concerned with retrieving, assembling and selecting an orthographic representation (which we can call *spelling*) and peripheral processes concerned with the output and execution of orthographic codes: that is, rendering the previous orthographic representation as marks on a surface (which we can call *writing*) (Delattre et al., 2006). In learning to write, one of the processes of greatest concern to educators is precisely what issues are related to spelling ability. The presence of difficulties with spelling may affect writing of various forms (Jiménez and Muñetón-Ayala, 2002). For example, a word that is spelled incorrectly may hinder the reader's understanding of the written message. Misspelling may also influence the perception of teachers about the child's proficiency as a writer, and the assessment of quality is largely determined by the presence of spelling errors (Marshall and Powers, 1969). Orthographic knowledge also influences the processes of syntactic construction and planning of writing, because if we pay close attention to how to spell a word, we forget the ideas that we are organizing and planning in our working memory (Graham, Harris et al., 2002).

It should be noted here that the research to date into lexical processes occurring in writing has been dominated by a dual model or dual route, rather than connectionist models (Bullinaria, 1994). The dual-route model of spelling production (e.g. Ellis, 1982; Ellis and Young, 1996) considers a lexical system that comprises the auditory analysis system, the auditory input lexicon, the semantic system, the speech output lexicon, the graphemic output lexicon, the grapheme level, the allograph level, and graphic motor patterns. This dual-route model proposes that there are at least two different systems accessed when writing to dictation, which operate in parallel. One is a lexical route that retrieves spellings of known words from a memory store of word-specific knowledge, and the second is a nonlexical (or assembled) route that generates spelling using a process of sublexical sound-to-spelling conversion.

The dual route model centres on the idea that to spell a word you can either attend to the phonemes that form the word (the route used to write unfamiliar words, regular or pseudowords) or retrieve the spelling from memory (for writing familiar words and those with arbitrary rather than rule-based spelling) (Ellis, 1982; Hatfield and Patterson, 1983). In addition to these linguistic systems, there is a cognitive component called the *graphemic buffer*, which is defined as a temporary working memory store of abstract letters or graphemes prior to their conversion into concrete letter shapes or letter names (Caramazza et al., 1987). The graphemic buffer and the more peripheral or motor components of writing or oral spelling are also referred to as non-linguistic aspects of these tasks.

Evidence in favour of this view comes from the literature about acquired spelling troubles. People with brain damage have been described as who have lost the lexical procedure but not the phonological one. These *surface dysgraphic* individuals show a severe impairment in spelling irregular words, but a reasonably good ability to spell regular words and pseudowords. *Phonological dysgraphic* individuals show the opposite pattern of disorders. They have severe difficulty manipulating phonological units, as attested to by their poor performance on pseudoword spelling, but a preserved capacity to spell frequent, even

irregular, words. Evidence for the dissociation between these two procedures has been also found in developmental disorders. For example, Boder (1973) proposed a taxonomy including *dysphonetic* children, who have deficits similar to those of phonological dysgraphics, and *dyseidetic* children, who have deficits similar to surface dysgraphics. The assembled spelling route would be efficient in languages whose orthographies have regular PGC (such as Turkish, Italian and Japanese Kana) but less effective for English and (to a lesser extent) French, whose orthography is characterized by irregular PGC (for statistics on PGC in English and French, see Peereman and Content, 1998).

This dual route model has found support from research in cognitive neuroscience. There is empirical evidence through neuroimaging techniques that the cognitive mechanisms posited derive from different neural substrata (Norton et al., 2007).

Spelling acquisition

Some researchers have conducted reviews of studies on the development of writing, but most of them have focused on the English language (Bourassa and Treiman, 2001; Caravolas, 2004; Treiman and Bourassa, 2000). Most models on the acquisition of writing in this language have established that children go through an initial pre-communicative stage where they still are not able to establish relationships between sounds and letters (at 4–5 years), then a proper alphabetical phase (6–7 years) in which they learn the rules of phoneme-grapheme conversion (PGC), and a spelling stage where they start building directly an orthographic lexicon.

The theories of spelling development maintain that orthographic knowledge does not begin to affect a child's spelling until the child has accumulated a considerable number of words that are recognized by sight. These theorists describe orthographic knowledge as the learning of complex sequences such as the *-ight* of words such as *right*, and learning when to double up consonants in polysyllabic words. However, some authors have suggested that the findings in the English language so far should not be generalized to other languages (Caravolas, 2004; Jiménez and Jiménez, 1999).

As has already been explained, the English language has an opaque orthography. The ratio of phonemes to graphemes is 1.7:1 in English, while in Spanish the ratio is well below 1.5:1 (Caravolas, 2004). In English the phonological strategy is a necessary mechanism, but it is not enough to enable children to spell words properly. Because Spanish has a much more shallow orthography and the PGC are very regular, the spelling strategies could be different in these two languages, and the models developed for English would only partly explain the orthographic learning process in such shallow languages (Sánchez et al., 2009).

As was mentioned above, there is an asymmetry between reading and spelling correspondence in the Spanish language, which adds to the complexity of these issues. Nevertheless, these linguistic differences between English and other languages have led some researchers to investigate whether the same patterns of development are operational in children learning to write more shallow orthographies as are found in English (e.g. in Czech, Caravolas, 2004; in Spanish, Defior and Serrano, 2005; Defior et al., 2009; Jiménez, O'Shanahan et al., 2008; Marin et al., 1999; Sánchez et al., 2009). In this

discussion, we treat Spanish as broadly representative of languages with relatively shallow orthographies.

Defior and colleagues (2009) analysed how Spanish orthographic code complexities influence learning to spell. They administered two spelling dictation tests (a word dictation test and a pseudoword dictation test) to 208 children in grades 1–4. They analysed whether the children were able to write words when a phoneme is represented by a grapheme formed by two letters (the Spanish digraphs are CH, LL, QU, GU and RR), the contextual effect (when the representation of a consonantal phoneme depends on the sound of the accompanying vowel), the position effect (when the representation of the phoneme depends on its position in the word), handling of inconsistency (when words contain a phoneme that may be represented by two or more graphemes without any rule determining the appropriate grapheme), and stress marks. A main finding was that children achieved a high level of spelling proficiency in words in consistent categories – that is, those subject to phonological rules such as digraph, contextual effect and position effect – from a very early age. However, in the inconsistent categories proficiency was achieved much more gradually: children were still not proficient in grade 4. The rules for the use of stress marks stood out as the hardest for children to learn. There was a floor effect in grade 1, when the children hardly used this orthographic mark, and by the end of the fourth grade they had reached no more than 50 per cent of correct responses. In Spain, the explicit teaching of stress mark rules is introduced at the end of grade 2 and dealt with thoroughly in grade 3.

Sánchez and colleagues (2009) have also recently analysed the acquisition of word-spelling strategies in Spanish-speaking children, during the first two years of primary education. They designed two experiments where first and second-grade children were given spelling tests to explore their phonological and orthographic knowledge. In the first, they analysed the influence of word complexity, length and frequency on spelling performance. The prediction was that if children performed better in spelling frequently occurring words than for less frequent ones, they were resorting to lexical knowledge. If the children showed more difficulties with long words and complex words, then it would suggest their phonological skills were not well developed. One error that suggests this problem is omitting letters.

The second experiment evaluated orthographic knowledge, considering the orthographic characteristics of the words. It was intended to compare how children acquire knowledge of the consistent and inconsistent correspondences. The consistent correspondences can be solved using GPC rules (since these involve phonemes that are always represented by the same letter), while words with inconsistent correspondences can only be spelled correctly through lexical knowledge (since the representation of the phoneme depends on the syllabic context).

The first experiment showed that, at the end of the first year, there was no frequency effect but the variables of complexity and length affected the children's performance. At the end of the second year, a frequency effect and a significant interaction between complexity and frequency were found. In the second experiment a significant consistency effect was observed, but there was no frequency effect. The researchers concluded that

phonological strategies are relevant in the beginning of spelling acquisition. However, lexical mechanisms appear later and are acquired gradually.

Finally, Jiménez, O'Shanahan and colleagues (2008) drew on the dual model to predict that from the second cycle of primary education (age 8–9 years) Spanish children would be in a position to acquire a domain of arbitrary spelling (i.e., consistent and arbitrary, not rule-based), and there would be no significant differences between grades after this period of schooling. They also analysed whether the production of spelling errors was associated with the demands of the writing task (so it might be less for a simple task such as taking down dictation than for a demanding one such as essay writing). Therefore, their study focused on spelling development in Spanish children in primary grades. They used a sample of 1,045 children from four schools in the Canary Islands, in grades 2 to 6 (aged between 7 and 12 years).

The researchers administered a standardized writing test which included diverse subtests to assess spelling of words, and set various written composition tasks (writing a story based on vignettes, describing a character, and writing a freely composed story). They calculated the average of correct spellings for each variable and school level, and also analysed the types of misspelling that children made across different writing tasks. They found that children in grade 4 could typically spell common words with inconsistent spelling, whereas fifth-grade children had acquired the ability to spell using rules. When they analysed the misspellings in the dictation tasks, they found that the children confused spelling of the graphemes c, s, z and x. Across different writing tasks, they found that children committed more misspellings with the graphemes b/v, h and c/s/z/x before they finished the fourth primary grade.

In sum, all of these results reflect the fact that Spanish is a language with a relatively transparent orthographic code, as has been reported in cross-linguistic studies, but curiously, the studies found no differences from the English language in the handling of the tasks researched. That is, the analysis of spelling errors has shown that children learning a language with shallow orthography seem to follow the same pattern of development as children learning the more complex English language. The main difference that the researchers found was in the speed with which children acquired the alphabetic code. That is, children acquire spelling skills early in terms of PGC rules, but lexical knowledge develops more slowly. The *orthographic knowledge* has a more gradual development, and shows a significant growth grade by grade after the main increase in the second grade. Children learning English need one to two more years of schooling to reach the same level of accuracy as Spanish or French children (Defior and Serrano, 2005; Goswami et al., 1998; Seymour et al., 2003).

Most of these studies have been carried out with children aged between 4 and 6 years. That is, fewer studies have examined the development of writing during the orthographic stage, although there have been some. In Spain these studies on slightly older children have focused on morphological awareness and mechanical and substantive psychological processes in writing (García and Fidalgo, 2003; García and González, 2006). Morphological knowledge may also play a role in spelling:

a) it allows one to choose among several plausible representations of a given sound;
 b) to spell certain words for which the preservation of regularities at the level of morphemes violates those based on phonemes; and
 c) could also help to represent aspects of the written language that have no phonological counterpart. For instance, morphonological knowledge helps one to decide how to spell the derived word /labandería/ [laundry], choosing between 'lavandería' and 'labandería'. Both sound phonologically the same, but only 'lavandería' is the correct because it has the same root as 'lavar' [to wash]. In this sense, Defior, Alegría, Titos, and Martos (2008) pointed out that children use morphological information to spell Spanish plural nouns and verbs when phonological knowledge is not sufficient to spell them (Defior et al, 2009, p. 57).

Spelling: consonants and vowels

English children in the first grade are consistently reported to have difficulties with the correct spelling of consonant clusters (e.g. Treiman, 1993). This difficulty is attributed to the phonemic segmentation problem inherent in the spelling of consonant clusters. Jiménez and Jiménez (1999) analysed Spanish children's ability to spell syllable-initial consonant clusters from a developmental view. They also studied whether children who fail to spell consonants correctly in clusters at the beginning of words have the same difficulty in analysing the internal structure of the onsets of spoken words. They used a sample of fifty-eight subjects, comprising twenty first-graders, eighteen second-graders and twenty third-graders. The results showed that children had trouble in spelling syllable-initial consonant clusters when they were asked to spell the clusters on their own and when they were asked to judge whether a letter was included in the spelling of a word. Moreover, difficulties in phonemic awareness were associated with difficulties in spelling in younger subjects. However, both normally achieving German children after about nine months of instruction and German children with specific spelling difficulties at the end of grade 2 had no difficulties in the spelling of consonant clusters (Wimmer and Landerl, 1997).

The findings on vowel spelling in German fit well with Treiman's (1993) conclusions about the sources of difficulty in vowel spelling observed among her American first-grade subjects. Treiman found that her participants had more difficulty spelling vowels than spelling consonants, and that this difference was related to both the difference in phoneme-grapheme consistency between consonant and vowels, and the difference in a number of graphemic options which is given to a vowel.

Spelling and reading: are they one and the same?

Spelling and reading have rather different characteristics, as several researchers have pointed out (Frith, 1979; Perfetti, 1997):

- Spelling is more difficult than reading. Reading does not require the degree of knowledge about words that spelling requires;
- Spelling and reading can be completely disassociated. Spelling requires the retrieval rather than the recognition of graphemes. Retrieval processes are subject to error

- because memory representations are low quality, or interference is encountered with competing letter sequences;
- Reading occurs by eye and spelling by ear, which means that spelling is phonologically mediated but reading is not.

Reading by itself will not dramatically improve spelling, because reading does not provide practice in the full orthographic retrieval process demanded by spelling. Children read words more successfully than they spell them, even in a shallow orthography such as Spanish, in which phonology-spelling mapping is very consistent. Jiménez, Naranjo and colleagues (2009) found that among 143 children in grades 1 to 6, twenty-three children could read words they could not spell, but only one child showed the opposite pattern. Therefore, the common pattern is for reading to be better than spelling, with the reversed pattern restricted to readers of low reading skill.

Researching in the French language, Alegría and Mousty (1997) found that reading-disabled children were poorer at lexical spelling than normal young children who read at the same level as the reading disabled children. They suggested that their word identification processes allow these children to read but not to develop an efficient orthographic lexicon. In addition, some longitudinal studies with French children have showed that spelling is more difficult than reading (Sprenger-Charolles and Siegel, 1997; Sprenger-Charolles, Siegel et al., 1998; Sprenger-Charolles, Siegelet et al., 2003).

Is learning to spell an effective way of learning to read?

Most orthographies are more consistent in their letter-to-phoneme relation than in their phoneme-to-letter relation. It is possible that learning about the phoneme-to-letter relation strengthens awareness of the letter-to-phoneme relation. Practice in spelling should help reading more than practice in reading helps spelling.

Experiments with Dutch beginning readers showed that reading is not always effective for learning to spell (Bosman and de Groot, 1992). In other studies, the effectiveness of reading practice for learning to spell was explored for explicit methods of spelling practice: copying (writing down the word into a notebook), problem-naming (practising the ambiguous phonemes), visual dictation (writing down the word after it has been presented for a brief period of time), word composition (making up the word using letter tiles), and oral spelling (spelling the word aloud). All spelling-instruction methods were superior to just reading as a means of learning spelling (see for a review, Bosman and Van Orden, 1997).

In Spanish, Jiménez and Muñetón-Ayala (2010) analysed the effects of computer-assisted practice on reading and spelling in children with learning disabilities. They compared three practice conditions: one with reading and two with spelling, in order to test whether computer-based reading and spelling practice had an influence on the development of reading and spelling ability in children with learning disabilities (LD). They used a sample of eighty-five children with LD, aged between 8 and 10 years, whose spelling performance was two years below grade level. The subjects were randomly assigned to four groups, who were given different tasks: 1) copy the target word from the computer screen ($n = 22$); 2)

memorize the target word and write it from memory ($n = 21$); 3) word reading ($n = 21$); and 4) an untrained control group ($n = 21$). The researchers then measured pseudoword reading, phonological awareness, and phonological word decoding and orthographical word decoding tasks. They examined the learning effects and transfer effects on words classified by length, consistency, and complexity of syllable structure. Overall, the results demonstrated that reading training did not improve spelling. However children who participated in the copy training (group 1) improved their spelling skills.

Lastly, teaching spelling and sentence construction skills has been shown to improve the reading fluency of typically developing children in grades 1–7, whereas spelling instruction improves the word reading skills of typically developing as well as weaker spellers in grades 1–5 (Graham and Hebert, 2011).

Text generation

The second component of the ‘Not-So-Simple View of Writing’ (Berninger & Winn, 2006), *text generation*, also measures a separate skill. Research showed that translation of ideas into written language of beginning writers consisted of two sub-processes: transcription (i.e. translating mental language representations in the mind into written symbols in the external environment); and text generation (i.e. translating ideas into visible language) (Berninger, 2000, p. 67). On one hand, transcription requires the retrieval of orthographic symbols and the execution of fine-motor movements for producing them (Abbott & Berninger, 1993). It primarily entails the processes of spelling and handwriting (or typing). On the other hand, text-generation is the process of “turning ideas into words, sentences, and larger units of discourse” (McCutchen, 2006, p. 123). The production of written text requires the writer to translate ideas into written form through various language-specific processes. These processes of ideation require a complex array of cognitive and metacognitive processes. Examples of these processes are accessing lexical knowledge, semantic coding, phonological coding, and monitoring of syntactic structures.

As children become older and their written tasks increase in length and complexity, higher-order processes become more critical in producing text. In addition, self-monitoring, revising, and editing skills are necessary for children to detect errors, check for semantic content and syntactic expression, and modify text appropriately.

However, because young writers have not mastered the skills and processes of experienced writers, researchers have proposed alternate models of composition that account for children’s developing competencies (e.g. Bereiter and Scardamalia, 1987; Berninger and Swanson, 1994).

Written expression

Young writers’ attention shifts from forming individual letters and spelling words, to constructing phrases, sentences and paragraphs. As their proficiency develops, the texts they compose become increasingly complex, progressing from random word combinations to extended narratives and organized texts (Berninger, Abbott et al., 2006). Therefore, current measures used to assess spelling or letter writing or that require copying and/or

dictation fail to capture the potential range of writing competencies that children in primary grades possess. This is a period of schooling in which composition skills are emerging.

Sentence writing

Coker and Ritchey (2010) investigated the use of a sentence-writing assessment administered to children in kindergarten and first grade. Sentence-writing is a measure of children' ability to write in response to a sentence prompt. An example of the directions for this task is, 'I want tell you when to start writing the first sentence and when to start writing the second sentence. If you come to a word that is tricky, spell it the best that you can. Write about your favourite food for lunch.' Then the children are given three minutes to write before they are prompted to start a second sentence. The children are then given three minutes to respond to this second prompt. If all children in the small group have completed their responses to the first sentence before the three minutes are up, they are prompted to ensure that their response is sufficiently complete. If all children indicate they have finished, the prompt for the second sentence is read. The researchers found that first-grade children demonstrated more developed sentence-writing abilities than kindergarten children.

Children in grade 1 were more likely to write a sentence or multiple sentences, and more likely to write complete sentences that included mechanical features such as capital letters and punctuation.

Narrative story

To become fully literate, children need to move beyond single words and sentences, and learn how to deal with larger stretches of text. Relatively few studies have investigated developmental or individual differences in written language production, beyond the level of single-word spelling (Cragg and Nation, 2006).

Bereiter and Scardamalia (1987) developed a two-part model of the development of written composition from novice to expert performance. *Knowledge-telling* is a process of making use in a linear fashion of natural abilities of language and everyday social experiences. According to these authors, the texts of child writers adhere strongly to the constraints of a knowledge-telling mode; that is, they tend to write whatever a prompt brings to their mind, and lack higher levels of processing skills such as revision and planning. Expert writing is explained by Bereiter and Scardamalia (1987) as being a product of a *knowledge transformational mode*. This second model has two problem-solving spaces. One pertains to *content*, and the other is *rhetorical*. In the content space, problems and beliefs are resolved through operations of hypothesizing and inferring. In the rhetorical space, knowledge states are representations of expression production, which includes both texts and goals.

One explanation of the characteristics of young children's early writings, which is knowledge-telling, is that children rely on a simpler approach to generating and encoding ideas because knowledge-telling makes fewer cognitive demands than processes such as

planning and revision. Children might devote less attention to planning and revising because they have not yet automated the process of translation, which involves generating ideas and transcribing them onto paper, so this demands considerable cognitive energy, and they do not have any to spare for planning and revising tasks (Graham, 1990; Graham and Harris, 2000). As a result, the quality of children's writing may depend to some degree on how efficiently children can perform tasks such as spelling and handwriting/typing (Graham, Berninger et al., 1997). Once they do these tasks easily, they can concentrate more on the quality of composition.

Our current understanding of the component processes of early narrative writing skills is very limited. There is only a little research examining writing skills in typically developing children in English, and even less in languages with consistent writing systems (Babayigit and Stainthorp, 2010). This is mostly because there are larger research establishments in countries where for reasons of historical accident English is the main language. Efficient, reliable and valid curriculum-based measures initially developed in English in the areas of reading, maths, spelling, and writing at the primary level could be valid across different languages, but this should not be taken for granted.

More recently, curriculum-based measurement research has been extended to the middle- and high-school levels, particularly in the area of written expression (Weissenburger and Espin, 2005, p. 154). These authors reported that previous research with curriculum-based measures has indicated that the number of words written, number of correctly spelled words, and number of correct word sequences (defined as two adjacent words that are correct) in a three-minute response to a narrative story starter serve as reliable and valid indicators of writing proficiency at the primary school level. So these are indices that have been identified as valid indicators of writing proficiency (Deno et al., 1982; Videen et al., 1982). Alternative indices that have been studied are the number of correct punctuation marks, number of simple sentences, number of words in complete sentences, and the number of large words, T-units (i.e., a single clause which consists of a subject and a predicate) and/or advanced words.

However, research at the middle- and high-school levels suggests that children may need to write for longer periods of time, and the scoring of the samples may need to be more complex, if valid indicators are to be generated for general writing performance. Counting the number of correct word sequences and subtracting the number of incorrect word sequences from the number of correct word sequences have proved to be better indicators of writing proficiency for older children (Espin et al., 2005).

Some research has analysed composition writing in the primary grades (e.g. Babayigit and Stainthorp, 2010; Olinghouse, 2008). Babayigit and Stainthorp (2010) used a composition task to examine narrative writing skills in Turkish children from grade 1 to grade 2. The task involved writing about the events depicted in a series of eight pictures. The children were told to study the pictures carefully and then when they were ready, go back to the beginning and start writing the story. All eight pictures were printed in order and remained visible at the front while the children were writing. The children were left to write their narratives at their own pace, and their speed was recorded by a stop-watch. To score the composition writing-structure, the researchers measured appropriate sequencing,

sentence structure, sentence variety, complexity of sentence structure, linking expressions (the use of words such as *and*, *or* *but*, *while*, *then*, *before*, *suddenly*), consistency of tense, and grammar.

Olinghouse (2008) examined the student-level and instruction-level predictors of narrative writing fluency and quality in grade 3 children. She used as writing assessments advanced planning, compositional fluency, compositional spelling, compositional quality and handwriting fluency. A scale used to assess advanced planning in junior high school children (Berninger, Fuller et al., 1996) was adapted for use with primary children. The advanced planning scoring guide included the following categories: 1) no advanced planning; 2) minimal advanced planning; 3) questions or topics with no subordination; 4) story grammar elements; and 5) mapping or detailed story grammar elements.

Compositional fluency was assessed by scoring the total number of words written in fifteen minutes. Compositional spelling was assessed by the percentage of correctly spelled words in the composition.

Compositional quality was scored using a holistic scale. The main conclusion was that child abilities in both basic writing skills and high-level writing skills, such as advanced planning, are related to compositional fluency and quality.

2.5 Pen or Keyboard?

Nowadays the use of computers in the school classroom has become almost universal in developed countries, and many researchers have been interested in analysing and comparing pen and keyboard modes. Among the questions that arise are: Do children write more and faster by keyboard than by pen? Are keyed written compositions worse than those produced by hand? Does slow typing speed influence the quality of keyed compositions in the same way that slow handwriting influences handwritten compositions?

Daiute (1986) claims that keying text frees up working memory for higher-level writing processes by removing the burden of writing by hand. However, if children are not fluent in keyboarding, they may be concentrating on key location rather than composition (Connelly et al., 2007; Freeman, MacKinnon et al, 2005), which would be similar to the case of being centered on letter formation with handwriting. To be an effective alternative to handwriting, keyboarding speeds need to be at least as fast as handwriting (Freeman et al., 2005). While typing skills increase steadily with age, at the primary school age, the speed of typing tends to lag behind that of handwriting at the primary level (Connelly, Gee, et al 2007; Wallen, Bonney, et al, 1996). Connelly and colleagues suggested that children of primary school age usually have more experience in writing with pens and pencils than keying, because computers are not used as often as pens and pencils in classrooms. They examined the relationship between handwriting fluency and keyboarding fluency throughout primary school, and also studied the link between word-processed compositional quality and keyboarding fluency. Results showed that the compositional quality of children's handwritten scripts was superior to that of keyed scripts.

Later, Berninger, Abbot and colleagues (2009) examined the effect of two modes for producing letters - formation by pen and selection of letters on a keyboard - on children's composition skills at different levels of language at different grade levels in the following aspects: reproducing the letters of the alphabet in order, constructing a single sentence, and composing an essay. The rationale of their study was that if the advantage of the pen as a transcription mode is found only at certain levels of writing production, which could be due to more familiarity with this production mode, the effect might not be applicable to entire levels. They also tested whether the amount and rate of writing using each method varied at the different levels of language. For this purpose, the writing by pen and by keyboard of fourth graders with learning disabilities in transcription (handwriting and spelling) (LD-TD), and without such difficulties (non-LD) were compared on the above-mentioned three writing tasks, which differed by level of language. The researchers found that:

LD-TD and non-LD groups did not differ in total time for producing letters by pen or keyboard; however, both groups took longer to compose sentences and essays by keyboard than by pen. Students in both groups tended to show the same pattern of result for amount written as a larger sample of typically developing fourth graders who composed longer essays by pen. Results for that sample, which also included typically developing second and sixth graders, showed that effects of transcription mode vary with level of language and within level of language by grade level for letters and sentences. However, consistently from second to fourth grade, children wrote longer essays with faster word production rate by pen than by keyboard. In addition, fourth and sixth graders wrote more complete sentences when writing by pen than by keyboard, and this relative advantage for sentence composing in text was not affected by spelling ability (Berninger, Abbott et al., 2009, p. 23).

Nevertheless, children who have LD may benefit from keyboard training. Findings from a number of studies have demonstrated the functional benefits of keyboarding in the development of writing and reading skills in primary school children who are typically developing and children with disabilities (Campbell, 1973; Dybdahl and Shaw, 1989; MacArthur and Graham, 1987; Sinks and Thurston, 1972). Jiménez, Marcos et al (2017) analyzed whether children with handwriting and/or spelling disabilities – or both – differ from normally achieving writers in their performance, based on components identified by a means of the Test Estandarizado para la Evaluación Inicial de la Escritura con Teclado (TEVET) [Spanish Digital Writing Test] (Jiménez, 2012d). The results indicated when keyboards are used, that poor handwriters did not differ from normally achieving writers in phonological processing, visual-orthographic processing, and sentence production components. In cases in which children, despite intervention, are unable to achieve competence in handwriting performance, a compensatory approach such as computer keyboarding may be employed (Law, Baum et al., 2002). With the increased availability of computers in the classroom, when children have illegible handwriting, the question often arises regarding the use of keyboard as an alternative to handwriting (Freeman et al., 2005; Graham, McKeown, et al, 2012; Rogers and Case-Smith, 2002). However, this would be more controversial when children show spelling deficiencies. Therefore, Jiménez, Marcos et al (2017) suggested that any previous spelling instruction regarding handwriting would be necessary so as to ensure that this was reflected at equivalent levels for keyboard writing.

In sum, we are in agreement with Medwell and Wray (2007) in concluding that speed of letter generation might be a good measure for handwriting fluency. In addition, they also suggested that graphonomic research might also give support in finding a definitive

measure of automaticity. Finally, ‘explicit keyboarding instruction (touch-typing)’ is needed to develop keyboarding fluency and unlock the full potential of the word processor for children’s writing’ (Connelly et al., 2007, p. 479).

2.6 Teaching of writing skills

How do school teachers teach writing? How well children write is influenced by how they are taught to write. There has been considerable debate and controversy on how writing should be taught. Overall, the nomenclature of this debate has shifted from ‘an academic versus a progressive approach’ to ‘skills-based instruction versus natural learning approaches’, such as whole-language and process-writing instruction (Graham, Harris et al., 2002). Knowledge of teachers’ theoretical orientations to instruction is an important element in understanding the teaching process. However, teachers’ actual beliefs and assumptions about writing instruction have been largely ignored by researchers, and little is currently known about them. A few studies that have attempted to measure primary grade teachers’ orientations to the teaching of writing have indicated that they embrace a balanced and eclectic approach (Baumann, Hooffman et al., 1998; Graham, Harris et al., 2002; Pressley et al., 1996). The interest in studying this topic is because teachers’ practices are directly tied to their beliefs or theories about instruction. We now know about contemporary writing classroom practices in primary grades because there are many studies examining writing practices with younger children.

How do primary-grade teachers teach handwriting?

Teaching handwriting improves more than one aspect of learners’ writing performance, including sentence construction skills, writing output and writing quality (Berninger, Vaughan et al., 1997; Graham et al., 2000). Despite the relative importance of handwriting, we know little about how it is taught to young, developing writers (Graham, Harris et al., 2008). Graham, Harris and colleagues (2008) conducted a survey of the handwriting instructional practices of primary-grade teachers randomly selected from throughout the United States. Teachers were asked how often they taught handwriting skills to their children. They were also asked to describe their children in terms of their handwriting skills, including their facility with handwriting legibility and fluency, number of children with handwriting difficulties, and types of handwriting problems.

The findings demonstrated that a great percentage of teachers use an explicit and systematic method for teaching handwriting to young developing writers. Some outstanding results were as follows:

90% of teachers indicated that they provided an average of 70 minutes of instruction per week; only 12% of the participating teachers reported that they received adequate preparation to teach handwriting in their college education courses; three out of every five teachers indicated that they used commercial materials for handwriting instruction; when teaching students how to write letters, 60% or more of the teachers used effective practices as modelled how to form the letter, to practice the letter by tracing it and

writing it from copy, praised students' for correct letter formation, and directed students to correct malformed letters as well as identify their best formed letters; many teachers also taught students proper pencil grip and paper position, including how left-handers should position their paper; slightly more than one-half of the teachers displayed examples of students' best handwriting, whereas a slightly greater percentage of teachers used specific procedures to promote handwriting fluency (Graham, Harris et al., 2008, p. 66).

Which handwriting style is more appropriate, cursive or manuscript?

The most contested issue in handwriting instruction today centres on the type of script children learn to write. Considerable attention has also focused on the relative merits of cursive script and traditional manuscript. Manuscript writing consists of unjoined, almost vertical letters. Manuscript strokes are separately formed using circles and straight lines. Gradually, this manuscript develops into cursive writing, or joined letters. Cursive strokes involve the more complex French curves (Bell, 1968). Traditionally manuscript handwriting instruction has preceded instruction in cursive handwriting, and the transition from manuscript to cursive handwriting is usually made between grades 2 and 3 (Trap-Porter et al., 1983). Nevertheless, the practice of progressing from manuscript to cursive strokes is not without opposition.

Proponents of the manuscript approach suggest that the manuscript letter strokes are easier to perform than cursive strokes for kindergarten and first-grade children. Others have suggested that manuscript strokes are not easier to initiate than cursive forms (Lehaman, 1980). We might expect unjoined writing to be faster. In order to check this point some experiments were conducted.

Hildreth (1945) selected upper-grade children (with a median age of 13 years) and tested the number of joined and unjoined 'up and down' pencil strokes they could make on a line in a short time interval. The children were first shown a row of either joined or unjoined strokes, and were told to make a similar row of strokes on paper during a timed interval. They were told they might slant their strokes in any direction that seemed most natural to them, or make strokes straight up and down; there was no need to reproduce the slant shown in the sample. Making unjoined strokes was found to be faster for older children than making joined strokes, and the authors suggested that children who first learn manuscript writing in the primary grades would do well to continue in that style.

Gray (1930) also analysed the movements in manuscript writing and cursive writing, and found differences between them in the speed with which movements were made in writing letters. Cursive writing was faster than manuscript writing. No significant differences between the two styles were found in the manner of grasping the pen, the sideways movement of the hand within words, the method of moving the hand and arm along the line, or the combination of hand movements, arm movements and finger movements while forming the letter strokes. Based on a review of various experiments, however, Hildreth (1945) suggested that there was a little real difference in writing rates between the two styles when the conditions of instruction and amounts of practice had

been equal. Consequently, studies may have been insufficient to draw accurate conclusions.

There have been attempts to develop new manuscript forms to facilitate the transition from manuscript to cursive handwriting. Trap-Porter, Cooper and colleagues (1984) compared cursive handwriting samples from first-graders who had received instruction using two new manuscript alphabets (i.e., D'Nealian and Zaner-Bloser). D'Nealian manuscript letters are written with a slant and show more resemblance to cursive letters than do traditional manuscript alphabets. Most D'Nealian manuscript letters are formed with one continuous stroke. The results showed that the two groups did not differ in production of cursive letters.

Researchers have also investigated the effects of space size of manuscript paper, grade level, and school setting (urban and suburban) on the accuracy of manuscript handwriting. The results suggest that space size of writing paper affects correct manuscript letter strokes of suburban and urban kindergarten and first grade students. Suburban students made more correct manuscript letter strokes using large-spaced writing paper when compared to performance with normal-spaced writing paper. Space size of writing paper generated no differences in correct manuscript letter strokes for urban students. Suburban kindergarten and first grade students produce more correct manuscript letter strokes with large-spaced writing paper than urban students. There were no differences among suburban and urban students across grade level when normal-spaced writing paper was employed (Waggoner, Lanunziata, Hill, and Cooper, 1981).

The same authors carried out a study of grade 2 and 3 children, comparing the accuracy of transitional cursive letter strokes on large-spaced paper and normal-spaced paper. Second graders had not been formally introduced to cursive handwriting; the third graders had received approximately nine months of cursive handwriting instruction prior to the study. Children in both grades produced more accurate letter strokes with large-spaced paper (space size 1.11 cm). Third-graders produced significantly more correct cursive letter strokes than second-graders. The results support the continued use of large-spaced paper with children writing transitional cursive letters.

Finally, Graham, Harris and colleagues (2008) asked primary-grade teachers whether and at what stage both manuscript and cursive handwriting should be taught. The majority (87 per cent) thought manuscript instruction should start in kindergarten; 10 per cent preferred first grade. In contrast, most teachers thought cursive instruction should start in grade 2 (48 per cent) or grade 3 (45 per cent).

How do primary-grade teachers teach spelling?

A previous section of this report analysed the role of spelling in children's literacy development. It is critical that spelling is taught effectively during the primary grades. There are two basic theoretical orientations to teaching spelling: 'caught and spelling' and 'taught' approaches (Graham, 2000). The first approach postulates that spelling can be acquired as naturally and easily as speaking, by immersing children in literacy-rich environments where they have plenty of opportunities to read and write for real purposes.

The basic idea behind the second approach is that it is necessary to directly and systematically teach children how to spell through procedures such as memorization (children memorize the spelling of specific words), generalization (children are directly taught rules and skills for spelling unknown words), and developmental approaches (children connect and extend their grasp of the spelling system through the use of word study activities, such as word sorting).

There have been few attempts to catalogue spelling instructional practices in today's schools, just as there are few attempts with handwriting. Some recent studies provide some tentative evidence on this issue (e.g. Fresh, 2007; Graham, Harris et al., 2008). These authors conducted a survey of the spelling instructional practices of primary-grade teachers randomly selected from throughout the United States. Teachers were asked questions, including how they teach spelling, to describe their children in terms of their spelling skills, what instructional adaptations they made for struggling writers, and how often they taught spelling skills.

Graham, Harris and colleagues (2008) reported that 90 per cent of teachers taught spelling for at least 25 minutes per week. Overall, the authors concluded that:

primary-grade spelling instruction is multifaceted, involving the teaching of a variety of skills as well as the application of many different activities and instructional procedures. There was considerable consistency in teachers' reports on how they taught spelling, with many activities and instructional procedures applied by 70% or more of the teachers at least weekly. This included students learning a new list of words each week and the teaching of phonological awareness, phonics for spelling, spelling rules, and strategies for spelling unknown words. Likewise, teachers reported providing minilessons, employing peer learning activities, and using games at least weekly to help students acquire new spelling words and skills. Teachers indicate they frequently praised students for correct spelling, provided feedback on the words children misspelled, and held conferences with students about their spellings. They also reported encouraging students to use invented spellings, spell checkers, and proofreading at least weekly (Graham, Harris et al., 2008, p. 812).

About half of the teachers indicated that, on a weekly basis, they repeated teaching these skills and strategies, word sorting, and reinforcement or other motivational strategies. However, teachers also reported that they used sometimes activities such as computer programs to teach spelling and conferencing with parents.

These results give an idea about instructional practices in spelling in the English language. Similar studies are required in other languages to analyse whether there are cross-linguistic differences. Additional research is needed to establish replicability and to more fully determine how spelling is taught as a function of differences across orthographic systems.

What teaching practices improve the quality of writing produced by children in the primary grades?

The main purpose of some recent reviews of these studies has been to identify effective practices for teaching writing in the primary grades. In fact, there are a variety of evidence-based instructional procedures for improving the writing of children in the primary grades. For instance, Graham, Kiuahara and colleagues (2012) carried out a meta-analysis of writing

instruction for children in the primary grades. The authors attempted to answer the following question: What teaching practices improve writing quality in primary grades? Overall, these authors found that the following teaching practices enhanced the quality of children' writing:

- Strategy instruction: teaching planning, drafting or revising strategies. Many studies have included strategy instruction using the self-regulated strategy development (SRSD) model (Harris and Graham, 1996). Children are taught general and task-specific writing strategies, the background knowledge needed to use the strategies, and procedures (goal-setting, self-monitoring, self-construction, and self-reinforcement) for regulating the strategies, the writing process, and writing behaviours;
- Adding self-regulation instruction to strategy instruction;
- Teaching the structure of stories, and teaching a variety of text structures (such as the persuasive, expository and academic structures);
- Teaching children how to be more creative or how to produce visual images;
- Teaching transcription skills (handwriting, spelling and/or keyboarding);
- Prewriting activities such as making notes or drawing pictures prior to writing;
- Peers working together when writing;
- Product goals, which range from objectives to include specific types of information in a paper (such as reasons to support a thesis) to making specific types of revision (for example, to add three new things to the paper);
- Assessing writing based on teacher's feedback (on children' papers or their progress in learning a specific writing skill, peer feedback giving and/or receiving feedback on a paper), and child self-assessment (teaching children to use rubrics or six-trait methods to assess their writing);
- Word processing programs used for writing, or with additional software for facilitating planning or drafting of text, or vocabulary and speech synthesis capabilities;
- Increasing how much children write, ranging from writing about self-selected topics to daily expressive writing time;
- Comprehensive writing programmes such as a process approach combined with word processing and strategy instruction; a whole language approach, language experience; direct instruction writing programmes; and writing skill and text structure instruction.

Individual differences

There has always been both social and academic interest in undertaking research on individual differences (normal variation) in learning, which has been and remains a concern within the educational community. In pioneering countries, such as the United States and Canada, since the 1960s, the diagnostic category of learning disabilities (LD) has been recognized in educational legislation as distinct from other categories that had previously

been defined in the field of special education, such as mental retardation, sensory deficits and socio-cultural deprivation.

Some European countries also make provision for specific LDs. For example, in Spain, 'specific learning disabilities' are mentioned in the organic law on education (Ley Orgánica para la Mejora de la Calidad Educativa - LOMCE 8/2013, 9 December 2013). Under Spanish law, the Education Act defines children with Specific Educational Support Needs (SESN) (i.e., their sensory impairment or acquired neurological problems, amongst others - these are traditionally used as exclusionary criteria for learning disabilities or severe behavioral disorders, either temporarily or throughout the whole of their schooling) as those who require additional educational support. The education act also contemplates those with specific learning disabilities, those who are gifted, or who are entering late into the education system (i.e., children coming from other countries, those who are in specific personal circumstances or children with certain past school records).

Spain has a central government and seventeen autonomous communities that have devolved power for the administration of schools, universities, health, social services, culture, urban and rural development, and in some cases policing. It is the responsibility of the regional education administrations (EA) to establish the procedures and resources necessary, and take measures to identify children with SESN and assess their needs as early as possible.

To our knowledge, the Community of the Canary Islands is the first autonomous community in Spain to have published specific laws including definitions, procedures and measures to identify children with LD, such as dyslexia, dyscalculia, disorders of written expression or dysgraphia, and attention deficit hyperactivity disorder (ADHD) (BOC 250, 22 December, 2010; BOC 40, 24 February, 2011).

Children who cannot write properly may have difficulty keeping up with the required pace of writing in class, especially when copying from the blackboard. Furthermore, doing homework requires continuous long hours and results in frustration. These children's writing difficulties are evident in the fluency and quality of their compositions, with illegible handwriting often leading to lower marks.

Overall, when learning to write in the early grades, children show individual differences in motor skills, for example in the placement of letters on lines on the paper, and maintaining consistency of letter size (Graham, Struck et al., 2006). Those children who do not succeed in developing proficient handwriting are defined by some authors as 'poor handwriters' and by others as 'dysgraphic' (Marr and Cermak, 2001). Dysgraphia means 'impaired letter form production by hand', and most dysgraphic children have handwriting problems despite motor function that falls within the normal range. It is generally regarded as a biologically based LD. The transcription skill that these children (with normal motor function) mostly appear to lack is the automatic retrieval and production of legible letters (Berninger, 2009). In other words, they show impaired orthographic coding and/or grapho-motor planning for sequential finger movements, which together function as the orthographic loop (Berninger, Raskind et al., 2008).

Studies on individual differences in learning to write have focused on: analysing the legibility of the writing (spacing between words and letters, alignment, size, inclination and linking of letters) (Graham, Struck et al., 2006); comparing writing by hand with keying text (Berninger, Abbott et al., 2009); comparing the abilities of transcription by conventional assessment of paper and pencil (the final product of writing) and assessment based on process or online by digitizing tablets (time spent in line, automation, breaks, etc.) (Rosenblum et al., 2004); and analysing the relationship between transcription and composition skills (Rosenblum et al., 2010). The relevance of studying all these dimensions is that if children show signs of LD in any of these aspects at a young age, their difficulties might continue into adulthood (Polloway et al., 1988).

Children with writing difficulties perform significantly more poorly than children with good handwriting in letter formation (Graham, Boyer-Shick et al., 1989; Hamstra-Bletz and Blote, 1993; Rubin and Henderson, 1982; Parush et al., 2010); overall legibility (Parush et al., 2010; Sovik et al., 1987), and spatial organization (Graham, Boyer-Shick et al., 1989; Hamstra-Bletz and Blote, 1993; Parush et al., 2010). There are also significant differences in handwriting speed between children with and without writing difficulties (Parush et al., 2010; Rosenblum et al., 2003a).

These differences between children with and without writing difficulties seem to be valid for many languages, since the studies were performed in different countries with children writing in various languages (e.g. English for Graham, Boyer-Shick et al., 1989, and Rubin and Henderson, 1982; Dutch for Hamstra-Bletz and Blote, 1993; Chinese for Tseng and Murray, 1994; and Hebrew for Parush et al., 2010). Parush and colleagues suggested that ‘the factors differentiating between these two groups of children may be a universal phenomenon; in various languages, poor letter formation, spatial organization, overall legibility, and slow writing seem to be important factors for identifying children at risk for developing more serious writing deficits’ (2010, p. 45).

2.7 Writing assessment: product versus process

Writing assessment should be focused not only on writing product (that is, teachers evaluate children’ compositions) but also on writing process (in which teachers monitor the process children use as they write). In both types of assessment, the goal is to help children become better writers (Isaacson, 1988).

Assessment of writing product can be used for a variety of purposes, such as inter-individual comparison, instructional planning, monitoring child progress and providing feedback. The main product variables used by researchers have been fluency (the number of words written), content (e.g. originality of ideas and organization, style), use of conventions (the mechanical aspects such as spelling, use of margins and punctuation), syntax (complexity of the sentences) and vocabulary.

In a process assessment, we observe children as they engage in writing in order to determine their strengths, abilities and needs. While observing, we may ask children questions depending on the writing stages:

- When children begin to write, questions such as ‘What will your topic be?’ and ‘How are you gathering ideas for writing?’
- As children are drafting, questions such as ‘How is your writing going?’ and ‘What do you plan to do next?’
- As children revise their writing, questions such as ‘How do you plan to revise your writing?’ and ‘What kind of mechanical errors have you located?’
- After children have completed their compositions, questions such as ‘With what audience will you share your writing?’ and ‘What did your audience say about your writing?’

This section of the report concentrates on analysing the relevance of handwriting assessment. This is primarily because there is now a growing body of research suggesting that handwriting is critical to the generation of creative and well-structured written text, and has an impact not only on fluency but also on the quality of composing (Berninger and Swanson, 1994; Graham, Berninger et al., 1997). If handwriting consumes a large proportion of working memory capacity, it may limit the child’s ability to generate ideas, select vocabulary, monitor progress and revise text.

Over the years, a wide variety of global-holistic evaluations of handwriting ‘readability’ or analytic evaluations that rated the readability of a handwritten product in relation to predetermined criteria have been developed in an attempt to find an optimally reliable and practical method of assessing handwriting. The scales have been developed to assess written output, but not the *process* of handwriting. As was shown earlier, in current handwriting pedagogy across different countries, handwriting efficiency has been neglected. The majority of curricula treat handwriting succinctly, and deal with the development of movement and style, without any attention to speed or efficiency.

Writing output

Writing output refers to the handwriting product, which can be analysed by analytic and global evaluation scales. According to the review made by Rosenblum and colleagues (2003b), the global evaluation scales are used to form an overall judgment of a written product in terms of how readable it is in comparison with a group of standard handwriting samples previously graded from ‘readable’ to ‘unreadable’. In contrast, analytically based evaluations use the assumption that a relationship exists between the general look (in other words, the readability), and certain criteria of performance, such as the shaping of the letters, and the spaces between the letters and the words. The handwriting sample is judged by grading each criterion individually for the passage and then calculating an overall score. These same authors (Rosenblum et al., 2003b) concluded in their review that general readability is an important factor in judging the quality of the written product.

There is agreement among the authors of analytic handwriting scales regarding the main qualitative criteria by which writing readability should be judged: size; slant; spacing; shape; and general merit). Nevertheless, they also conclude that there exist many methodological variations among the scales in terms of factors that may affect children’

outcome scores, such as nature of handwriting assignments, instructions given to the examinees, writing accessories, specific assessment criteria, methods for measuring handwriting speed, psychometric properties, and the applicability of the scales to different populations, type of evaluator, sensitivity to variability in personal writing style, practicality of the evaluation's administration, and the nature of the examinees' involvement in the process. Rosenblum and colleagues (2003b) analysed all of these factors and described how they may impede progress in the development of a maximally reliable and effective handwriting tool.

Recent research has used a variety of writing tasks, based on a theoretical framework. There should be a clear link between the theoretical construct and the data generated by the actual assessment (Messick, 1995). Therefore, Crawford and colleagues (2006) analysed the reliability and validity of the *Oregon Extended Writing Assessment* (EWA) which contain six tasks ranging in difficulty from copying letters to story writing. This analysis took Berninger's Functional Writing System (Berninger, 2000) as its conceptual framework. In their study, they administered six tasks to more than 1,000 children in grades 3, 5, 8 and 10. The first four tasks consisted of copying and dictation activities (copying letters, copying words, taking word dictation and taking sentence dictation). The child was prompted to copy or write each letter, word, or sentence exactly as it is shown in the test protocol or dictated by the evaluator. Tasks 5 and 6 were free-writing tasks (writing sentences and writing a story). For the validity analysis they performed a principal components analysis, and they found that a four-factor model provided a better representation of the principal components contained in the data. Factor 1 encompassed 'Story writing tasks' (total words, correct word sequences, and ideas and organization), Factor 2 comprised 'Copying letters and words'; Factor 3 consisted of 'Dictating words and sentences'; and Factor 4 encompassed 'Writing sentences (total words and correct letter sequences)'. These four factors better align conceptually with both the theory and practice associated with the writing assessment.

Writing process

In contrast, examination of the handwriting process refers to the computerized measurement and analysis of a different set of variables such as time, space, and pressure while the child is actually performing a writing task. An overwhelming number of parameters, such as acceleration, velocity, duration, pressure, size, slant and curvature, have been analysed at different unit sizes (e.g. strokes, letters, words, and pair of strokes). Investigators in the field of graphonomic research analyse the relationship between the planning and generation of handwriting and drawing movements, the resulting spatial traces of writing and drawing instruments, and the dynamic feature of these traces. In graphonomic research, handwriting is not considered as a product. Handwriting is a multicomponent task involving at the least linguistic, motor and spatial processing. The style and neatness of handwriting are therefore not of particular interest in graphonomic research. Handwriting is rather understood as a process that is characterized by spatial and kinematic parameters. These spatial and kinematic parameters of movement execution during handwriting (position, time, velocity and acceleration) can easily be recorded by digitizing tablets. Spatial and kinematic data are stored on a personal computer, which is connected to the tablet. Data processing can be performed with commercially available

computational programs for the analysis of handwriting movements in real time (e.g. Eye and Pen: Alamargot et al., 2006; Ductus: Guinet and Kandel, 2010; and Spell Write II: Cottrell, 1999).

Some of the units and measures most frequently considered in the cognitive study of handwriting are the number of errors, disfluences (that is, breaks and irregularities) and gaze-raising; written latency; writing and intervals duration, and writing velocity (Afonso, 2013).

During writing instruction, children learn to produce the movement patterns for individual letters, which are later combined to produce more complex orthographic units. Moreover, the fact that the letter-form is remarkably consistent across replications suggests that a motor pattern for each letter is available. A motor pattern is understood as the set of specifications of abstract movement parameters that sufficiently describe the movement (Teulings and Schomaker, 1993). Analysis of the types of error made by children during writing instruction has provided valuable insights into the way in which children acquire writing skills. The number of errors, disfluences (defined as the number of velocity extremes) and gaze-raising (to consult the model in the course of copying) have been analysed mainly in developmental studies of handwriting. Children produce numerous and varied errors, ranging from misspellings to mere letter orientation errors. In later stages of development, however, the number of errors decreases dramatically with the automation of writing, and disfluences and gaze-raising disappear completely. All of these measures are likely to tap into the peripheral process of writing, given their absence once writing movements have been automatized.

Written latency is defined as the time between the presentation of a given stimulus and the occurrence of the first contact of the pen with the digitizer tablet. Written latencies are thought to reflect central spelling processes, and they seem to be sensitive to semantic, lexical and sublexical variables.

Writing duration and *intervals duration* are defined as the total time needed to produce a given segment of writing and the time between the productions of two different segments, respectively. Letter durations are measured as the time between the first contact of the pen with the tablet for a letter and the last first lift in that letter. Inter-letter intervals are defined as the time between the last pen lift in a letter and the first pen down in the following letter.

Some researchers prefer to use *writing duration* instead of *writing velocity* for several reasons (Afonso, 2013):

- Whereas velocity is a relatively novel measure in psycholinguistics, writing durations have been reported repeatedly in the literature;
- We cannot measure the velocity for latencies of intervals, so different measures should be provided for letters and intervals. Thus, potential effects appearing in both letters and interval would not be easy to compare;

- If only writing velocity is analysed, potential effects occurring in the within-unit intervals would pass undetected. By measuring total duration of the unit (instead of only total writing duration or velocity) we make sure that we do not miss any information potentially relevant for our understanding of the time-course of the written response.

A review of graphophonemic research revealed that attentional control to any characteristic of the writing process, such as direction, lexical status, movement, style, resulted in an impairment of handwriting automaticity (Tucha et al., 2008). These findings have educational implications because national curricula in many countries put too much emphasis on writing style and neatness, and neglect the automation of handwriting (Tucha et al., 2008). Also these commercial programs are very useful for investigating the relationships between spelling and writing proficiency. So, for instance, Graham, Harris and colleagues (2002) noted that spelling imposes strong and mnemonic demands, especially on young children, that affect other aspects of the writing process. The analytical study of handwriting production revealed, for instance, how the information encoded by the orthographic representations at the spelling level regulates motor outputs in children (Guinet and Kandel, 2010).

Finally, several studies using online measures of handwriting movement reveal that orthographic representations used in writing production present a linguistic format. Letters, graphemes, syllables and morphemes modulate the processes involved in the production of handwriting movements. The way these linguistic units interact during the writing process depends on the orthographic characteristics of each language (Kandel and Valdois, 2006).

3. Expert Meeting on Formative Writing Assessment in Early Grades of Primary Education (Canary Islands, 19–20 January 2012)

3.1 Objectives and key outcomes of the Expert Meeting

This section describes objectives and key outcomes of the Expert Meeting on Formative Assessment of Writing in Early Grades in Primary Education held on 19 and 20 January 2012 in the Autonomous Community of the Canary Islands, Spain, following the completion of the draft study on EGWA and the draft model instrument. The Expert Meeting was organized jointly by UNESCO and the research team ‘Dificultades de Aprendizaje, Psicolingüística y Nuevas Tecnologías’ (DEAP&NT)³ of the Universidad de La Laguna in Spain, whose principal investigator is Dr Juan E. Jiménez, Professor of Learning Disabilities (see Table 4 for a list of participants). It was supported by the Department of Education from the Canarian Government, the Ministry of Science and Innovation in Spain, the Universidad de Las Palmas de Gran Canaria, Cabildo Insular de Tenerife and the Russian Federation.

Derived from the Learning Counts initiative launched by UNESCO in October 2008 to address issues related to assessment and improvement of quality of education, this meeting intended to explore effective ways to assess writing skills in early grades of primary education, especially through an expert review of the draft study on EGWA and the draft model instrument developed by Dr Jiménez, building on the existing work related to measuring the two basic skills in the early grades of the primary cycle, namely reading skills and numeracy. More concretely, the Expert Meeting aimed to:

- review research findings in the area of early grade writing assessments in order to improve the teaching methods in early grades;
- define areas of action on policy dialogue, build capacity related to writing assessments in early grades, and contribute to the quality issue for education;
- complete a draft instrument to measure the writing skills in the early grades of the primary education; and
- define next steps, including piloting the tool in the Autonomous Community of the Canary Islands.

In short, the key outcomes of the Expert Meeting included:

- The draft report and a model instrument prepared by Dr Jiménez were well received. Useful comments were provided by the experts which will be utilized in finalizing the draft report and developing a tool for EGWA;

³ <https://ejimenez.webs.ull.es>

- An agreement was reached on the immediate next step. Details were drawn up of an implementation plan to pilot the tool in the Canary Islands with around 800 primary school children during the first half of 2012;
- Useful ideas and recommendations on potential future steps for this project on EGWA were provided by the expert group;
- There was positive feedback from participants, including those from the Global Partnership for Education (GPE) and the Russian Federation, with some expressing interest in bringing this project on EGWA to a broader community of development partners.

Table 4 Participants at the Expert Meeting on Formative Assessment of Writing in Early Grades, 19–20 January 2012

Special guests

Participant	Organization/Institution
Antonio Perez Godino	Town of San Cristobal de La Laguna Town Council of Presidency, Planning, Housing, University and Institutional Relations
Isabel Pascua Febles	Vice-chancellor of Culture and Sports, Universidad de Las Palmas de Gran Canaria
Carlos Gutián Ayneto	Canary Islands Government Director General of Universities
Catalina Ruiz Pérez	University de La Laguna Vice-chancellor of Research, Technical Development and Innovation
Eduardo Doménech	Rector – Vice-chancellor of Universidad de La Laguna

Participants

Participant	Organization/Institution
Barbara Arfè	University of Padova, Italy
Ana Maria Borzone	CONICET-UBA, Universidad de Buenos Aires, Argentina
Claudia Cardoso-Martins	Universidade Federal de Minas, Brazil
Luis Crouch	Team Coordinator, Global Good Practices, GPE Secretariat, USA
Nicholas C. Taylor	Joint Education Trust, South Africa

Valeria Sakharova	Deputy Director, Centre for International Cooperation for Education Development, Russian Federation
Liliane Sprenger-Charolles	Université René Descartes, France
Co-organizers	
Juan E. Jiménez	Professor of Learning Disabilities, Faculty of Psychology Universidad de La Laguna, Spain
Pablo Barrientos	Rapporteur – Universidad del Valle (Guatemala)
Elaine Bisschop	Rapporteur – University of Amsterdam, Netherlands
Venkata Subbarao Ilapavuluri	Chief, Section for Literacy and Non-Formal Education, Division for Basic to Higher Education and Learning (BHL/LNF), UNESCO HQ, France
Mari Yasunaga	Programme Specialist, BHL/LNF, UNESCO HQ, France
Moritz Bilagher	Programme Specialist (Monitoring and Evaluation), UNESCO Office, Santiago, Chile

Observers

Participant	Organisation/Institution
Marcos Luis Cámera Barroso	Canarian Government , Responsable del Área de Neae y Orientación Educativa y Profesional
Isabel O'Shanahan Juan	Universidad de La Laguna, Departamento de Didacticas Específicas
Remedios Guzmán Rosquete	Universidad de La Laguna, Departamento de Didactica e Investigacion Educativa

Eduardo García Miranda	Universidad de La Laguna, Departamento de Psicología Evolutiva y de la Educación
Celia Morales	Universidad de La Laguna, Departamento de Psicología Evolutiva y de la Educación
Isabel Hernández-Valle	Universidad de La Laguna, Departamento de Psicología Evolutiva y de la Educación
Desirée González Martín	Universidad de La Laguna, Departamento de Psicología Evolutiva y de la Educación
Claudia Patricia Uribe	Universidad Casa Grande, Guayaquil, Ecuador
Christian Peake Mestre	University of Islas Baleares,
Ceferino Artiles Hernández	Universidad de Las Palmas de Gran Canaria, Departamento de Psicología y Sociología, ULPGC
Gabriel Díaz	Universidad de Las Palmas de Gran Canaria, Departamento de Psicología y Sociología, ULPGC
Rebeca Villarroel	Andrés Bello Catholic University
Olga Escandell	Universidad de Las Palmas de Gran Canaria, Departamento de Psicología y Sociología, ULPGC
Maria de la Luz Tabraue el Jaber	Universidad de La Laguna
David Armando Vallet	Universidad Casa Grande, Guayaquil, Ecuador
Patricia Crespo	Universidad de La Laguna, Departamento de Psicología Evolutiva y de la Educación

Source: Author (Jiménez)

3.2 First draft of EGWA: comments and suggestions

The expert comments and suggestions on EGWA provided during the Expert Meeting are summarized below.

Overall comments on EGWA

- It would be useful to develop a checklist regarding teaching methods and practices of teachers which can be used in interpreting test results, covering aspects such as ‘how much time they spend on spelling and writing instructions’ and ‘which template they use’.

- The information collected about children should include the language spoken at home.
- Addition of an example at the beginning of each task to ensure that children understand the instructions.
- Instructions should include the time limit for each task, which can be decided after piloting the instrument. Administrators should inform children that they have to write as fast and as accurately as possible. The instructions should also include information on scoring. For instance, there is no need to register errors of added strokes, missing strokes and reversal errors in some copy tasks, although they can however be recorded for later examination of their usefulness.
- To enable the child to undertake a task of putting a mark in the text, the task should be presented like a game in order to lower the possible level of frustration and apprehension.
- All the tasks should be administered individually to create the conditions for an equivalent assessment using a keyboard.
- Concerning the assessment of automaticity, process-based assessment is more suitable than this kind of outcome-based assessment, an issue which can be discussed later.

Comments on specific tasks

Task 1: Writing the alphabet in order from memory

- Indicate at the outset of the task that children can use the type of letter of their choice (cursive, manuscript, upper or lower case);
- Control for a possible ceiling effect by changing the instructions: children have to continue to write the alphabet for one minute, to avoid calculation of the averages per grade;
- Ask the children who do not finish the alphabet in one minute to continue writing after inserting the one-minute mark, which will allow the examiner to register the time used to write the entire alphabet;
- Register the score for omission errors in the pilot study;
- Score only the letters that are written in correct alphabetical order; this should be specified in the scoring instruction.

Task 2: Alphabet copying and allograph selection

- Distinguish between the instructions for the two different tasks (Part A and Part B) and specify in these instructions that children have to copy correctly and write clearly;
- Change the instruction to ‘I’m sure you know the letters of the alphabet. Let’s play a game together, using letters’, instead of ‘I wonder if you know the letters of the alphabet.’

- Using all the letters was recommended, as will be done for this task in EGWA.

Task 3: Word Copying

- Explain explicitly the use of the different templates depending on children's preference in the theoretical report;
- Ensure that both bisyllabic and trisyllabic words in this task have consonant vowel consonant vowel (CVCV) structure to control these patterns;
- Instruct the child to put a mark when the tester asks them to do so (after writing for one minute).

Task 4: Sentence copying

- Register missing words and spacing errors in this task;
- Use each letter of the alphabet at least once in the sentence.

Task 5: Writing regular words from dictation

- Change the title of the task to: 'Writing words with inconsistent letter-sound correspondence';
- Ensure that the words have the consonant–vowel (CV) pattern. Twenty words should be presented: ten bisyllabic words and ten trisyllabic words;
- Use words identified through an exhaustive study on the subjective familiarity of words (Gúzman and Jiménez, 2001). For phonological errors, words with j/g; c/k/q; b/v; c/s/z; h; /gue, gui; y/ll; r/rr (twenty words) can be selected. Select words without accents, to avoid errors regarding the accentuation.
- Confusing 'prójimo/brójimo' could be a phonological error (mishearing 'p' and 'b') and not necessarily a reversal error. A deletion error can also be a phonological error in case of letters like 'l' and 'r'. Because of the hierarchy of sounding, 'l' and 'r' sound more or less like vowels, which makes it difficult to differentiate the sounds. These errors will be registered as proposed in the first place, but their interpretation and analysis will have to be discussed after data collection;
- The possibility of a ceiling effect should be considered in this task. But it is unlikely to occur given that a previous study in the Spanish language in grades 2 and 3 with similar words did not reach a ceiling effect (Jiménez, O'Shanahan et al., 2008);
- Regarding the selection of words, take into account the frequency of letter combinations by statistical computation (for instance in Spanish, there might be more words starting with 'ge' than with 'je', which would influence the tendency of a child to write the word with 'ge'). While recognizing its utility, it was noted that this kind of information would not be made available for this study, which is conducted within a limited timeframe. This study, therefore, will use familiar words for children of this age, controlling for length and patterns of consonants and vowels, taking into account the possible errors in words with inconsistent letter–

- sound correspondences. These considerations will be described in the theoretical report;
- It is necessary to observe whether children sound out parts of the word. If the child pronounces parts of the words, this could indicate that they are using a phonological route instead of the lexical route. The sounding-out of words will also be registered in the keyboard modality.

Task 6: Writing words that fit in spelling rules from dictation

- Ensure that this task also consists of twenty words so that it can be compared with Task 5;
- It was recommended to use pseudowords in this task as there is no guarantee that there is an automatic link between correct spelling and sublexical rules in spelling that has been mastered. Children may have just memorized a specific spelling. This can also reveal whether the children are sensitive to orthographic patterns;
- EGWA in Spanish cannot control for CVCCV in this task, because of its rules (e.g. words such as *campo* will occur) but the length of words will be controlled.

Task 7: Writing pseudowords from dictation

- The researchers should select twenty pseudowords that fit the same rules as the words identified in Task 6 and use the same error registration in this task.

Task 8: Writing a sentence from dictation

- Regarding the scoring of orthographic errors, the column with orthographical errors should be deleted as such errors are unlikely in this task. Added stroke for added letter should be substituted, because an added stroke does not make sense in a copy task. Morphological errors will be taken into consideration based on previous Spanish studies (e.g. Defior and Serrano, 2005).

Task 9: Composing a sentence

- The alternative approach of providing children with more specific prompts (word or picture prompts) proposed by Mr Steve Graham was discussed. Dr Jiménez and his team decided to use a topic of children's interest to stimulate writing, especially for children with poor writing skills. It was also suggested to use more parameters in the sentence analysis, but Dr Jiménez thought that this would affect the consistency of the task. Also, teachers may not be familiar with these kinds of parameter.

Task 10: Writing a story

- It was recommended to use picture prompts or bibliographical narratives of familiar events for the composition task, depending on the curriculum used. The group discussed the number of pictures that can be used and have associated effects. Dr

Jiménez expressed his preference to use a single picture. (For instance a picture of a child with a broken leg visiting a doctor can stimulate story-writing as the injury depicted in the illustration might allow children to recall their own experience and emotions. It will also facilitate children imagining what could happen in a clinic.) Another recommendation was to ask children to write about their own experiences (such as what they did on the beach). Dr Jiménez responded that experience suggests there are some difficulties with this approach;

- An analysis would cover five different categories of information described in the stories: 1) when (has the child used words that indicate time?); 2) characters in the story; 3) an initial problem or a cause; 4) actions; and 5) consequences. (An explicit end to the story will be valued.) Empirical evidence has demonstrated that these are the categories used most by children in story-writing.
- A ten-minute assessment timeframe was suggested, as fifteen minutes of writing could be too long for this age group. The experts also discussed dividing the total time for this task into blocks, to count the number of words written and spelled correctly per block (for instance, five minutes per block). Another proposal made was to allow less skilled children to continue to write after marking the end of the assessment time, to measure the total time taken.
- For the entire text, the number of words written, the number of correct words and the proportion of correctly written words (in percentage) will be registered. (This percentage is the parameter of spelling composition.) The scoring will also cover other aspects such as word sequences, the use of capital letters and the use of punctuation marks.
- After the assessment, the tester can let the children correct meaning of the words that are spelled ambiguously, so that the tester can see what the child meant by their writing.

4. Early Grade Writing Assessment (EGWA)

4.1 Introduction

The intent of EGWA is to gauge and document children's skills in composing units of increasing complexity (letters, words, sentences and stories) to communicate meaning. We were interested in developing a tool for writing assessment based on analytic scoring procedures that demonstrate adequate technical features for screening and progress monitoring. EGWA contains ten tasks ranging in difficulty from copying letters to story writing (see the administrator instructions and protocol in Annex A). The first four tasks consist of copying (copying letters, copying words and copying a sentence). The next four tasks consist of dictating activities (writing down dictated words and pseudowords, and dictated sentences). Tasks 9 and 10 are free-writing tasks (writing sentences and writing a story). The child is prompted to copy or write each letter, word or sentence exactly as it is shown in the test protocol or dictated by the evaluator (see the student sheet in Annex C). Each of the ten tasks of EGWA is explained below firstly in English to be followed by the original version in Spanish.

4.2 Description of tasks, administration and scoring procedures:

Task 1: Writing the alphabet in order from memory

Target: The purpose of this task is to see if the child is able to reproduce all alphabet letters in order from memory.

Materials: A pencil similar to the one the child typically uses, without an eraser. Lined paper appropriate to the child's grade level. A timer or watch with a second hand.

Scoring: Indicate on the data collection form (see Annex B) the time spent, the total number of letters written in the time spent, the number of letters written correctly in order in one full minute, and the number of letters omitted in order in one full minute.

- **Time spent:** record the time the child has spent to write all the letters, starting the timer the moment the child begins writing the first letter and stopping the timer when they finish writing the last. The maximum time allowed for the completion of this task is five minutes.
- **Number of letters written in the time spent:** 1 point is assigned for each letter regardless of whether the child has written in manuscript or cursive, upper or lower case, and whether or not they are in the right order. After the corrections, the letters are counted and the total number of letters produced is indicated in the data collection form.
- **Number of letters written correctly in order in one full minute:** 1 point is assigned for each legible letter the child has written, whether manuscript or cursive,

uppercase or lowercase. After correction and counting, indicate the total number of letters written correctly on the data collection form. All those letters that are legible and that are located in the right order are considered correct (for example, in the sequence ‘a, c, d ...’ all the letters are correct since they are in the proper order; however, in the sequence ‘a, c, b ...’ the letter ‘b’ is not counted as it has not been placed in the right order). Mark as correct those letters written in an inverted form, but located in the correct order (such as an upside-down ‘j’ or ‘z’). Digraphs (such as ‘ch’, ‘rr’, ‘ll’) are always valued positively and never counted negatively (so if the child writes ‘ll’ after ‘l’, it will be counted as a correct letter). Children that do not include digraphs are not penalized; in no case is this considered a letter omission. In addition, letters are considered correct as long as they are in the correct position in the alphabet (for instance both ‘q’ and ‘qu’ are considered correct, as long as they are in the correct position).

- **Number of letters missing in order in one full minute:** 1 point is assigned for each letter that the child has written in order. After correction and counting, indicate the total number of letters that the child omitted on the data collection form. For example, in the sequence ‘a, c, d ...’ record one omission (the letter ‘b’). In the sequence ‘a, c, d, b, e ...’ record one omission (‘b’ is included, but not in the correct position). Every letter that has not been placed in the correct order of the alphabet is considered omitted. For example if the child writes ‘a, b, c, z, d, e, f, g ...’, treat all the letters between the ‘c’ and ‘z’ as missing letters, so the total is 23 missing letters and 4 letters written correctly in order (‘a’, ‘b’, ‘c’ and ‘z’).

Calculating the speed of writing: The writing speed in seconds is calculated by dividing one minute (60 seconds) by the number of letters written correctly in order in that time (60/number of letters), as indicated on the data collection form.

Instructions: Ask children to write all the letters of the alphabet in order. They should write the letters in the way they prefer, which could be uppercase or lowercase, cursive or manuscript. Tell them to write as fast and as accurately as possible. Start timing when the child begins to write the first letter and stop timing when they finish writing the last letter, or five minutes after the beginning of the task if they have not already finished. It is necessary to give the child expectations of success. Use phrases such as ‘I know you know well the alphabet or letters of the alphabet, try to write them down’ or ‘Your teacher told me you’ve learned well to write letters.’ Tell the child, ‘If you don’t know some letters, do not worry, but carry on with those you do know.’

Start timing when the child begins to write the first letter. If the child does not start writing when prompted, then say, ‘See how I do it’, and write the first two letters of the alphabet on the top two lines at the upper left of the answer sheet: ‘a’ and ‘b’. Ignore spaces and do not penalize children for omissions or incorrect writing during the process. Note that children should always write from left to right and top to bottom. If after five minutes the child has not completed the exercise, ask them to stop and to leave the task.

Before starting the exercise, it is IMPORTANT to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. The tester (who is timing the task) asks the child to make this mark after the first minute. Children must not know they have only five minutes to complete the task. It is important to distract children as little as possible from the activity. Do not stop the stopwatch after a minute: let them finish writing all the letters and continue to time the process until they have finished writing the last letter. Only stop timing when children indicate that they cannot continue or after the full five minutes is up.

IMPORTANT NOTE: If a child finishes writing the alphabet in less than a minute, they should start writing it again. Tell the child rapidly to start again on the next piece of paper. Do not stop the timer, and give this instruction rapidly. After the first minute is up, tell the child to make a mark on the paper. Once they have finished writing the alphabet again, stop the timer and make the calculations.

Task 2: Alphabet copying and allograph selection

Target: The purpose of this task is twofold: 1) to see if the child has acquired the motor patterns for writing letters, and 2) to see if the child is able to select the correct allograph (lower-case letter) for each capital letter.

Materials: Each child needs a pencil similar to the one they normally use, without an eraser. The researcher requires a stopwatch or clock with a second hand. This task comprises two subtasks, 2A and 2B. For subtask 2A, ‘Alphabet copying’, the researcher needs two types of answer sheets: one with the alphabet written in manuscript and one with the alphabet written in cursive. Select the manuscript or cursive letter template depending on the type of format the children are learning at school; children only have to fill in one of the two answer sheets. For subtask 2A, the child must make an exact copy of each of the letters. For subtask 2B, ‘Allograph selection’, the child gets an answer sheet containing all the letters of the alphabet in capital letters. Ask them to write the lowercase letter for each capital letter presented.

Scoring:

Part 2A

Indicate on the data collection form the time spent, the number of letters written in one full minute, and number of letters written correctly in the time annotated. Also record the alignment, reversals, added strokes and missing strokes (see examples in Annex A: Administrator Instructions and Protocol):

- **Time spent:** record the time the child takes to write all the letters, starting the timer at the moment they start to write the first letter and stopping the timer when they finish the last one. Also stop timing if the child says they cannot continue, or if five minutes have elapsed since the beginning of the subtask.

- **Letters written in one full minute:** assign 1 point for each letter the child produces in the first minute, whether it is legible or illegible, right or wrong. After correction and counting, total up the number of letters produced on the data collection form.
- **Letters written correctly in the time spent:** assign 1 point for each letter the child has copied correctly. Copied letters are considered correct when none of the following errors have been committed: misalignment, reversals, added strokes and missing strokes. If there is any such error, consider it an incorrect letter and do not count it in this section. After correction and counting, note down the total number of letters written correctly.
- **Alignment:** Consider where a letter should normally sit on the baseline and where it is actually seated, except for those letters that are not recognizable. If the letter sits exactly where it should on the baseline, score 0. If the letter is seated above or below the baseline, score 1. In other words, score 1 for an alignment error and 0 for correct alignment.
- **Reversals:** Record any occurrence of inverted letters: that is, if the letter or any part of it has been reversed or rotated incorrectly. Writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’ are examples of reversals. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. Note on the data collection form the total number of reversals in the set of written letters.
- **Added strokes:** Record each occurrence of a letter with an added stroke. Any strokes not shown on the original letter in the template for copying are considered as added strokes. Do not take into account the characteristics of the letter stroke. In other words, score only the added strokes, not their length or inclination. (A stroke is not an added stroke if it is longer or more tilted than it should be, but otherwise correct.) If children write ‘qu’ when copying ‘q’, ignore the ‘u’: this is not counted as an added stroke. Note on the data collection form the total number of added strokes in the set of written letters.
- **Omission of strokes:** Record each occurrence of a letter with omitted strokes: that is, the absence of any stroke shown in the original letter on the template. Do not take into account the characteristics of the letter stroke. In other words, score only the missing strokes, not their length or inclination. If a stroke is shorter or less inclined than it should be, but is present, it is not a missing stroke. Note on the data collection form the total number of omitted strokes from the set of written letters.

Note: Each letter may contain one or more of these errors. Note that when the child has chosen a font (manuscript or cursive) but written the letter in the other style, the following letters cannot be modified through additions or omissions of strokes: ‘f’, ‘b’, ‘k’, ‘p’, ‘q’, ‘r’, ‘s’, ‘v’, ‘w’, ‘x’ and ‘y’. All others can be modified through additions or omissions of strokes until the letter is exactly equal to the letter model of the template that has to be copied. In other words, when the child chooses a type of format for letter copying (manuscript or cursive), then this is the format of the template they are given, and they should reproduce

it exactly. It is treated as an error when the child uses the other format, but this criterion is only used for those letters that can be modified by adding or deleting strokes. The main reason is that we cannot be sure whether children are using the cursive or manuscript format for those letters. For example, the only difference between cursive and manuscript format in copying the letter ‘a’ is adding or deleting two strokes.

Part 2B

Indicate on the data collection form the time spent, the number of letters written in one full minute and the number of letters written correctly in the time spent. Also record the alignment, reversals, added strokes and missing strokes (see examples in Annex A: Administrator Instructions and Protocol).

- **Time spent:** record the time the child has spent in writing all the letters, starting the timer at the moment they start to write the first letter and stopping the timer when they finish writing the last one. Stop timing if the child says they cannot continue or when the maximum time (five minutes) has elapsed since the beginning of the subtask.
- **Letters written in one full minute:** assign 1 point for each letter the child has produced in the first minute, whether legible or illegible, right or wrong. After correction and counting, note the total number of letters produced on the correction template.
- **Letters written correctly in the time spent:** assign 1 point for each letter the child has written correctly in the time spent. If a child has adequately written the allograph (lower case) for the presented capital letter, it is considered correct. It is not correct if it shows misalignment, reversals, added strokes or missing strokes. Any of these errors mean the letter should be judged incorrect and not counted in this section. After corrections, count and indicate the total number of letters written correctly.
- **Alignment:** Consider where a letter should normally sit on the baseline and where it is actually seated, except for letters that are not recognizable. If the letter sits exactly where it should on the baseline, score 0. If the letter is seated above or below the baseline, score 1. In other words, an alignment error scores 1, and correct alignment scores 0.
- **Reversals:** Record any occurrence of inverted letters: that is, if the letter or any part of it has been reversed or rotated incorrectly. Writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’ are examples of reversals. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. Note on the data collection form the total number of reversals in the set of written letters.
- **Added strokes:** Record each occurrence of a letter with an added stroke. Any strokes not shown on the original letter on the answer sheet are considered as added strokes. Do not take into account the characteristics of the letter stroke. In other words, score only the added strokes, not their length or inclination. (A stroke

is not an added stroke if it is longer or more tilted than it should be, but otherwise correct.) If children write ‘qu’ when copying ‘q’, ignore the ‘u’: this is not counted as an added stroke. Note on the data collection form the total number of added strokes in the set of written letters.

- ***Missing strokes:*** Record each occurrence of a letter with omitted strokes: that is, the absence of any stroke shown in the original letter on the answer sheet. Do not take into account the characteristics of the letter stroke. In other words, score only the missing strokes, not their length or inclination. If a stroke is shorter or less inclined than it should be, but is present, it is not a missing stroke. Note on the data collection form the total number of omitted strokes from the set of written letters.

Note: In Subtask 2B, children can mix both types of letters (manuscript and cursive). So when correcting the errors regarding alignment, reversals, added strokes and missing strokes, take into account the font chosen by the child for each letter produced. To do this, you can compare each copied letter with the letter (manuscript or cursive) shown on the template for task 2A. If it is not clear whether a letter has been written in cursive or manuscript style, choose the template most advantageous to the child.

Calculating the speed of writing: In both parts (2A and 2B), the writing speed in seconds is calculated by dividing one minute (60 seconds) by the number of letters written correctly in order in that time (60/number of letters), as indicated on the data collection form.

Instructions:

Part 2A

Invite the child to choose either the manuscript or cursive templates, whichever they consider easier and feel they can do faster. Ask them to copy the letters of the alphabet, staying within the lines of the ruled paper and using their preferred style, cursive or manuscript. Whichever is chosen, the copy should be as close as possible to the model. Tell the child too to copy as fast and as accurately as possible.

You need to give the child expectations of success. Use phrases such as ‘I know you know to copy the alphabet very well, I’d like you to write it’, or ‘Your teacher has told me you’ve learned to copy the letters very well.’ Say, ‘If you can’t do something, don’t worry, just carry on with the next letter.’

Note that the child must write from left to right and top to bottom. Start timing when the child begins to write the first letter. If the child does not start writing when prompted, say ‘See how I do it’, and write the first two letters of the alphabet on the top two lines at the upper left of the template: ‘a’, ‘b’. Do not count spaces or penalize children for omissions or incorrect writing while performing the test. If after five minutes the child has not completed the exercise, ask them to stop and leave this subtask.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just

below the letter they are writing. Tell the child to make the mark after the first minute, but not that they only have five minutes to complete the task, or that the time taken is being measured. It is important to distract the child as little as possible from the activity. Do not stop the stopwatch at the end of a minute: let them finish writing all the letters and continue to time the process until they have finished writing the last letter. Do stop timing if the child indicates that they cannot continue or if they have not finished the task at the end of five minutes.

Part 2B

Ask the child to write the lower-case letters of the alphabet. This time, they are shown the capital letters of the alphabet and must write the corresponding lower-case allograph. Explain that they must write the letters as well as they can, placing them within a space between the horizontal lines above and below of the ruled paper (show these space limits if necessary). Tell them to write as fast and as accurately as possible.

As for Subtask 2A, it is necessary to give expectations of success and propose the task as a 'play of marking the letter' from the beginning.

Task 3: Word copying

Target: The objective of this task is to determine if the child has acquired the motor patterns for writing words.

Materials: Each child needs a pencil similar to the one they normally use with no eraser . You will also need a stopwatch or clock with a second hand. Show the child an answer sheet where words must be copied on the baseline below the sample word provided. You will need two answer sheets with different types of letters, manuscript or cursive, so the children can choose which one to use before starting the task.

Scoring: Indicate on the data collection form the time spent, the number of letters written in one full minute and the number of letters written correctly in the time spent. Also note alignment, reversals, added strokes, missing strokes and missing letters (see examples in Annex A: Administrator Instructions and Protocol).

- **Time spent:** record the time the child takes to write all the words, starting the timer at the moment they start to write the first letter and stopping it when they finish the last letter. The maximum time for writing all the words is five minutes.
- **Letters written in one full minute:** assign 1 point for each letter the child has produced in the first minute, whether legible or illegible, right or wrong, After the correction and counting, note the total number of letters produced on the data collection form.
- **Letters written correctly in the time invested:** assign 1 point for each letter the child has copied correctly. A correct letter is one that has no errors of misalignment, reversals, added strokes or and missing strokes. Any such error means the letter is incorrect and should not be counted in this section. After correction and counting, note the total number of letters written correctly on the data collection form.

- **Alignment:** Consider where a word usually sits on the baseline and where it is actually seated, except for unrecognizable words. If the word sits exactly where it should on the baseline, score 0. If the word is seated above or below the baseline, score 1. If the word, or any part of the word, is not within the ruled lines above and below, record it as an alignment error and score 1. If one single letter of the word is misaligned, this counts as an alignment error for the entire word. Assigning a 1 for the whole word does not indicate that all letters are misaligned and therefore are all wrong. In this section the scores are for whole words, not individual letters. When you have counted the alignment errors per word, the next cell in the data collection form lets you sum up all the alignments errors found in the entire task.
- **Reversals:** Record any occurrence of inverted letters: that is, if a letter or any part of it has been reversed or rotated incorrectly. Writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’ are examples of reversals. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. After counting the reversals per word, use the same template table to sum all the reversals found in the entire task.
- **Added strokes:** All the strokes that do not belong to the original letter on the template to be copied are considered as added strokes. Do not take into account the characteristics of the letter strokes. In other words, score only the added stroke, not its length or inclination. If the child chooses the manuscript template and copies the letters in cursive, treat each letter union as an added stroke. This additional stroke belongs to the first letter of the pair. After counting the added strokes per word, use the table in the data collection form to sum up all additions of strokes found in the entire task.
- **Missing strokes:** Record each occurrence of a letter with missing strokes. The absence of any stroke in the original letter on the answer sheet is considered as an omitted stroke. Do not take into account the characteristics of the letter strokes. In other words, score only the added stroke, not its length or inclination. If the child chooses the cursive template and copies the word in manuscript, treat each disunity as a missing stroke. This omission belongs to the first letter of the separated pair. After counting the missing strokes per word, use the table in the data collection form to sum up all stroke omissions found in the entire task.
- **Missing letters:** Record the number of missing letters in each word. A letter is considered omitted when it has not been copied or when the letter has been written in a totally different place from where it should be, and this error could not be corrected through additions or omissions of strokes. For example, with the word *casa*, if the child writes ‘cas’ or ‘case’, in both cases they have omitted the letter ‘a’. On the contrary, if the child wrote ‘caso’, it can be treated as an omitted stroke, since one stroke could convert a manuscript ‘o’ into a manuscript ‘a’. A letter is never considered omitted when the child fails to translate from cursive to manuscript or vice versa, even if it cannot be modified through additions or

omissions of strokes. It should be counted as a wrong letter, but not a missing letter. After counting the missing letters per words, use the same template box to sum up all the omissions of letters found in the entire task.

Note: Each letter may contain one or more of these errors. It is necessary to note that when the child has chosen a font (manuscript or cursive) and writes the letter contrary to the chosen font, the following letters cannot be modified through additions or omissions of strokes: ‘f’, ‘b’, ‘k’, ‘p’, ‘q’, ‘r’, ‘s’, ‘v’, ‘w’, ‘x’, ‘y’. All others can be modified through additions or omissions of strokes until the letter is exactly equal to the letter model of the template that has to be copied. The rationale is that if the child chooses a type of format for letter copying (manuscript or cursive), the task is for them to reproduce the same letter format exactly. So if they use the other format, the task has been done wrongly. This criterion is only used for letters that can be modified adding or deleting strokes, because we cannot be sure if children are using the cursive or manuscript format for those letters. For example, the only difference between cursive and manuscript format in copying the letter ‘a’ is adding or deleting two strokes.

Calculating the speed of writing: The writing speed in seconds is calculated dividing one minute (60 seconds) by the number of letters written in a minute (60/number of letters) as specified in the correction template.

Scoring when the child does not write one or more words: When children do not write one or more words during the task, put the number of letters that form that missing word (and therefore are letters that have been omitted) in the corresponding cell ‘Missing letters’. Leave all the other cells corresponding to the missing word blank. This criterion only applies to those words that were not copied during the maximum time to perform the task. Words not copied because the child ran out of time (after five minutes) should be scored by leaving all sections blank. Do not count this as omitted letters, because the child has not omitted the word, but did not have time to write it.

Instructions: Ask the child to choose whichever template (manuscript or cursive) they prefer: that is, the one they consider easier and think they can do faster. Children choosing the manuscript template should always leave a space between letters as shown in the template, and those choosing the cursive template should join up their letters just as in the template. Ask the child to write the words as well as they can, placing them within a space between the horizontal lines above and below of the ruled paper (show these space limits if necessary). Tell them to write as fast and as accurately as possible, although the time is not limited and they can complete the entire task. Again give the child expectations of success, using phrases such as ‘I know you know copy words very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t do something, don’t worry, continue with the next part.’ Note that children should always write from left to right and top to bottom.

Before starting the task, write down the first word as an example, at the top of the answer sheet. While doing so, explain to the child how to keep within the baselines on the answer sheet, how to leave spaces or not (depending on whether they have chosen manuscript or cursive) and how to perform all the strokes that contain each of the letters that make up

the word. Start timing when the child begins to write the first word. If they do not start writing when prompted, make it clear that they do not know how to perform the task, saying ‘See how I do it with another example.’ Produce the second example, again writing at the top of the sheet. Ignore the spaces and do not penalize the child for omitting or misspelling words during the process. If after five minutes the child has not completed the exercise, stop timing and ask the child to leave this task.

Before starting the exercise, it is IMPORTANT to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. Tell them to make this mark after the first minute, but not that they only have five minutes to complete the task, or that you are timing them. It is important to distract the child as little as possible from the activity. Do not stop the stopwatch after a minute: let them finish writing all the letters and continue to time the process until they have finished the last letter. Do stop timing if the child indicates they cannot continue or when the five minutes is up, even if they have not finished.

Task 4: Sentence copying

Target: The objective of this task is to determine if the child has acquired the motor patterns for writing sentences.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. You will need a stopwatch or clock with a second hand. Show the child an answer sheet on which sentences must be copied between the lines. You will need two answer sheets, one using manuscript and the other cursive script. Children may choose which template to copy.

Scoring: Indicate on the data collection form the time spent, the number of letters written in one full minute and the number of letters written correctly in the time spent. Also note alignment, reversals, added strokes, missing strokes, missing letters, word spacing and missing words (see examples in Annex A: Administrator Instructions and Protocol):

- **Time spent:** record the time the child takes to write all the words, starting when they start to write the first letter and stopping when they finish copying the last letter. The maximum time for writing all the words is five minutes.
- **Letters written in one full minute:** assign 1 point for each letter that the child has produced in the first minute, whether legible or illegible, right or wrong. After the correction and counting, indicate on the data collection form the total number of letters produced.
- **Letters written correctly in the time spent:** assign 1 point for each letter the child has copied correctly. Letters are judged as correct if they do not include misalignment, reversals, added strokes or missing strokes. Any of these errors is an indication of an incorrect letter, which is not counted in this section. After correction and counting, note the total number of letters written correctly on the data collection form.

- **Alignment:** Consider where a word normally sits on the baseline and where it is actually seated, except for unrecognizable words. If the word sits exactly where it should on the baseline, score 0. If the word is seated above or below the baseline, score 1. If the word, or any part of it, strays above or below the bounding lines, this is an alignment error: score 1. If one single letter of the word is misaligned, treat this as an alignment error for the entire word. This section is scored on a whole-word basis, not counting each letter that is misaligned. When you have counted the alignment errors, use the same table on the data collection form to sum up all alignments errors found in the entire task.
- **Reversals:** Record any occurrence of inverted letters: that is, if the letter or any part of it has been reversed or rotated incorrectly. Examples are writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. Note on the data collection form the total number of reversals in the set of written letters.
- **Added strokes:** Record each occurrence of a letter with an added stroke. Any stroke not shown in the original letter on the template is considered an added stroke. Do not take into account the characteristics of the letter strokes. In other words, score only the added strokes, not their length or inclination (it does not matter if the letter stroke is longer, tilted or otherwise different from the original). If the child has chosen the manuscript template but copies the letters in cursive, treat each joining of letters as an added stroke. This additional stroke belongs to the first letter of the pair. After counting the added strokes per word, use the same template box to sum up all additions of strokes in the entire task.
- **Missing strokes:** The absence of any stroke shown in the original letter on the template contains is considered as an omitted stroke. Do not take into account the characteristics of the letter stroke. In other words, score only the missing strokes, not their length or inclination. If the child chooses the cursive template and copies the words in manuscript, treat each separate letter as having a missing stroke, with this omission belonging to the first letter of the separated pair. After counting the missing strokes per word, use the same template box to sum up all stroke omissions found in the entire task.
- **Word spacing:** For each space between words that the child respects, score 1. Do not count the space between the words *perro* and *Bajo*.
- **Missing words:** Record the number of omitted words. Indicate on the data collection form the total number of words omitted from the sentence.
- **Missing letters:** Record the number of missing letters in each word. A letter is considered omitted when it has not been copied, or when it has been written in a totally different place from where it should be, and this cannot be corrected through additions or omissions of strokes. For example, for the word *casa*, if the child writes ‘cas’ or ‘case’ they have omitted the letter ‘a’. But if the child writes

'caso', this counts as a missing stroke but not a missing letter, since a single stroke could turn the manuscript 'o' into a manuscript 'a'. A letter is never considered omitted when the child fails to use the chosen form (cursive or manuscript), even if it cannot be modified through additions or omissions of strokes; it is counted as a wrong letter, but not a missing letter. After counting the missing letters per words, use the same table on the data collection form to sum up all the omissions of letters in the entire task.

Note: Each letter may contain one or more of these errors. It is necessary to note that when the child has chosen a font (manuscript or cursive) and writes the letter contrary to the chosen font, the following letters cannot be modified through additions or omissions of strokes: 'f', 'b', 'k', 'p', 'q', 'r', 's', 'v', 'w', 'x', 'y'. All others can be modified through additions or omissions of strokes until the letter is exactly equal to the letter model on the template. The rationale is that when the child chooses manuscript or cursive, they are asked to exactly reproduce the same letter format. So if they have used the other format, they have not done this correctly. This criterion is only used for those letters that could be modified by adding or deleting strokes, because we cannot be sure if children are using the cursive or script format for those letters. For example, the only difference between cursive and script format in copying the letter 'a' is adding or deleting two strokes.

Note: In this task 'qu', 'rr', 'll' and 'ch' are counted as single letters.

Note: When the child has not copied a full stop or comma, this is not considered an error. However, a capital letter which should be lowercase or vice versa is counted as an error.

Calculating the speed of writing: The writing speed in seconds is calculated by dividing one minute (60 seconds) by the number of letters written in one minute (60/number of letters) as specified in the correction template.

Scoring when the child does not write a word or words: When children do not write one or more words during the task, score 1 point in the corresponding cell 'Missing words'. Leave all other cells corresponding to this word blank. This criterion only applies to those words that were not copied within the maximum time to perform the task. If words were not copied because the child ran out of time (after five minutes), then leave all sections blank. These do not count as missing words, because the child has not omitted the words, but did not have time to write them. If the child is midway through writing a word when the time limit is reached, it can be treated in either of two ways. If the child has written at least half the letters of the word, treat it as a whole word with missing letters. If less than half the word has been written, do not assess the word at all. (It is not an omitted word, but simply one not written because of lack of time.) For instance, if the child writes 'Bajo la lluvia escucha el saxof' when the last word should be *saxofón*, treat 'saxof' as a word with two missing letters. If they write 'Bajo la lluvia escucha el sa', then ignore the two letters at the end.

Instructions: Ask the child to choose either the manuscript or cursive template, whichever they consider easier and think they can do faster. Children choosing the manuscript template should always leave a space between letters as given in the template, and those

choosing the cursive template should link their letters just as in the template. Ask the child to copy the words on the template as well as they can, placing them within a space between the horizontal lines above and below of the ruled paper (show these space limits if necessary). Tell them to write as fast and as accurately as possible, but that there is no time limit and they can complete the task. You need to give the child expectations of success with phrases like ‘I know you copy words very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t do something, don’t worry, carry on with the next word.’ Note that children should always write from left to right and top to bottom’.

Before asking the child to start the task, show them an example, by writing down the sentence at the top edge of the template. While writing it, point out the need to keep within the guidelines on the paper, to leave spaces or not (depending on whether they have chosen manuscript or cursive) and how to make all the strokes in each letter that makes up the word. Start timing when the child begins to write the first word. If the child does not start to write when prompted, make it clear they do not know how to perform the task, saying ‘See how I do it with another example’. Copy the second example in the upper edge of the sheet. Ignore the spaces and do not penalize the child for omitting or misspelling words during the process. If the child has not completed the exercise after five minutes, stop the task.

Before starting the exercise, it is IMPORTANT to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. Time from the moment the child starts to write, and tell them to make the mark after the first minute, but do not explain that there are only five minutes to finish the task, or that you are timing them. It is important to distract the child as little as possible from the activity. Do not stop the stopwatch after one minute, but let them finish writing all the letters, and continue to time the process until they have finished writing the last letter. Stop timing if the child indicates they cannot continue, or after five minutes, if the task is still not complete.

Task 5: Writing dictated words with inconsistent spelling

Target: The objective is to assess if the child is able to write words that are spelled differently than they are pronounced – that is, words that do not conform to any spelling rules.

If children are able to write words that do not conform to any spelling rules, this indicates they have memorized its orthographic representation. The child must have an orthographic representation of the arbitrary spelled words to write them well. The procedure is that the meaning directly activates the written representation without the need to break the word into its phonemes or graphemes. Therefore, this is a method of assessing whether the child is using the direct or the lexical route.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. Give the child an answer sheet, where words should be written on the ruled lines.

Scoring: Indicate on the data collection form the number of words spelled correctly. Also indicate for each word the substitutions, deletions, added letters, translations, and pronunciation if any:

- **Number of words spelled correctly:** If the child has written the word correctly, score 1. If the word is incorrect, score 0. A word is considered spelled correctly when its orthographic representation is correct: that is, when the word is written as it appears on the data collection form.
- **Substitutions:** Record whether or not a word has been substituted. A word is regarded as substituted when the child replaces a critical letter (marked in bold font on the data collection form) with an alternative letter which also represents that phoneme. Each word has one or more critical letters. In *veneno* the alternative (for ‘v’ is ‘b’). In *papaya* it is ‘ll’ (instead of ‘y’). In *noveno*, it is ‘b’ (for ‘v’), in *cometa* there are three alternatives, ‘k’, ‘q’ or ‘qu’ for ‘c’; in *boda* it is ‘v’ (for ‘b’); in *leno* it is ‘y’ (for ‘ll’); in *cuna* it is ‘k’, ‘q’ or ‘qu’ for ‘c’; in *harina* the ‘h’ is a letter that might be omitted; in *paje* it is ‘g’ (for j); in *quita* it is ‘q’ ‘ku’or ‘k’ for ‘qu’; in *gitana* it is ‘j’ (for ‘g’); in *llama* it is ‘y’ (for ‘ll’); in *hada* the ‘h’ might be omitted; in *guerra* it is ‘gu’ for ‘gue’; for *cena* it is ‘s’ or ‘z’ for ‘c’; in *guitarra* it is ‘g’ for ‘gui’; in *sapo* it is ‘z’ for ‘s’; in *jirafa* it is ‘j’ for ‘gi’; in *zapato* it is ‘s’ for ‘z’; and in *cohete* the ‘h’ might be omitted. (Note that the absence of the letter ‘h’ is treated as a substitution.)
- **Deletions:** Record the number of missing letters in each word. A letter is considered missing when the child has not written one or more letters of the word, or when one of the letters has been replaced by another, *except* when the critical letter is replaced by its alternative. For example, if the word given is *veneno* and the child writes ‘veneo’ or ‘venemo’ they have missed out an ‘n’; if the word given is *boda* and the child writes ‘poda’, this is treated as a deletion of the ‘b’. It is not a substitution since the ‘b’ has been changed to ‘p’ and not the alternative letter ‘v’.
- **Added letters:** Record the number of added letters in each word. This type of error is committed when the child incorporates letters that do not form part of the word (for example, if the word is *harina* and the child writes ‘harinas’).
- **Inversions:** Record any transformations in a word. This type of error occurs when the child changes the order of the letters in the word (and writes, for example, ‘terce’ instead of *trece*). Score 1 point for each word containing transformations (even if there is more than one transformation in a word). If the number of letters in the word is more or less than the correct number, this is not treated as a transformation, but as additions or deletions of letters. For instance, if the word is *cuna* and the child writes ‘ucnan’, this is not treated as a transformation of the ‘u’, since there are two deletions (‘c’ and ‘u’) and an addition (‘n’) adding up to a different total from the correct word.
- **Pronunciation:** Indicate on the data collection form if the child says out loud a word or part of a word while writing. Score 1 when this happens, and 0 otherwise.

Scoring when a child does not write a word or several words: When the child does not write one or more words during the task, leave all cells corresponding to the word blank, except for ‘Missing letters’, where you should enter the number of letters in the template. Also put a 0 in the corresponding section ‘Correct spelling’.

Instructions: Ask the child to write down words that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the first two words of the test (*yate, gusano*). Repeat twice, slowly and pronouncing each word correctly. If the child asks if the word can be repeated, do so only once more. Be aware that the children must always write from left to right and top to bottom.

If the child does not begin to write the first word of the test when you dictate it, say ‘See how I do it’, and write it down as an example. Do not repeat the word aloud while writing, as the child might take this as a model and use this strategy when trying to write the following words. Ignore spaces and do not penalize the child for omissions or incorrectly spelled words during the exercise.

Task 6: Writing words that conform to spelling rules from dictation

Target: If the child is able to write words that conform to spelling rules, this indicates that they have memorized these rules, recalling the orthographic representation. This task aims to determine the use of the lexical route by the child. The rules to evaluate are the following:

- Write ‘m’ before ‘p’ and ‘b’ (*sombrero* [hat], *ombligo* [navel]).
- The letter ‘r’ is written at the beginning of a word (*radio* [radio]) and after ‘l’, ‘n’, and ‘s’ (*sonreír* [smile]). The double ‘rr’ is written in inter-vowel position (*perro* [dog]) and sounds stronger.
- The letter ‘h’ is written when the sound is ‘hue’, ‘hie’ (as in *hueso* [bone], *hielo* [ice]).
- The letter ‘y’ is written at the end of a word and when the stress mark does not falls on that letter (*rey* [king]).
- All verbs ending in ‘aba’ are written with ‘b’ (e.g. *caminaba* [walking]).
- All verbs ending in ‘bir’ (e.g. *subir* [top]) are written with ‘b’, except *hervir* [to boil], *servir* [to serve], and *vivir* [to live].
- Words ending in -evo, -ave (*nuevo* [again], *suave* [smooth]) are written with the letter ‘v’ except for *mancebo*, *placebo*, *recebo*, *sebo*, *árabe*, *jarabe*.
- Words ending in ‘bilidad’ are spelled with the letter ‘b’ (*debilidad* [weakness]) except *civilidad* [civility] and *movilidad* [mobility].
- Words ending in -jero, -jera, -jería (*pasajero* [passenger], *cajera* [cashier], *relojería* [watches]) are written with the letter ‘j’.
- Words ending in -logía (*tecnología* [technology]) are written with the letter ‘g’.

- Words ending in -illo,-illa (*pestillo* [latch], *taquilla* [box office]) are written with a double ‘ll’.
- Words ending in -iva are written with ‘v’ except *criba*, *jiba*, *piba*.

Materials: Each child needs a pencil similar to the one they normally use with no eraser . Give the child the answer sheet, on which the words have to be written on the ruled lines.

Scoring: Indicate on the data collection form the number of words in which the child has used the correct spelling rule.

- **Correct versus incorrect spelling rule:** Score 1 point if the child has used the spelling rule correctly. The child has successfully used the spelling rule if they have written correctly the part of the word that contains the spelling rule (all the relevant letters are in bold on the data collection form). It is necessary for children to write properly the letters that make up the rule, so for example if the word is *cepillo* and the child writes ‘sepillo’ or ‘pillo’, score 1 point for correct use of the correct spelling rule - illo, in spite of the misspelling elsewhere in the word. If the word is *cajera* and the child writes ‘cajero’ or ‘cajere’, score 0 because they did not use entirely the spelling rule -jera. Do not penalize children if they do not use the stress mark.

Scoring when the child does not write one or more words: When children do not write one or more words during the task, leave the corresponding cells blank.

Instructions: Ask the child to write down the words that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the first two words of the test (*limpio*, *herba*). Repeat twice slowly, pronouncing each word correctly. If the child asks you to repeat a word, do so only once more.

If the child does not begin to write the first word of the test when you dictate it, say ‘See how I do it’ and write it down as an example. Do not count spaces or penalize the child for omissions or incorrectly written words during the exercise. Children should always write from left to right and top to bottom.

Task 7: Writing pseudowords from dictation

Target: The objective is to assess if the child is able to write the graphemes that correspond to the phonemes of the word. The spelling of pseudowords indicates knowledge of the rules of phoneme-grapheme correspondence. If the child makes many more mistakes in writing pseudowords, it will imply they have difficulties in using the phonological route. These pseudowords also follow certain spelling rules: if the child applies the rule, this indicates they have memorized it.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. Give the child an answer sheet and ask them to write the pseudowords on the ruled lines.

Scoring: Indicate on the data collection form the number of pseudowords written correctly. Also indicate whether or not the child has used spelling rules.

- **Number of pseudowords with correct graphical representation of the sounds:** If the child has written the pseudoword correctly, score 1. For incorrect spelling, score 0. A pseudoword – an invented word that does not exist in our language – is judged to be written correctly when the child has transformed each phoneme into its corresponding graphemes. All the words written in a way that can be pronounced like the dictated word, are valid, whether or not they conform to spelling rules. For example, if the pseudoword dictated is *hiefe* and the child writes ‘*iefes*’ or ‘*yefe*’, these are considered correct since they both sound like the pseudoword.
- **Correct versus incorrect use of the spelling rule:** Score 1 point for each correctly applied spelling rule in a particular pseudoword. For example, if the dictated word is *lambo* and the child write ‘*tambo*’ or ‘*pambo*’, score 1 since the child has applied the orthographic rule ‘m’ before ‘b’, even though they have misspelled another part of the word. The data collection form shows in bold the spelling rule included in each pseudoword. This rule has to be applied correctly for the score to be 1 point in this section.

Note: The pseudowords *nempu* and *lambo* sound the same in Spanish as ‘nenpu’ and ‘lanbo’. So score 1 point if the child spells the words with either an ‘m’ or an ‘n’, as the graphical representation of the sounds is correct for both spellings.

Note: You must keep in mind that child might dramatically misspell a pseudoword and yet apply its spelling rule correctly, or vice versa. For instance, if the word dictated is *rumu* and the child writes ‘*romo*’, score 0 in the first cell, ‘word contains the graphical representations of all sounds’, but 1 in the second cell, ‘using the spelling rule’, since the written word has respected the rule that the ‘r’ has to be written at the beginning of the pseudoword. If the word dictated is *hiefe* and the child writes ‘*yefe*’, score 1 for ‘word contains the graphical representations of all sounds’ but 0 for ‘using the spelling rule’, since the written word did not respect the rule regarding ‘hie’ at the beginning of a pseudoword. Children should not be penalized if they do not use stress marks.

Scoring when a child does not write one or more words: When children do not write one or more words during the task, score 0 for ‘word contains the graphical representations of all sounds’ and leave the cell ‘Using the spelling rule’ blank.

Instructions: Ask the child to write down the invented words you will dictate. You need to give the child expectations of success with phrases like ‘I know you know writing very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write any of the invented words, don’t worry, continue with the next one.’ Start dictating the first two invented words as examples (*pambu*, *vetenaje*). Repeat twice slowly,

pronouncing each pseudoword correctly. If the child asks for a pseudoword to be repeated, do so only once more.

If the child does not begin to write the first example when it is dictated, say ‘See how I do it’, and write out the first example. Ignore spaces and do not penalize the child for omissions or incorrect spelling during the exercise. Children should always write from left to right and top to bottom.

Task 8: Writing a sentence from dictation

Target: Assess if the child is able to write a sentence from dictation.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. Give the child an answer sheet on which the sentence should be written on the ruled lines.

Scoring: Indicate on your data collection form the number of words spelled correctly, capital letters written correctly and stress marks used correctly, as well as the number of spaces between words and punctuation marks. Also take into account alignment, reversals, substitutions, added letters and missing letters:

- **Words spelled correctly:** If the child has written the word correctly, score 1. If the spelling is incorrect, score 0. A word is considered correct when there are no spelling errors and it has been reproduced exactly like the dictated word on the data collection form. In this task, do *not* penalize the use of lowercase letters at the beginning of the sentence, missing stress marks (for example, if the child should write ‘El’ and writes ‘el’), or the absence of capital letters. So ‘el’ will be considered a correct word. If the child should write ‘elefante’ and write ‘Elefante’, that is considered incorrect, as it uses a capital letter when none is needed. If the child should write ‘más’ and writes ‘mas’, this is considered a correct word. Failure to separate or attach words to or from each another correctly scores 0 in this section. For instance, if the child writes ‘delos’ when *de los* is correct, give a 0 to both ‘de’ and ‘los’. The same applies for ‘mun do’ instead of the correct *mundo*.
- **Capital letters used correctly:** For each capital letter the child writes correctly, score 1.
- **Stress mark used correctly:** For every stress mark the child writes correctly, score 1.
- **Spacing between words:** For each space between words that the child respects, score 1.
- **Use of punctuation marks:** For each punctuation mark that the child uses correctly, score 1.
- **Alignment:** Consider where a word usually sits on the baseline and where it has been placed, except for those words that are not recognizable. If the word sits exactly where it should on the baseline, score 0. If the word is seated above or below the baseline, score 1. If the word, or any part of it, strays outside the

bounding lines above and below the space for it, record this as an alignment error and score 1.

- **Reversals:** Record the occurrence of every inverted letter (when the letter or any part of it has been reversed or rotated incorrectly, as in writing ‘p’ for ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’). When a letter is inverted, score only the reversal and do not analyse the alignment, added strokes, or missing strokes.
- **Substitutions:** This type of error occurs when the child replaces one letter for another, when the two characters do not sound the same way in the word. So if the word is ‘más’ and the child writes ‘tas’, this is considered a replacement of the ‘m’ with a ‘t’.
- **Added letters:** Record the number of added letters in each word. This type of error occurs when the child incorporates letters that do not form part of the word, such as writing ‘unos’ instead of ‘uno’.
- **Missing letters:** Record the number of missing letters in each word. There is a missing letter when the child does not write a letter or letters of the word, or when one of the letters is replaced by another letter with the same sound (as when the word is *mundo* but the child writes ‘mumdo’ or the word is *distintiva* and the child writes ‘distintia’). In both words there is a missing letter (the ‘n’ in *mundo* and ‘v’ in *distintiva*).

Scoring when the child does not write one or more words: When children do not write one or more words during the task, leave the cells that correspond to the word blank, except for ‘Correct spelling’ (score 0) and ‘Deletions’ (record the number of letters omitted).

Instruction: Ask the child to write down a sentence that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you know writing very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the test sentence (*El juguete está roto*). First say the sentence, then repeat each word slowly, pronouncing them correctly, giving the child the time to write. Do not show a visual model of the sentence. When you complete each word of the sentence, quickly say the next word. If the child asks you to repeat a word, do so only once. You must remember to dictate the first sentence and give the child time to write it down completely, then proceed to dictate the second. Remember not to verbalize the endpoints of each sentence.

If the child does not begin to write the first example when you dictate it, say ‘See how I do it’, and show the child how to do the first two words of the example. Ignore spaces and do not penalize the child for omissions or incorrect writing during the exercise. Children must remember always to write from left to right and top to bottom, and should be aware that they must write within the ruled lines on the answer paper.

Task 9: Writing an independently composed sentence

Target: To assess if the child is able to write an independently composed sentence. This task assesses the ability of the child to convert oral language into written language.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. You need a stopwatch or clock with a second hand. Give the child a ruled answer sheet and ask them to write on the ruled lines.

Scoring: Indicate on the data collection form the time spent, the number of words written in each period of time (in one minute, two minutes, the entire task up to five minutes), the number of words spelled correctly in each period of time, the use of capital letters, the use of stress marks, the spaces between words, and the punctuation marks.

- **Time spent:** enter the total time that the child takes to write the sentences. This time should not exceed five minutes.
- **Number of words written during the first time interval (one minute):** score 1 point for each word the child has written, whether it is spelled correctly or incorrectly. Do not include words that are wrongly separated from or joined to other words. If for example the child writes ‘mellamo’ instead of *me llamo* or ‘gus ta’ instead of *gusta*, ignore both words and do not count them in any of the cells on the data collection form. Similarly, do not count words that do not exist in Spanish, such as ‘Feh’, except for words used onomatopoeically to refer to sounds, such as ‘Pam’ and ‘bum’.
- **Number of words written with correct spelling during the first time interval (one minute):** If the child has written the word correctly, score 1. If the child has written the word incorrectly, score 0.

A word is regarded as spelled correctly when:

- it does not contain misspellings
- for any words written in a foreign language (such as English), it is considered correct only when it is spelled correctly that foreign language
- the word starts a sentence and its first letter is not capitalized, but the word is spelled correctly
- it is spelled correctly but a stress mark is omitted (this is dealt with in the section ‘Using stress marks’)
- a numerical quantity is expressed in numbers (1, 2, 3 ...).

A word is considered to be incorrect when:

- the first letter is written in lowercase, but it should be written with a capital letter (for instance, it is a proper name)

- the word is written in upper case when it should not be, since it is not a proper name (such as ‘Gato’ [Cat]) or there is a capital letter in the middle of the word (such as ‘gaTo’ [cAt]);
- there is a mismatch of gender, number or verb, or one of the words involved in a syntactic construction is incorrect. For instance, if the child writes ‘el niña’ when it should be *la niña*, count one of the two words as incorrect.

- ***Number of words written during the second time interval (second minute)***: score 1 point for each word that the child has written, whether it is spelled correctly or incorrectly. The same criteria are used as specified above for ‘Number of words written during the first time interval (one minute)’.
- ***Number of words written with correct spelling during the second time interval (second minute)***: If the child has written the word correctly, score 1; incorrectly, score 0. Use the criteria outlined above to determine correct or incorrect spellings.
- ***Total number of words written (total in all the time taken)***: score 1 point is for each word that the child has written in the total time spent on this task, whether it is written correctly or not. This might not be a sum of words written in interval 1 and interval 2, as the time spent performing the task can be five minutes maximum.
- ***Total number of words spelled correctly (total in the time taken)***: As above, score 1 for correct and 0 for incorrect spelling. This might not be a sum of words written in interval 1 and interval 2, as the time spent performing the task can be five minutes maximum.
- ***Use of capital letters***: For each capital letter written correctly, score 1. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task.
- ***Stress marks***: For every stress mark the child has written correctly, score 1. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task.
- ***Spacing between words***: For each space between words that children have included correctly, score 1. This applies to spaces between each two words, but not between ‘eliminated words’ (words eliminated from the count because of one of the errors mentioned above). So if the child writes ‘yo me llamo adrian yme gusta el football’ instead of *yo me llamo adrian y me gusta el football*, count five spaces, not including the space between ‘llamo adrian yme’ since this entire phrase is eliminated. Do not count the space between the last word of a sentence and the first word of the next sentence. Do count the space between a word and the line the child makes as requested to mark one minute and two minutes elapsing. So if the child writes ‘Yo me llamo / Adrián’, count in the first time interval three spaces, and in the second time interval 0 spaces. When this line is at the end of a sentence, do not count the space. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task.

- **Punctuation marks:** For each correct punctuation mark, score 1. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task.

IMPORTANT NOTE: The child is considered to have written a sentence when several words have been set down that convey a meaning that makes sense.

Scoring when the child finishes writing in less than one minute: If the child takes less than one minute to perform the task, leave all cells for the second interval blank, and complete scores for only the first interval and the total. In that case both these sections will have the same scores.

Instructions: Start up a conversation with the child about their interests. Ask about his/her favourite games, hobbies and so on. Once the child has said one or two things, ask them to write two sentences on what they have just described. Ask them to write one sentence and then add a second immediately below the first. Explain briefly what a sentence is: a set of meaningful words. Start timing the process when the child starts writing.

If the child does not start writing when prompted, say ‘See how I do it’, and write down a sentence as an example (such as *Yo monto a caballo por las tardes con mi madre* [I ride a horse in the afternoon with my mother]). The second example sentence might be *Mi caballo preferido se llama Pegaso* [My favourite horse is called Pegaso]. Ignore spaces and do not penalize the child for omissions or incorrect writing during the exercise. Children should always write from left to right and top to bottom.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. Time from the moment the child starts to write, and tell them to make the mark after the first minute (but not that they only have five minutes to complete the task, or that you are timing them). It is important to distract the child as little as possible from the activity. Do not stop the stopwatch after one minute, let them finish writing all the words, and continue to time the process until they have finished writing the last letter. Stop timing if the child indicates they cannot continue or after the full five minutes is up.

Task 10: Writing a story

Target: Children need to move beyond single words and sentences and learn how to deal with text. Therefore, the aim of this task is to assess if the child has acquired narrative-writing ability. Narrative writing and expository writing are two different structures and have different grammars. Narrative structures are easier because they have well-defined components that children acquire understanding of from early ages (a beginning, event, an outcome and so on). In contrast, expository writing is more difficult because it requires another kind of organization of knowledge. This assessment is limited to narrative ability.

Materials: Each child needs a pencil similar to the one they normally use, with no eraser. You will need a stopwatch or clock with a second hand. Give the child a ruled answer sheet on which the text should be written on the ruled lines.

Scoring: Indicate on the data collection form the time taken, and the following sections for each time interval (first time interval (five minutes), the second time interval (next five minutes), and full time): number of written words, number of words with correct spelling, use of capital letters, use of stress marks, word sequence, use of punctuation marks, and planning processes used in the written text. Do not count any of these points if the child does not meet the primary objective of this task: telling a story.

- **Time spent:** enter the total time the child has taken writing the narrative. This time should not exceed ten minutes.
- **Number of words written during the first time interval (the first five minutes):** Score 1 point for each word the child has written, whether it is spelled correctly or incorrectly. Do not include words that are incorrectly separated from or joined to other words. For example, if the child writes ‘mellamo instead of *me llamo* or ‘gusta’ instead of *gusta*, eliminate both words and do not count them in any of the scoring sections for this task. Similarly do not count words that do not exist in Spanish, such as ‘Feh’, unless they are correctly used as onomatopoeiac conveyance of a sound such as ‘Pam’ or ‘bum’.
- **Number of words written with correct spelling during the first time interval (the first five minutes):** Score 1 for words written correctly, 0 for words written incorrectly.

A word is regarded as spelled correctly when:

- it does not contain misspellings
- for any words written in a foreign language (such as English), it is considered correct only if it is spelled correctly in that foreign language
- the word starts a sentence and its first letter is not capitalized, but the word is spelled correctly
- it is spelled correctly but a stress mark is omitted (this is dealt with in the section ‘Using stress marks’)
- a numerical quantity is expressed in numbers (1, 2, 3 ...).

A word is considered to be incorrect when:

- The first letter is written in lowercase, but it should be written with a capital letter (for instance, it is a proper name)
- the word is written in upper case when it should not be, since it is not a proper name (such as ‘Gato’ [Cat]) or there is a capital letter in the middle of the word (such as ‘gaTo’ [cAt])

- there is a mismatch of gender, number or verb, or one of the words involved in a syntactic construction is incorrect. For instance, if the child writes ‘el niña’ when it should be *la niña*, count one of the two words as incorrect.
- ***Number of words written during the second time interval (the next five minutes):*** Score 1 for each word that the child has written, whether it is spelled correctly or incorrectly. Use the criteria outlined for the first time interval above.
- ***Number of words written with correct spelling during the second time interval (the next five minutes):*** Score 1 for correct spelling, 0 for incorrect spelling. Use the criteria outlined for the first time interval above.
- ***Total number of words written (ten minutes in total):*** Score 1 for each word that the child has written, whether it is spelled correctly or incorrectly.
- ***Total number of words spelled correctly (ten minutes total):*** Score 1 for correct spelling, 0 for incorrect spelling.
- ***The use of capital letters:*** For each capital letter used correctly, score 1. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task
- ***Stress marks:*** Score 1 for every stress mark used correctly. This section is calculated individually for the first time interval, the second time interval and the total time spent on the task.
- ***Correct word sequence:*** a word sequence is composed of groups of two words only. Score 1 point for each sequence of two words that is plausible in our language; in other words, for every coherent sequence of two words.

This sequence is broken only when there is:

- a full stop that ends a sentence
- a mismatch of gender, number or verb
- a word is categorized as ‘eliminated’ (as with the example above, ‘mellamo’ or ‘lla mo’).

Note: The existence of a comma (,) or a word categorized as ‘wrong’ (such as ‘sapato’ instead of *zapato*) will not break the sequence. As an example, take the word sequence ‘yo me caí con la bicicleta. Nunca me caído con ella.’ It contains eight correct sequences of words (yo-me, me-caí, caí-con, con-la, la-bicicleta, Nunca-me, caído-con, con-ella). The pair me-caído is not counted, because between me and caído the conjugated verb ‘he’ is missing, therefore this is not a correct sequence.

Note: also that the sequence between the last word of a time interval and the first word of the next time interval is always be counted in the first interval score. For instance, if the child writes ‘Yo me / llamo Pedro’, there are two word sequences (yo-me and me-llamo) in the first time interval and one word sequence in the second time interval (llamo-Pedro).

- **Punctuation marks:** Score 1 point each punctuation mark that the child uses correctly.
- **Global structure:** this index is assessed to analyse the extent to which children appear to understand the causal relationships between the events in the story, as opposed to simply describing a series of scenes. For a score to be given, the child's narrative must include some essential elements. 1 point is given to each essential element on the data collection form. Score 1 point when the category is present in the text and 0 if it is not. The categories are:
 - *Where the history takes place:* Does the child mention the place where the action is (such as in a village or a school)?
 - *Characters involved in the story:* Does the child name a character who performs an action?
 - *Initial event or problem:* Score 1 for any phrase or expression that indicates the reason or reasons why things happen later, the problem that the main character has to face (such as 'He was told he had to get up for school ...').
 - *Implementation:* This considers subsequent actions that the character takes (such as, ate a big breakfast, walked to school ...).
 - *What happens at the end of the story:* Does the child explain the end of the story?

Note: Assign just one 1 or a 0 in each category, regardless of whether more than one instance of the category appears in the story. The total time is a summation of the first time interval and second time interval, so the values that can be obtained are 0, 1 or 2. The characters and the execution of actions assigned to the first interval may not also be assigned to the second time interval if they have been scored in the first. In order for a 1 to be given for the second time interval, there must be another instance of the category. Furthermore, the sections 'Initial event or problem' and 'What happens at the end of the story' can only be counted in one of the two time intervals, as these events can occur only once in the story.

Scoring when the child finishes writing in less than five minutes: If the child does not take more than five minutes to complete the task, leave the cells related to the second time interval blank, and complete the form for only the first time interval and the totals. In that case both sections will have the same scores.

Instructions: Ask the child write a story based on a picture you show them. Give the child an answer sheet with a picture on it, and say, 'I'll show you a picture for you to write a story about. You should take your time to look at the picture (about 30 seconds) and then start writing. Try to remember a story like this that has happened to you or someone you know.' If the child does not know how to do this, you can help by writing the first two words of the story.

Before starting the exercise, it is IMPORTANT to propose the task as a game to the child. The game is that at some unexpected point in the task they will be told to make a mark just below the word they are writing. Time from the moment the child starts to write, and tell

them to make the mark after the first minute, but not know that they only have ten minutes to complete the task, or that you are timing them. It is important to distract the child as little as possible from the activity. Do not stop the stopwatch after the first interval, and continue to time the process until they have finished writing the last word. Stop timing if the child indicates they cannot continue or after completion of the full ten-minute period.

IMPORTANT NOTE: Allow children to complete the exercise by providing ten minutes maximum. When children have completed the exercise, review the legibility of writing in order to check whether it includes everything the child wants to express. This will help the process of correcting the narrative. If any word is illegible, this is the time to ask the child what they meant. The tester can write the correct word above the illegible word.

5. EGWA Pilot Study in the Canary Islands

5.1 Introduction

This section describes the pilot study conducted in the Canary Islands in Spain, together with its key findings. As explained in the previous sections, a model instrument for early grade writing assessment (EGWA) was developed based on a literature review and existing writing tools and assessments, as well as school curriculum. In this phase of the project, this model instrument was piloted in twelve primary schools, assessing children's basic writing skills, mapped in composing units of increasing complexity (letters, words, sentences and stories) to communicate meaning.

This section provides the psychometric properties of EGWA. Descriptive statistics for the EGWA are presented. Cronbach's alpha and other indexes of reliability have been calculated for different tasks. Likewise, predictive validity of EGWA was performed. The factor solution was analysed using main component analysis. Finally, as one of the expected outputs for piloting EGWA in the Canary Islands was to standardize writing assessment for early grades, percentile ranks and number of participants contributing to the normative estimates of each EGWA task and its main components are also provided here.

5.2 Study design

Protocol used for the pilot study in the Canary Islands

EGWA contains ten tasks ranging in difficulty from copying letters to story-writing. The first four tasks consist of copying (copying letters, copying words and copying sentences). The next four tasks consist of dictating activities (writing down dictated words and pseudowords, and dictated sentences). Tasks 9 and 10 are free-writing tasks (writing sentences, and writing a story). The student is prompted to copy or write each letter, word or sentence exactly as it is shown in the test protocol or dictated by the evaluator. A full description of EGWA is provided in a previous section of this report.

Participants

A total of 1,653 children in grade 1, 2, and 3 were recruited from twelve schools selected at random in the Canary Islands. In this probability sampling, children with special educational needs were excluded for standardization process (i.e., children who had sensory, acquired neurological, or other problems traditionally used as exclusionary criteria for learning disabilities).

The law of education in Spain (Ley Orgánica para la Mejora de la Calidad Educativa - LOMCE 8/9 December, 2013) defines students with Specific Educational Support Needs

(SESN) as those who require additional educational support because of special educational needs (that is, those who require support and specific educational attention because of disabilities or severe behaviour disorders, either for a period or throughout the whole of their schooling), specific learning disabilities (SLD), high ability, late entry to the education system (this covers children who arrive from other countries or who enter the education system late for any reason) or because of personal conditions or past school record.

The information required for sampling was provided by the Dirección General de Ordenación, Promoción e Innovación Educativa belonging to the Canary Islands Government (BOC 250, 22 December, 2010; BOC 40, 24 February, 2011). Accordingly the final sample consisted of 1,333 children (692 male, 641 female), all in the early grades. The children came from urban zones and from average socio-economic backgrounds, and attended both state and non-state schools. The distribution of the sample according to school, grade and sex is shown in *Table 5*.

Table 5 Distribution of the EGWA sample as a function of school, sex and grade

		Sex							
		Male			Female				
		Grade		Total	Grade		Total		
		1	2	3	1	2	3		
School	San Fernando	16	21	24	61	17	22	12	51
	Tomecano	17	14	10	41	14	11	12	37
	García Escámez	14	16	18	48	8	16	14	38
	25 Julio	18	21	16	55	16	14	12	42
	Fernando III	15	17	20	52	21	20	11	52
	Narciso Brito	6	12	12	30	16	19	16	51
	Las Delicias	13	23	17	53	13	22	8	43
	Hispano -Inglés	43	42	39	124	44	34	37	115
	Hogar Escuela	10	11	25	46	13	11	23	47
	Cervantes	12	9	7	28	12	10	7	29
	Cisneros Alter	42	41	35	118	33	36	33	102
	Chamberí	12	15	9	36	13	9	12	34
	Total	218	242	232	692	220	224	197	641

Source: Author (Jiménez)

Data source: Dirección General de Ordenación, Promoción e Innovación Educativa, Canary Islands Government

It has to be noted that if the data related to schools' general performance, including students' achievement levels, had been available, more equal distribution of samples could have been achieved.

Procedure

All the tasks were administered individually. The assessment was administered by the Canary Islands Department of Education in coordination with schools involved in the project. All tests were administered by trained university students from the Educational

Psychology Department at the University of La Laguna. The EGWA was administered over three sessions (thirty minutes per session). The different tasks were administered to the study sample in counterbalanced form: to one half of the sample, the handwriting fluency and spelling measures were administered first, followed by those involving written expression measures, and to the other half of the sample, the tasks were administered in the reverse order.

5.3 Presentation and analysis of results

Jiménez (2017b) used principal components analysis to reduce a larger set of variables into a smaller set of 'artificial' variables, called 'principal components', which account for most of the variance in the original variables.

The following correlation coefficients were used with respect to inter-rater reliability: Pearson product moment, Kendall's tau, Spearman's rho, and intraclass correlation coefficients (ICC).

When our analyses focus on group comparisons, multivariate analyses of variance (MANOVAs) were conducted to determine whether there were overall grade differences in the EGWA measures. If the overall Wilks' lambda (λ) was significant, univariate Fs were computed to determine group differences in individual factors. As an index of effect size we report eta squared (η^2). When $\eta^2 > 0.15$ effects are 'large' in magnitude, and when $\eta^2 > 0.06$, effects are 'medium' (Cohen and Cohen, 1983).

The quality of the EGWA was evaluated on the basis of the construct validity, inter-rater reliability, internal consistency, and predictive validity. The psychometric analysis was not conducted due to EGWA's main focus on 'fluency', among others, for which internal reliability cannot be provided. (see the reliability section on page 107).

Construct validity: Factor structure

Jiménez (2017b) analyzed the internal structure of the EGWA, and the results showed that four factors with eigenvalues greater than 1 were extracted, and they accounted for a total of 76.3 per cent cumulative variance. The first factor had an eigenvalue of 6.08 and a variance of 43.4 per cent, while the values for the last factor are 1.18 and 8.48 per cent respectively. The first factor contained compositional fluency (0.909), compositional spelling (0.890), correct word sequence (0.886) and global structure total (0.654) in text production, and we named it named *text production*. The second factor, *sentence production*, contained total number of spelled words (0.949), total spacing between words (0.947) and total number of correctly spelled words (0.909) in sentences, and accounted for about 12.7 per cent of the variance. A third factor, which we called *word production*, contained the total number of correctly spelled words with inconsistent spelling (0.790) and total number of correctly spelled words that fit spelling rules (0.779) in word dictation tasks; total number of correctly spelled words (0.687) in sentence dictation; total number of pseudowords correctly spelled using P–G rules (0.626); and letters written correctly in order from memory per minute (0.496). This accounted for about 11.7 per cent of the variance. The last factor contained letters written correctly per minute (0.896) in the

allograph selection task, and letters written correctly per minute (0.893) in alphabet copying. It accounted for 8.4 per cent of the variance, and we named it *letter production*. Before carrying out this analysis we had included word copying and sentence copying tasks in a previous analysis. But their inclusion accounted somewhat less for a total of 72.2 per cent cumulative variance and saturated in the latter factor, which proved to be irrelevant. Table 6 shows a summary of the factorial structure of EGWA.

Table 6 Early Grade Writing Assessment (EGWA): factorial structure

Early Grade Writing Assessment (EGWA): factorial structure		
Factors	Tasks	Main assessment indicators
Letter production	Alphabet copying	Number of letters copied correctly in one full minute (0.893)
	Allograph selection	Number of letters written correctly in one full minute (0.896)
Word production	Writing dictated words with inconsistent spelling	Number of words spelled correctly (0.790)
	Writing words that conform to spelling rules from dictation	Number of words spelled correctly (0.779)
	Writing sentences from dictation	Number of words spelled correctly (0.687)
	Writing pseudowords from dictation	Number of pseudowords with correct graphic representation of the sounds (0.626)
	Writing the alphabet in order from memory	Number of letters written correctly in order in one full minute (0.496)
Sentence production	Writing an independently composed sentence	Number of spelled words (0.949)
	Writing an independently composed sentence	Number of words spelled correctly (0.909)
	Writing an independently composed sentence	Spacing of words (0.947)
Text production	Writing a story	Number of written words (compositional fluency) (0.909)
	Writing a story	Number of words with correct spelling (compositional spelling) (0.890)
	Writing a story	Word sequence (0.886)

Writing a story	Global structure total (0.654)
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Source: Author (Jiménez)

Reliability: internal consistency and inter-rater reliability

Internal consistency

The most widely used measure of test-score reliability is Cronbach's alpha, which is a measure of the internal consistency of a test. However, Cronbach's alpha may not be the most appropriate measure of the reliability of EGWA scores because portions of the EGWA instrument are timed. The internal consistency of these tasks was not analyzed because it is constituted by a single indicator (i.e., fluency). However, for the internal reliability of some tasks of EGWA based on accuracy scores, Cronbach's alpha coefficients were 0.76, 0.90, 0.70, 0.71, 0.71 and 0.72, for word copying, sentence copying, writing dictated words with inconsistent spelling, writing words that conform to spelling rules, writing pseudowords, and writing sentences from dictation respectively.

Inter-rater reliability

Two psychology students were recruited as raters. A training EGWA Administrator Instructions and Protocol Manual (see Annex A) and 5 hour workshop were developed to teach raters how to score the EGWA. Raters then scored independently seventy writing samples (from students in grades 1–3). The technique used to assess the relationship between the scores provided by multiple raters was inter-rater reliability. This shows the stability of scores a student receives from different raters. The evaluation index for inter-rater reliability is based on the comparison of the score variances among different raters. The most popular method for testing inter-rater reliability is correlation. Correlation tests the relationship between the scores of two raters, which can be achieved by reporting the following coefficients: Pearson, Kendall's tau and Spearman's rho. Results were also analysed using Intra-class correlation coefficient (ICC) (the value obtained for the correlation coefficient of absolute agreement [random effects model] between the two examiners). Cicchetti (1994) gives the following often quoted guidelines for interpretation for ICC inter-rater agreement measures: Less than 0.40—poor; between 0.40 and 0.59—Fair; between 0.60 and 0.74—Good; between 0.75 and 1.00—Excellent. Overall, the inter-rater reliability of the EGWA ranged from high to very high, as shown in *Tables 7 to 18*.

Table 7 Inter-rater agreement for EGWA principal components

Factor I Text production						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 n= 72	0.98	0.90	0.97	0.98	0.979–0.992	0.001
Factor II Sentence production						
J1 vs J2	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
n= 72	0.98	0.89	0.96	0.97	0.963–0.986	0.001
Factor III Word production						
J1 vs J2	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
n= 72	0.98	0.92	0.98	0.98	0.980–0.992	0.001
Factor IV Letter production						
J1 vs J2	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
n= 72	0.87	0.71	0.87	0.86	0.787–0.910	0.001

Source: Author (Jiménez)

Table 8 Inter-rater agreement for writing the alphabet in order from memory

Task (Task 1)

Number of letters written in time spent						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.98	0.99	0.99	0.997–0.998	0.001
Number of letters written correctly in order in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.98	0.92	0.97	0.98	0.974–0.989	0.001
Number of missing letters in order in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.87	0.80	0.78	0.80	0.704–0.872	0.001

Source: Author (Jiménez)

Table 9 Inter-rater agreement for alphabet copying task (Task 2A)

Letters written correctly in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.98	0.99	0.99	0.993–0.997	0.001
Letters written correctly in time spent						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.89	0.78	0.90	0.88	0.818–0.924	0.001
Alignment						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.77	0.61	0.77	0.73	0.610–0.826	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.70	0.70	0.70	0.66	0.512–0.8775	.001
Added strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.94	0.70	0.74	0.93	0.894–0.957	0.001
Missing strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.96	0.86	0.93	0.95	0.926–0.970	0.001

Source: Author (Jiménez)

Table 10 Inter-rater agreement for allograph selection task (Task 2B)

Letters written correctly in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.81	0.88	0.89	0.82	0.737–0.887	0.001
Letters written correctly in time spent						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.82	0.65	0.81	0.80	0.706–0.873	0.001
Alignment						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.78	0.60	0.78	0.79	0.684–0.862	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.84	0.70	0.70	0.86	0.780–0.907	0.001
Added strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.26	0.30	0.35	0.32	0.102–0.515	0.001
Missing strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.76	0.62	0.75	0.67	0.528–0.784	0.001

Source: Author (Jiménez)

Table 11 Inter-rater agreement for word copying (Task 3)

Letters written in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.83	0.89	0.89	0.83	0.752–0.895	0.001
Letters written correctly in the time spent						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.85	0.68	0.84	0.83	0.743–0.890	0.001
Alignment						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.68	0.53	0.63	0.60	0.496–0.732	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	-	-	-	-	-	-
Added strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.97	0.58	0.59	0.96	0.950–0.496	0.001
Missing strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.93	0.71	0.84	0.90	0.848–0.937	0.001
Missing letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.80	0.62	0.63	0.80	0.703–0.872	0.001

Source: Author (Jiménez)

Table 12 Inter-rater agreement for sentence copying (Task 4)

Letters written in one full minute						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.83	0.89	0.89	0.98	0.974–0.989	0.001
Letters written correctly in the time spent						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.85	0.68	0.84	0.79	0.689–0.865	0.001
Alignment						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.81	0.67	0.80	0.68	0.543–0.791	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.70	0.70	0.70	0.66	0.512–0.775	0.001
Added strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.98	0.58	0.62	0.97	0.959–0.983	0.001
Missing strokes						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.86	0.76	0.89	0.82	0.732–0.885	0.001
Word spacing						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.91	0.76	0.77	0.92	0.875–0.949	0.001
Missing words						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	-	-	-	-	-	-
Missing letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <

J1 vs J2 N=72	0.95	0.73	0.78	0.94	0.914–0.965	0.001
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Source: Author (Jiménez)

Table 13 Inter-rater agreement for writing dictated words with irregular spelling (Task 5)

Number of words spelled correctly						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.95	0.91	0.96	0.95	0.932–0.972	0.001
Substitutions						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.94	0.88	0.93	0.94	0.914–0.965	0.001
Deletions						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.52	0.66	0.72	0.47	0.273–0.633	0.001
Added letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.80	0.81	0.83	0.80	0.711–0.875	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	-	-	-	-	-	-

Source: Author (Jiménez)

Table 14 Inter-rater agreement for writing words that conform to spelling rules from dictation (Task 6)

Correct versus incorrect spelling rule						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.97	0.92	0.97	0.97	0.954–0.982	0.001

Source: Author (Jiménez)

Table 15 Inter-rater agreement for writing pseudowords from dictation (Task 7)

Number of pseudowords with correct graphical representation of the sounds						
	Pearson	Kendall's tau	Spearman's	ICC	IC 95%	p <

			rho			
J1 vs J2 N=72	0.94	0.81	0.89	0.93	0.904–0.961	0.001
Correct or incorrect use of the spelling rule						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.88	0.81	0.91	0.84	0.763–0.900	0.001

Source: Author (Jiménez)

Table 16 Inter-rater agreement for writing a sentence from dictation (Task 8)

Number of words spelled correctly						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.87	0.84	0.92	0.88	0.819–0.924	0.001
Use of capital letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.94	0.91	0.94	0.94	0.918–0.967	0.001
Stress marks						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.84	0.70	0.72	0.84	0.764–0.900	0.001
Spacing between words						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.87	0.82	0.85	0.92	0.880–0.951	0.001
Use of punctuation marks						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.90	0.88	0.90	0.91	0.862–0.943	0.001
Alignment						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.56	0.51	0.62	0.61	0.447–0.739	0.001
Reversals						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.06	0.35	0.35	.012	-0.105–0.346	ns
Substitutions						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.29	0.43	0.50	0.24	0.02–0.45	0.01
Added letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.44	0.53	0.55	0.34	0.129–0.535	0.001
Missing letters						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.92	0.78	0.88	0.91	0.870–0.946	0.001

Source: Author (Jiménez)

Table 17 Inter-rater agreement for writing an independently composed sentence (Task 9)

Number of words written during the first time interval (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.86	0.82	0.86	0.91	0.867–0.945	0.001
Number of words written with correct spelling during the first time interval (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.86	0.86	0.85	0.90	0.859–0.942	0.001
Number of words written during the second time interval (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.76	0.79	0.82	0.92	0.885–0.953	0.001
Number of words written with correct spelling during the second time interval (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.77	0.72	0.74	0.87	0.808–0.920	0.001
Total number of words written (in total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.98	0.92	0.96	0.98	0.971–0.988	0.001
Total number of words spelled correctly (in total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.94	0.88	0.94	0.95	0.931–0.972	0.001
Use of capital letters (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.69	0.91	0.94	0.65	0.506–0.772	ns
Stress marks (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.86	0.82	0.82	0.86	0.792–0.912	0.01

Spacing between words (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.81	0.74	0.81	0.86	0.790–0.912	0.001
Punctuation marks (one minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.70	0.70	0.73	0.78	0.671–0.856	0.001
Use of capital letters (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.35	0.73	0.74	0.46	0.264–0.627	.001
Stress marks (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.38	0.70	0.71	0.71	0.576–0.809	0.01
Spacing between words (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.89	0.77	0.83	0.92	0.889–0.954	0.001
Punctuation marks (second minute)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.51	0.56	0.57	0.76	0.652–0.847	0.001
Use of capital letters (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.58	0.91	0.94	0.44	0.239–0.611	.001
Stress marks (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.91	0.85	0.85	0.88	0.819–0.925	0.01
Spacing between words (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.95	0.84	0.90	0.95	0.931–0.972	0.001
Punctuation marks (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.77	0.73	0.78	0.81	0.713–0.876	0.001

Source: Author (Jiménez)

Table 18 Inter-rater agreement for writing a story (Task 10)

Number of words written during first time interval (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.95	0.99	0.97	0.967–0.987	0.001
Number of words written with correct spelling during first time interval (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.97	0.90	0.96	0.96	0.949–0.979	0.001
Number of words written during second time interval (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.1	0.1	0.99	0.995–0.998	0.001
Number of words written with correct spelling during second time interval (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.97	0.99	0.99	0.994–0.997	0.001
Total number of words written (ten minutes in total)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.99	0.95	0.99	0.98	0.974–0.989	0.001
Total number of words spelled correctly (ten minutes in total)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.98	0.91	0.96	0.97	0.962–0.985	0.001
Use of capital letters (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.38	0.80	0.83	0.20	-0.02– -0.412	.05
Stress marks (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.16	0.64	0.65	0.10	-0.122– 0.331	ns

Correct word sequence (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.96	0.85	0.94	0.95	0.927–0.970	0.001
Punctuation marks (first five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.81	0.86	0.88	0.77	0.665–0.853	0.001
Use of capital letters (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.1	0.1	0.1	0.001	-0.227– -0.231	ns
Stress marks (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	-	-	-	-	-	-
Correct word sequence (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.98	0.90	0.96	0.97	0.964–0.986	0.001
Punctuation marks (second five minutes)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.25	0.30	0.32	0.06	-0.16–0.291	ns
Use of capital letters (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.38	0.80	0.83	0.21	-0.013– 0.424	.05
Stress marks (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.16	0.60	0.61	0.10	-0.122– 0.331	ns
Correct word sequence (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.96	0.95	0.94	0.95	0.934–0.973	0.001
Punctuation marks (total time spent)						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <
J1 vs J2 N=72	0.77	0.80	0.82	0.77	0.657–0.849	0.001
Global structure total						
	Pearson	Kendall's tau	Spearman's rho	ICC	IC 95%	p <

J1 vs J2 N=72	0.80	0.75	0.81	0.77	0.661–0.859	0.001
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Source: Author (Jiménez)

Concurrent and predictive validity

Analysing the correlations between EGWA and TEVET

Jiménez, Marco and colleagues (2017) hypothesized that there would be positive and significant correlation between the scores of the participants in EGWA and Test Estandarizado para la Evaluación Inicial de la Escritura con Teclado (TEVET) (Spanish Writing Digital Test, Jiménez, 2012d). The concurrent validity of EGWA with TEVET was established by using Pearson Product Moment to intercorrelate the scores of the participant in EGWA tasks, EGWA (total) and TEVET. This test comprises of six tasks ranging in difficulty from writing letters to sentence writing. The first two tasks consist of typing the alphabet in order from memory and allograph selection. The third task consists of copying words. The next two tasks consist of dictation activities (dictating words and pseudowords). Task 6 is a free-writing task (typing sentences). A more comprehensive of each of the tasks description is presented below:

TEVET

Training task on the keyboard	
Description	This is a task for the child to become familiar with the computer keyboard. It is not evaluated.
Development	The child can use this task to learn how to use accent marks, spaces, capitalization and other features on the computer keyboard.

TASK 1 – Writing the alphabet in order from memory (This task corresponds to Task 1 in the EGWA using paper and pencil)	
Description	The child must write the alphabet in order from memory. If the child finishes before the first minute they should repeat the task.
Example	The program displays three boxes in which the child has to write three letters of the alphabet in order from memory.
Development	When the child says they have finished writing the alphabet, press the arrow button (enter) to let them start again.
Correction	The tester should not make any corrections.

TASK 2 – Allograph selection (This task corresponds to Task2B in the EGWA using paper and pencil)	
Description	The child must select the allograph (lower-case letter) that corresponds to each capital letter. If they finish before the first minute, they should repeat the task.

Example	Three boxes are displayed in which the student types the corresponding allograph.
Development	When the student says they have finished the task, press the arrow button to let them start again.
Correction	The tester should not make any corrections.

TASK 3 – Word copying (This task corresponds to Task 3 in the EGWA using paper and pencil)

Description	The student copies the words that appear on the computer screen.
Example	The student copies two example words before beginning the task.
Development	When the child finishes copying a word, the tester presses the arrow button on the computer keyboard.
Correction	The tester should not perform any correction.

TASK 4 – Writing dictated words with irregular spelling (This task corresponds to Task 5 in the EGWA using paper and pencil)

Description	The child listens to every word twice, then types the word using the keyboard, pressing letter by letter.
Example	The student writes two words that the program dictates.
Development	If the child has not heard the word very well, they may listen to the word again by clicking on the mouth icon. The tester should write down the words the child has spoken aloud during the test.
Correction	Once this task is completed, the program shows the list of words. The tester should select only those words they wrote down.

TASK 5 – Writing pseudowords from dictation (This task corresponds to Task 7 in the EGWA using paper and pencil)

Description	The child listens twice to each pseudoword, then types the word using the keyboard, pressing letter by letter.
Example	The student writes two pseudowords that are dictated by the computer program.
Development	If the child has not heard the pseudoword well, they may listen to the word again by clicking on the mouth icon.
Correction	The tester should not perform any correction.

TASK 6 – 1 – Writing an independently composed sentence (This task corresponds to Task 9 in the EGWA using paper and pencil)

Description	The child writes two sentences.
Example	The student writes an example sentence. Make use of the example in a way that children will familiarize themselves with the keyboard (accents, capitalization, punctuation).
Development	When the student has finished writing the two sentences, press the arrow button.
Correction	After the task, the program displays a correction wizard that has to be completed.

TASK 6 – 2 – Writing an independently composed sentence: Correction wizard for the examiner

Description	This wizard is to be used by the examiner. After the task, the
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	program displays a correction wizard that has to be completed by the examiner. This wizard has 7 steps. When the examiner finish a step, click < Next > to go to the next step. The wizard displays an interactive text, allowing the examiner to select and deselect words and verbatim copying of sentences that the child has written
Are you going to assess the sentences written by the student?	The first step is to decide whether the sentences written by the child should be evaluated. If the sentences that the child has written do not make any sense, then press the < No > button and the wizard ends. Otherwise, press the < Yes > button to continue the correction.
Selections of spaces	The wizard searches for spaces in the two sentences and highlights them in green. Click to deselect the spaces automatically selected that are not counted in the evaluation, such as the space between the two sentences, and the space to the left or right of an incorrect word.
Selection of incorrect words	Select the wrongly formatted words in the interactive text by clicking on them. A word selected as incorrect is highlighted in red. If you were mistaken, click again to undo the selection. Some examples of wrongly formatted words are 'ca sa' (should be <i>casa</i> , house), 'laccase' (should be <i>la casa</i> , the house), 'prata' (should be <i>rata</i> , rat).
Selection of misspelled words	Select the words that contain spelling errors. If you were mistaken, click again to undo the selection. Some examples of misspelled words are 'plalla' (should be <i>playa</i> , beach), 'moketa' (should be <i>moqueta</i> , carpet).
Words with uppercase letters	The wizard automatically selects words containing uppercase letters. If you do not agree with any of the words selected by the program because the upper case letters have been used wrongly, then click on the word to deselect it. An example of a capital letter that you should deselect is 'mi C asa es bonita' ('My house is beautiful').
Words with stress mark	The wizard automatically selects words containing stress marks. If the stress mark is not used correctly, click on the word which contains that stress mark used wrongly so that the word can be deselected. An example of a stress mark that must be deselected is 'ráton' (should be <i>ratón</i> , mouse).
Punctuation mark	The wizard displays the punctuation used by the student. Review the text written by the student, and if you decide any of the automatically selected punctuation marks have not been used correctly, click on them to deselect them. An example of a punctuation mark that must be deselected is 'La casa es bonita' (should be <i>La casa es bonita</i> . [with a full stop]: The house is nice).
Ending correction wizard	In the last step of the wizard (selecting punctuation), a button appears that allows you to restart the wizard from the beginning if you have made a mistake. If you press the button 'following' then the task ends.

The results presented in *Table 19* show that EGWA has a positive and significant concurrent validity with TEVET (0.56**). All EGWA tasks were also found to be positively and significantly correlated with TEVET (that is, Letters written correctly in order from memory per minute, 0.58; Alphabet copying: Letters written correctly per minute, 0.22; Allograph selection: Letters written correctly per minute, 0.23; Writing dictated words with inconsistent spelling: Total number of correctly spelled words, 0.59; Writing words that fit spelling rules: Total number of correctly spelled words, 0.55; Writing pseudowords: Total

number of pseudowords correctly spelled using P–G rules, 0.30; Writing sentences from dictation: Total number of correctly spelled words, 0.48; Writing an independently composed sentence: Total number of words, 0.34; Writing an independently composed sentence: Total number of correctly spelled words, 0.43; Writing an independently composed sentence: Total spacing between words, 0.35; Writing a story: Compositional fluency, 0.40; Writing a story: Compositional spelling, 0.48; Writing a story: Correct word sequence, 0.44; Writing a story: Global structure total, 0.28) at $p < 0.01$ level of significance. That means that there is a positive and significant correlation between the scores of the participants in EGWA and TEVET.

Table 19 Correlations matrix for participants' scores in EGWA and TEVET

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
EGWA	1	0.644(**)	0.227(**)	0.223(**)	0.561(**)	0.580(**)	0.403(**)	0.512(**)	0.648(**)	0.711(**)	0.643(**)	0.922(**)	0.943(**)	0.909(**)	0.538(**)	0.567(**)
Letters written correctly in order from memory per minute		1	0.301(**)	0.301(**)	0.495(**)	0.482(**)	0.298(**)	0.428(**)	0.358(**)	0.438(**)	0.345(**)	0.468(**)	0.522(**)	0.463(**)	0.278(**)	0.583(**)
Alphabet copying: Letters written correctly per minute			1	0.662(**)	0.170(**)	0.118(**)	0.187(**)	0.097(**)	0.125(**)	0.144(**)	0.108(**)	0.107(**)	0.125(**)	0.064(*)	0.115(**)	0.222(**)
Allograph selection: Letters written correctly per minute				1	0.173(**)	0.158(**)	0.201(**)	0.072(*)	0.090(**)	0.113(**)	0.088(**)	0.121(**)	0.127(**)	0.064(*)	0.149(**)	0.232(**)
Writing dictated words: Total number of correctly spelled words					1	0.677(**)	0.385(**)	0.508(**)	0.308(**)	0.407(**)	0.298(**)	0.386(**)	0.468(**)	0.427(**)	0.310(**)	0.597(**)
Writing words that conform to spelling rules: Total number of correctly spelled words						1	0.423(**)	0.519(**)	0.299(**)	0.399(**)	0.298(**)	0.427(**)	0.494(**)	0.456(**)	0.346(**)	0.550(**)
Writing pseudowords: Total number of pseudowords correctly spelled using P–G rules							1	0.370(**)	0.190(**)	0.235(**)	0.179(**)	0.310(**)	0.312(**)	0.279(**)	0.325(**)	0.308(**)
Writing sentences from dictation: Total number of correctly spelled words								1	0.290(**)	0.383(**)	0.290(**)	0.348(**)	0.425(**)	0.417(**)	0.250(**)	0.489(**)
Writing an independently composed sentence: Total number of words									1	0.943(**)	0.958(**)	0.452(**)	0.453(**)	0.413(**)	0.216(**)	0.346(**)
Writing an independently composed sentence: Total number of correctly spelled words										1	0.929(**)	0.494(**)	0.516(**)	0.474(**)	0.252(**)	0.433(**)
Writing an independently composed sentence: Total spacing between words											1	0.453(**)	0.451(**)	0.421(**)	0.218(**)	0.355(**)
Writing a story: Compositional fluency												1	0.959(**)	0.920(**)	0.545(**)	0.405(**)
Writing a story: Compositional spelling													1	0.943(**)	0.540(**)	0.481(**)
Writing a story: Correct word sequence														1	0.511(**)	0.448(**)
Writing a story: Global structure total															1	0.281(**)
TEVET																1

** Correlation significant at the level 0.01 (bilateral).

* Correlation significant at the level 0.05 (bilateral).

Source: Author (Jiménez)

Identifying the effectiveness of EGWA factors in differentiating between children with and without educational support.

For identifying the effectiveness of EGWA factors in differentiating between children with and without educational support (i.e., children that are struggling with learning literacy skills), Jiménez (2016b) asked teachers to identify children into this category according to the criteria used in the Canary Islands. (These were discussed in the Individual Differences section of this report; see also Boletín Oficial de Canarias (BOC) 250, 22 December 2010; BOC 40, 24 February, 2011). A sample of 181 children was identified by teachers with educational support, and we selected a random sample of the same size of children who were identified as not having educational support. Children with special educational needs (i.e., those who require support and specific educational attention due to their sensory impairment or acquired neurological problems) were excluded.

A linear discriminant analysis (LDA) was performed to determine the capability of the different components to correctly classify children with and without educational support using the EGWA main component scores. Standardized coefficients demonstrated that Transcription: spelling (0.80) and Transcription: handwriting (0.65) were the variables with the highest score in this discriminant function, meaning that transcription skills play an important role in the early grade writing.

This discriminant function predicted group classification correctly in 65.4 per cent of children with or without educational support.

Variance multivariate analysis: differences across grades in EGWA

We used variance multivariate analyses to test the difference between grades across several dependent variables simultaneously. If the value of Sig. for the statistic Wilks' lambda is less than 0.05 then the grades differ significantly with respect to the dependent variables. Analyses of variance (ANOVAs) were used to follow up the MANOVA (with a different ANOVA for each dependent variable). These ANOVAs were followed up using contrasts.

Letter production

This first factor includes the following indicators:

- in the alphabet copying task, the number of letters written correctly per minute
- in the allograph task, the number of letters written correctly per minute.

Number of letters copied correctly in one minute

The average number of letters of the alphabet that children copied correctly in one minute in the alphabet copying task was first grade: five letters; second grade: six letters; and third grade: seven letters.

Number of allograph letters written correctly in one minute

The average number of allograph letters of the alphabet that the children wrote correctly in one minute in the allograph selection task was first grade: five letters; second grade: five letters; and third grade: five letters.

We used variance multivariate analyses to test the difference between grades for the number of letters copied correctly in one minute and number of allograph letters written correctly in one minute. *Table 20* shows means and standard deviations of EGWA tasks included in the letter production component by grade.

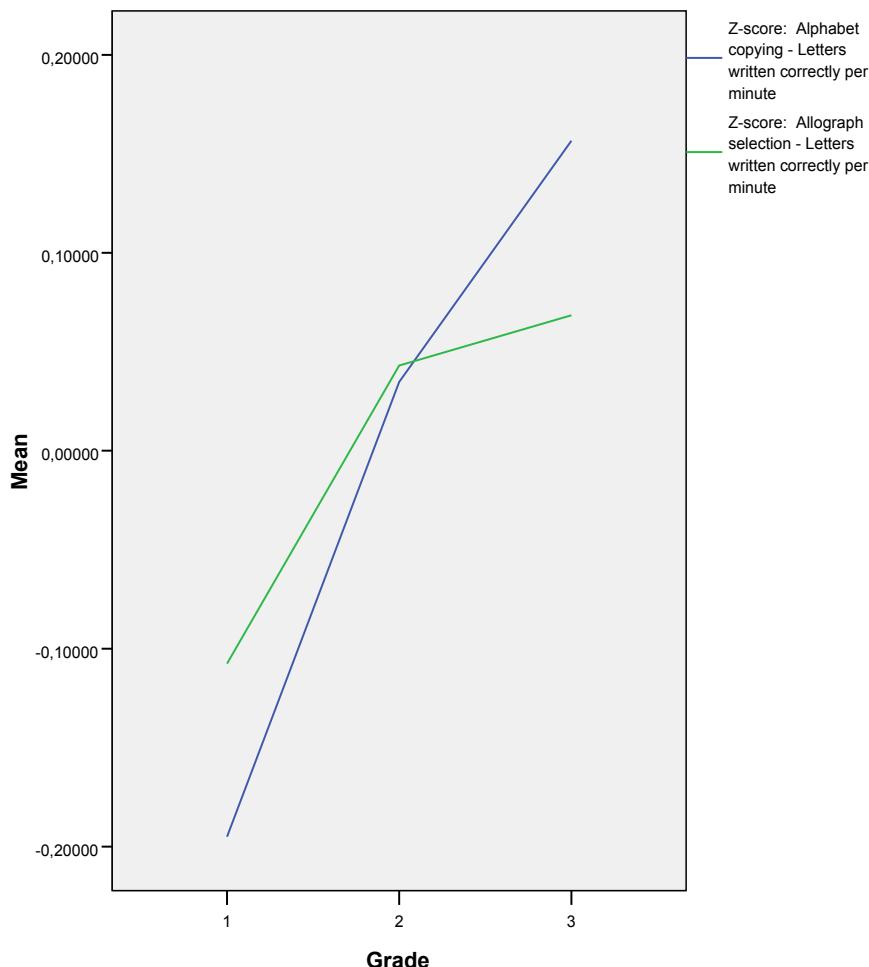
Table 20 Means and standard deviations of EGWA tasks included in the factor letter production by grade

		Grade			Total
		1	2	3	
Alphabet copying : letters written correctly per minute	Mean	5.45	6.27	6.70	6.14
	SD	3.10	3.39	4.03	3.56
	N	435	465	425	1325
Allograph selection: letters written correctly per minute	Mean	4.82	5.38	5.48	5.23
	SD	2.98	3.64	4.38	3.71
	N	435	465	425	1,325

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(4, 2642) = 7.40, p < 0.001, \eta^2 = 0.01$. Tests of between-subjects effects were conducted after the MANOVA on each dependent variable, and there were significant differences between the grades in the number of letter copied correctly in one minute, $F(2, 1,322) = 14.0, p < 0.001, \eta^2 = 0.001$, and the number of allograph letters written correctly in one minute, $F(2, 1,322) = 3.96, p < 0.05, \eta^2 = 0.006$. Post hoc comparisons using the Bonferroni method of multiple comparisons showed that children from grade 1 performed significantly lower than those in grade 2, $t(899) = 3.47, p < 0.01$, and grade 3, $t(859) = 5.21, p < 0.001$ in the number of letters copied correctly in one minute. However, there were no significant differences between grade 2 and grade 3, $t(889) = 1.83, p = 0.20$ in the number of letters copied correctly in one minute. With regard to the number of allograph letters written correctly in one minute, children from grade 1 performed significantly lower than those in grade 3, $t(859) = 2.58, p < 0.05$; but not those in grade 2, $t(899) = 2.26, p=0.07$. Finally, children from grade 2 performed similarly to those in grade 3, $t(889) = 0.37, p=.1.0$ (see *Figure 1*).

Figure 1 Performance by grade for letter production tasks



Source: Author (Jiménez)

Word production

This second factor includes the following indicators:

- * in the writing dictated words with inconsistent spelling task, the **total number of words written correctly**
- * in the writing words that conform to spelling rules task, the **total number of correctly spelled words**
- * in the writing sentences from dictation task, the **total number of correctly spelled words**
- * in the writing pseudowords task, the **total number of pseudowords correctly spelled using P–G rules**
- * in the writing the alphabet in order from memory task, the **number of letters written correctly spelled using P–G rules**.

Number of dictated words with inconsistent spelling

The average number of dictated words with inconsistent spelling correctly spelled was first grade: eleven words; second grade: fourteen words; and third grade: fifteen words.

Number of words that conform to spelling rules

The average number of correctly spelled words that conform to spelling rules was first grade: thirteen words; second grade: fifteen words; and third grade: seventeen words.

Number of correctly spelled words in writing sentence from dictation

The average number of correctly spelled words was first grade: fourteen words; second grade: sixteen words; and third grade: seventeen words.

Number of pseudowords correctly spelled using P–G rules

The average number of pseudowords correctly spelled using P–G rules was first grade: sixteen pseudowords; second grade: eighteen pseudowords; and third grade: eighteen pseudowords.

Number of letters written correctly in order from memory per minute

The average number of letters written correctly in order from memory per minute was first grade: eleven letters; second grade: eighteen letters; and third grade: twenty-six letters.

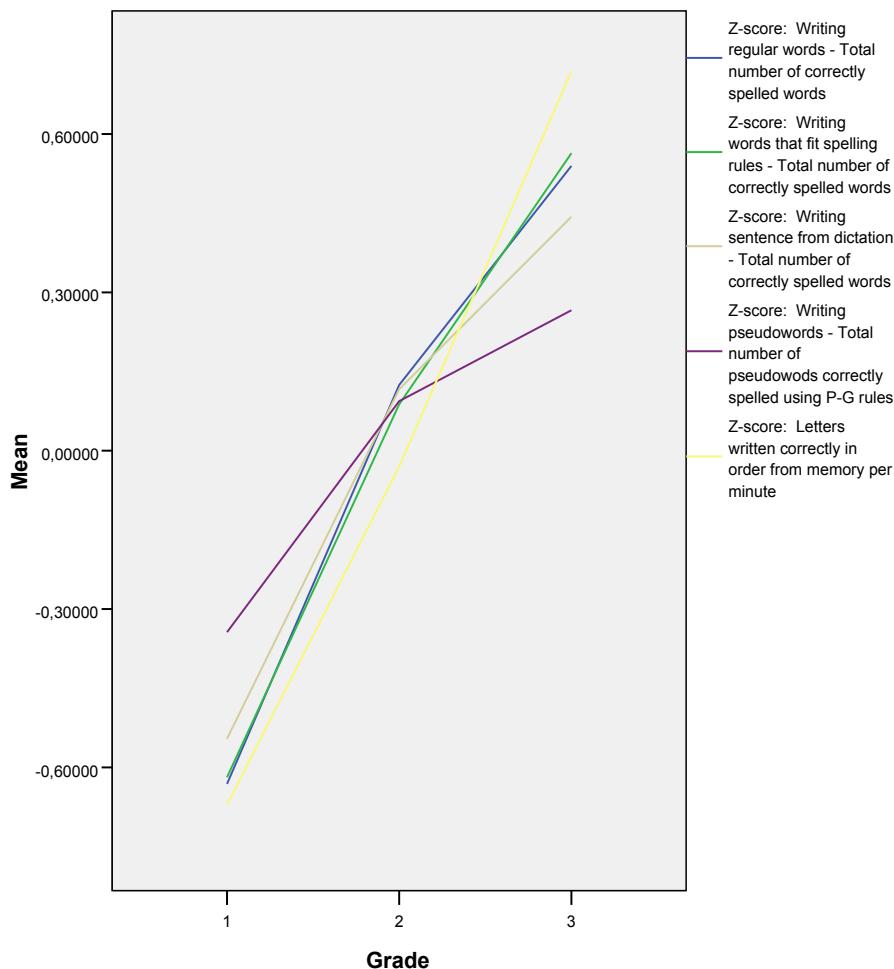
We used variance multivariate analyses to test the difference between grades across the total number of words with inconsistent spelling written correctly, , the total number of correctly spelled words that fit spelling rules, the total number of correctly spelled words from sentence dictation, the total number of pseudowords correctly spelled using P–G rules, and the number of letters correctly spelled using P–G rules. *Table 21* shows means and standard deviations of EGWA tasks included in the component Word production by grade.

Table 21 Means and standard deviations of EGWA tasks included in the factor word production by grade

		Grade			
		1	2	3	Total
Writing dictated words with irregular spelling: total number of correctly spelled words	Mean	11.40	13.89	15.26	13.52
	SD	2.93	2.88	2.74	3.26
	N	428	461	424	1313
Writing words that conform to spelling rules: total number of correctly spelled words	Mean	12.66	15.07	16.70	14.81
	SD	3.34	3.05	2.34	3.37
	N	428	461	424	1313
Writing sentences from dictation: total number of correctly spelled words	Mean	14.50	16.34	17.25	16.03
	SD	3.30	2.08	1.94	2.75
	N	428	461	424	1313
Writing pseudowords: total number of pseudowords correctly spelled using P–G rules	Mean	16.39	17.57	18.04	17.34
	SD	3.19	2.39	2.07	2.68
	N	428	461	424	1313
Letters written correctly in order from memory per minute	Mean	11.54	18.22	26.03	18.57
	SD	6.81	8.44	10.28	10.41
	N	428	461	424	1,313

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(10, 2,612) = 76.4, p < 0.001, \eta^2 = 0.22$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between grades in the total number of words with inconsistent spelling written correctly, $F(2, 1,310) = 200.8, p < 0.001, \eta^2 = 0.23$, the total number of correctly spelled words that fit spelling rules, $F(2, 1,310) = 203.1, p < 0.001, \eta^2 = 0.23$; the total number of correctly spelled words in writing sentence from dictation, $F(2, 1,310) = 132.6, p < 0.001, \eta^2 = 0.16$; the total number of pseudowords correctly spelled using P–G rules, $F(2, 1,310) = 46.0, p < 0.001, \eta^2 = 0.06$; and the number of letters written correctly in order from memory, $F(2, 1,310) = 301.7, p < 0.001, \eta^2 = 0.31$. All post hoc comparisons using the Bonferroni method of multiple comparisons were significant ($F > 1$). That means that children from grade 1 performed significantly lower than those in grade 2 and grade 3, and children from grade 2 performed significantly lower than those in grade 3 on each dependent variable (see *Figure 2*).

Figure 2 Performance by grade in word production tasks

Source: Author (Jiménez)

Sentence production

The indicators for this factor were:

- * In the writing an independently composed sentence task, the **total number of words**
- * in the writing an independently composed sentence task, the **total number of correctly spelled words**
- * in writing an independently composed sentence task, the **total spacing between words.**

Number of words

The average number of words written was first grade: thirteen; second grade: eighteen; and third grade: twenty-one.

Number of correctly spelled words

The average number of correctly spelled words was first grade: ten; second grade: sixteen; and third grade: twenty.

Number of spacings between words

The average number of spaces between words was first grade: eleven; second grade: sixteen; and third grade: nineteen.

We used variance multivariate analyses to test the differences between grades across the total number of words, the total number of correctly spelled words, and total spacing between words. *Table 22* shows means and standard deviations of EGWA tasks included in the sentence production by grade component.

Table 22 Means and standard deviations of EGWA tasks included in the factor sentence production by grade

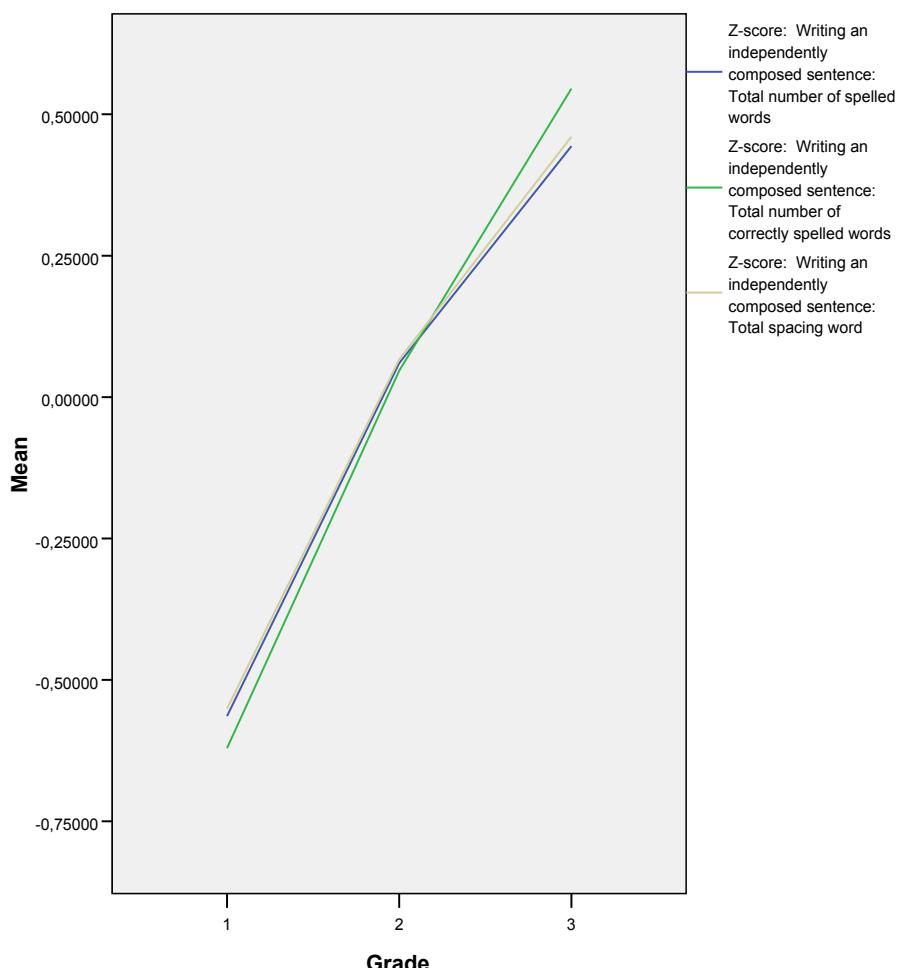
		Grade			
		1	2	3	Total
Writing an independently composed sentence: total number of words	Mean	12.89	17.87	20.94	17.26
	SD	5.20	7.21	8.15	7.69
	N	419	462	420	1301
Writing an independently composed sentence: total number of correctly spelled words	Mean	10.46	15.58	19.40	15.17
	SD	5.13	6.74	7.79	7.56
	N	419	462	420	1,301
Writing an independently composed sentence: total spacing between words	Mean	10.99	15.72	18.74	15.17
	SD	4.96	7.19	8.12	7.57
	N	419	462	420	1,301

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(6, 2,592) = 62.8, p < 0.001, \eta^2 = 0.12$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between grades in the total number of words, $F(2, 1,298) = 142.4, p < 0.001, \eta^2 = 0.18$, the total number of correctly spelled words, $F(2, 1,298) = 190.9, p < 0.001, \eta^2 = 0.22$; and total spacing between words, $F(2, 1,298) = 190.9, p < 0.001, \eta^2 = 0.17$. All post hoc comparisons using the Bonferroni method of multiple comparisons were significant ($F > 1$). That means that children from grade 1 performed significantly lower than those in grade 2 and grade 3, and children from

grade 2 performed significantly lower than those in grade 3 on each dependent variable (see *Figure 3*).

Figure 3 Performance by grade in sentence production tasks



Source: Author (Jiménez)

Text production

The indicators for this factor were:

- * in writing a story, the **number of words** (compositional fluency)
- * in writing a story, the **number of correctly spelled words** (compositional spelling)
- * in writing a story, the **number of word sequences**
- * in writing a story, the **global structure total**.

Number of words (compositional fluency)

The average number of words written was first grade: twenty-six; second grade: forty-four; and third grade: fifty-three.

Number of correctly spelled words (compositional spelling)

The average number of correctly spelled words was first grade: twenty; second grade: thirty-seven; and third grade: forty-nine.

Number of correct word sequences

The average number of correct word sequences was first grade: twenty; second grade: thirty-seven; and third grade: forty-seven.

Global structure total

The average number of narrative categories was first grade: three; second grade: four; and third grade: five.

We used variance multivariate analyses to test the difference between grades across the total number of words (compositional fluency), the total number of correctly spelled words (compositional spelling), number of correct word sequences, and global structure total. *Table 23* shows means and standard deviations of EGWA tasks included in the text production component by grade.

Table 23 Means and standard deviations of EGWA tasks included in the factor text production by grade

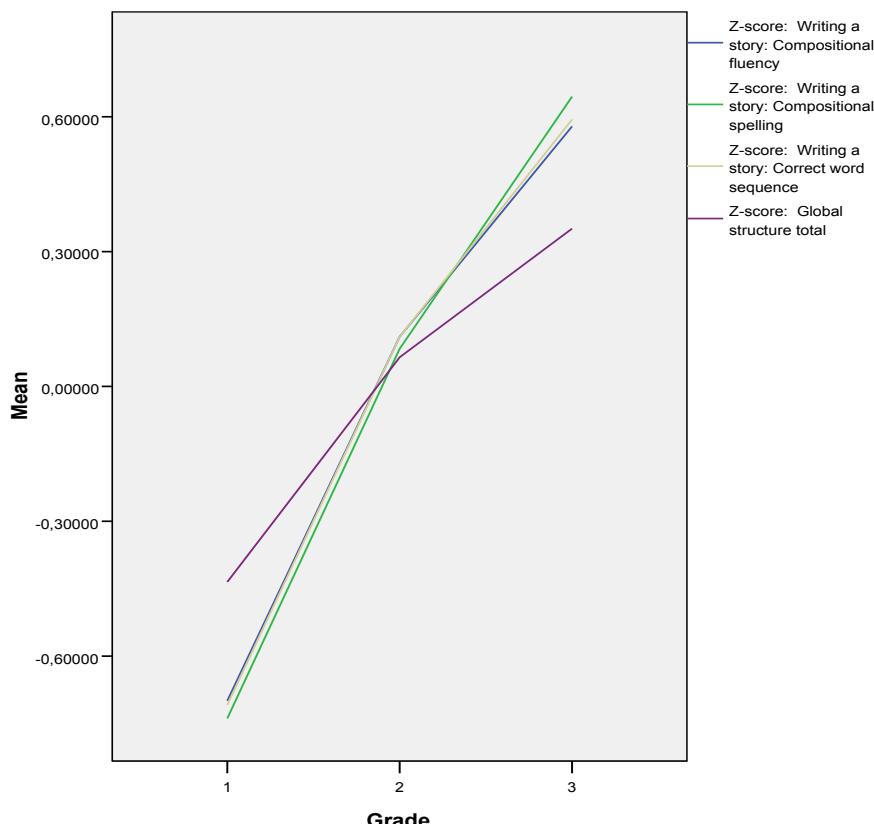
		Grade			
		1	2	3	Total
Writing a story: compositional fluency	Mean	26.46	43.54	53.41	41.32
	SD	14.06	18.58	20.52	21.03
	N	413	461	423	1297
Writing a story: compositional spelling	Mean	20.35	37.28	48.83	35.66
	SD	11.91	17.89	20.07	20.55
	N	413	461	423	1,297
Writing a story: correct word sequence	Mean	19.84	36.93	47.03	34.78
	SD	13.17	18.47	20.38	20.81
	N	413	461	423	1,297
Global structure total	Mean	3.45	4.18	4.60	4.08
	SD	1.49	1.39	1.27	1.46
	N	413	461	423	1,297

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(8, 2,582) = 70.1, p < 0.001, \eta^2 = 0.17$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between the grades in the total number of words, $F(2, 1,294) = 240.3, p < 0.001, \eta^2 = 0.27$, the total number of correctly spelled words, $F(2, 1,294) = 295.3, p < 0.001, \eta^2 = 0.31$; the number of correct word sequences, $F(2, 1,294) = 253.1, p < 0.001, \eta^2 = 0.28$, and global structure total $F(2, 1,298)$

$= 73.4$, $p < 0.001$, $\eta^2 = 0.10$. All post hoc comparisons using the Bonferroni method of multiple comparisons were significant ($F > 1$). That means that children from grade 1 performed significantly lower than those in grade 2 and grade 3, and children from grade 2 performed significantly lower than those in grade 3 on each dependent variable (see *Figure 4*).

Figure 4 Performance by grade in text production tasks



Source: Author (Jiménez)

Analysis of handwriting movements in real time

The digital recording of handwriting was controlled by Eye and Pen software (Alamargot et al., 2006). The EGWA tasks that we selected for this purpose were writing the alphabet in order from memory, alphabet copying in cursive, alphabet copying in manuscript, and allograph selection. The EGWA tasks were run on an Aspire One 722 computer. The administration of these tasks was conducted individually in a soundproof room. The children had to write on a lined sheet of paper placed over a graphic tablet (Wacom Intuos GD-1218-u). They were asked to write with an Intuos Inking pen. They had to press a green button with the pen when they finished a task. This led to a new task. A whole session lasted fifteen minutes approximately.

Several measures were recorded:

- The distance corresponding to the contact of the pen with the tablet surface, travelled in one minute. An increase in this distance means the child is drawing a larger number of letters in a minute;
- Duration, measured as the real time that the pen makes contact with the tablet surface during the course of a minute;
- Velocity: the average speed that is reached by the child during the task when the pen makes contact with the tablet
- Pressure, measured in Hertz. This refers to how hard children are pressing down when they make a stroke. When children use less pressure they write faster.

We analysed handwriting movements in real time with some EGWA tasks that we selected for this purpose: writing the alphabet in order from memory, alphabet copying in cursive, alphabet copying in manuscript, and allograph selection.

Distance

We used variance multivariate analyses to test the difference between grades in distance as dependent variable. *Table 24* shows means and standard deviations of distance in the EGWA tasks by grade.

Table 24 Means and standard deviations of distance in the EGWA tasks by grade

		Grade			
		1	2	3	Total
distance_Task1 (summed distance between these points)	Mean	27.55	39.60	46.43	37.96
	N	105	109	108	322
	SD	11.61	13.65	14.68	15.45
distance_Task2A- cursive (summed distance between these points)	Mean	26.01	28.30	29.33	27.90
	N	105	109	108	322
	SD	10.75	9.20	11.24	10.49
distance_Task2A- manuscript (summed distance between these points)	Mean	19.21	23.05	25.46	22.61
	N	105	109	108	322
	SD	6.09	8.73	7.58	7.96
distance_Task2B (summed distance between these points)	Mean	27.32	35.21	39.47	34.07

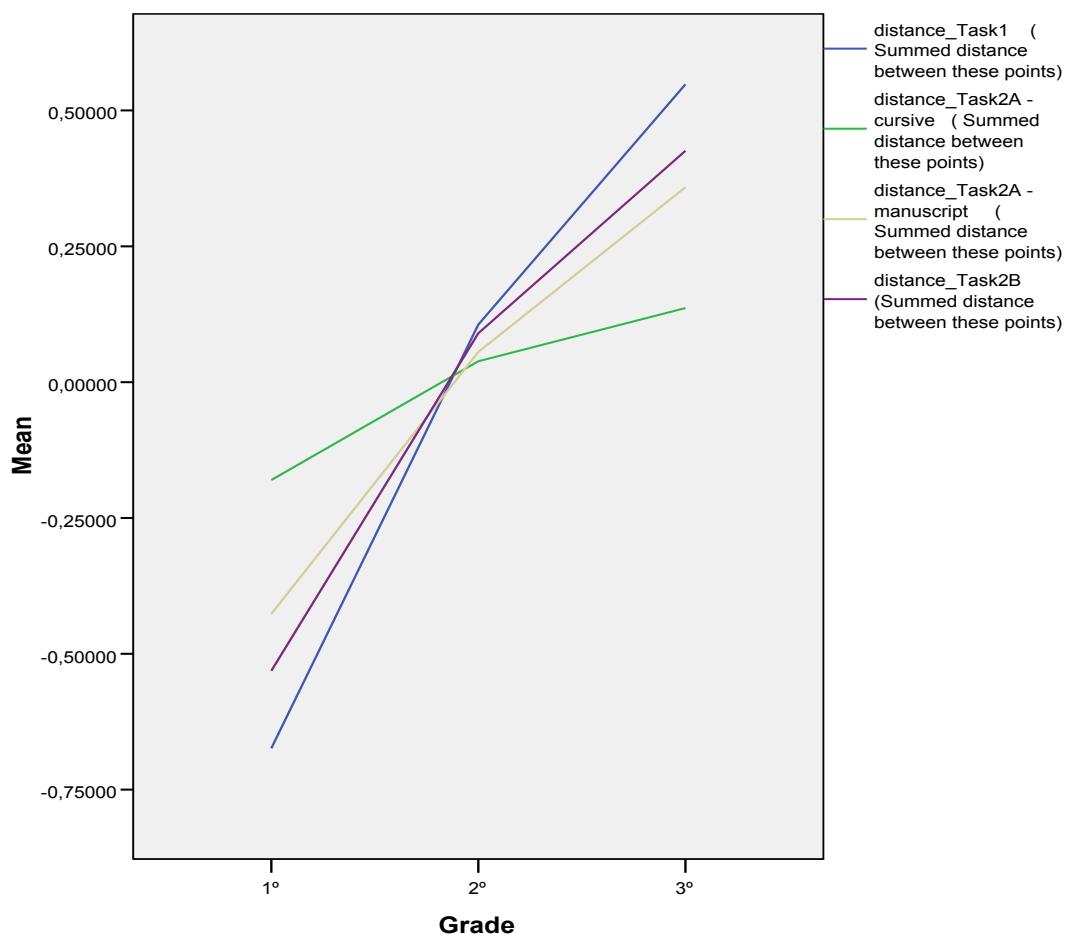
N	105	109	108	322
SD	9.90	12.00	12.96	12.70

Note: Task1 = writing the alphabet in order from memory; Task2A-cursive = alphabet copying in cursive; Task2A-manuscript = alphabet copying in manuscript; Task2B = allograph selection.

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(8, 632) = 14.3, p < 0.001, \eta^2 = 0.15$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between grades in writing the alphabet in order from memory, $F(2, 319) = 54.1, p < 0.001, \eta^2 = 0.25$, alphabet copying in manuscript, $F(2, 319) = 18.4, p < 0.001, \eta^2 = 0.10$; and allograph selection, $F(2, 319) = 29.5, p < 0.001, \eta^2 = 0.15$, except for alphabet copying in cursive ($F < 1$). All post hoc comparisons using the Bonferroni method of multiple comparisons were significant ($F > 1$). That means that children in grade 1 covered less distance on the tablet than those in grade 2 and grade 3, and children in grade 2 covered less than those in grade 3 on each dependent variable (see Figure 5).

Figure 5 Performance by grade on distance variables



Source: Author (Jiménez)

Duration

We used variance multivariate analyses to test the difference between grades in duration as a dependent variable. *Table 25* shows means and standard deviations of duration in the EGWA tasks by grade.

Table 25 Means and standard deviations of duration in the EGWA tasks by grade

		Grade			
		1	2	3	Total
duration_Task1 (summed duration between these points)	Mean	21.30	22.50	23.11	22.31
	N	105	109	108	322
	SD	6.53	5.01	5.09	5.60
duration_Task2A- cursive (summed duration between these points)	Mean	23.94	24.59	25.96	24.84
	N	105	109	108	322
	SD	5.25	3.99	5.27	4.93
duration_Task2A- manuscript (summed duration between these points)	Mean	21.28	22.35	23.87	22.51
	N	105	109	108	322
	SD	4.11	3.97	3.86	4.11
duration_Task2B (Summed duration between these points)	Mean	22.37	22.12	24.51	23.01
	N	105	109	108	322
	SD	4.64	4.12	4.84	4.65

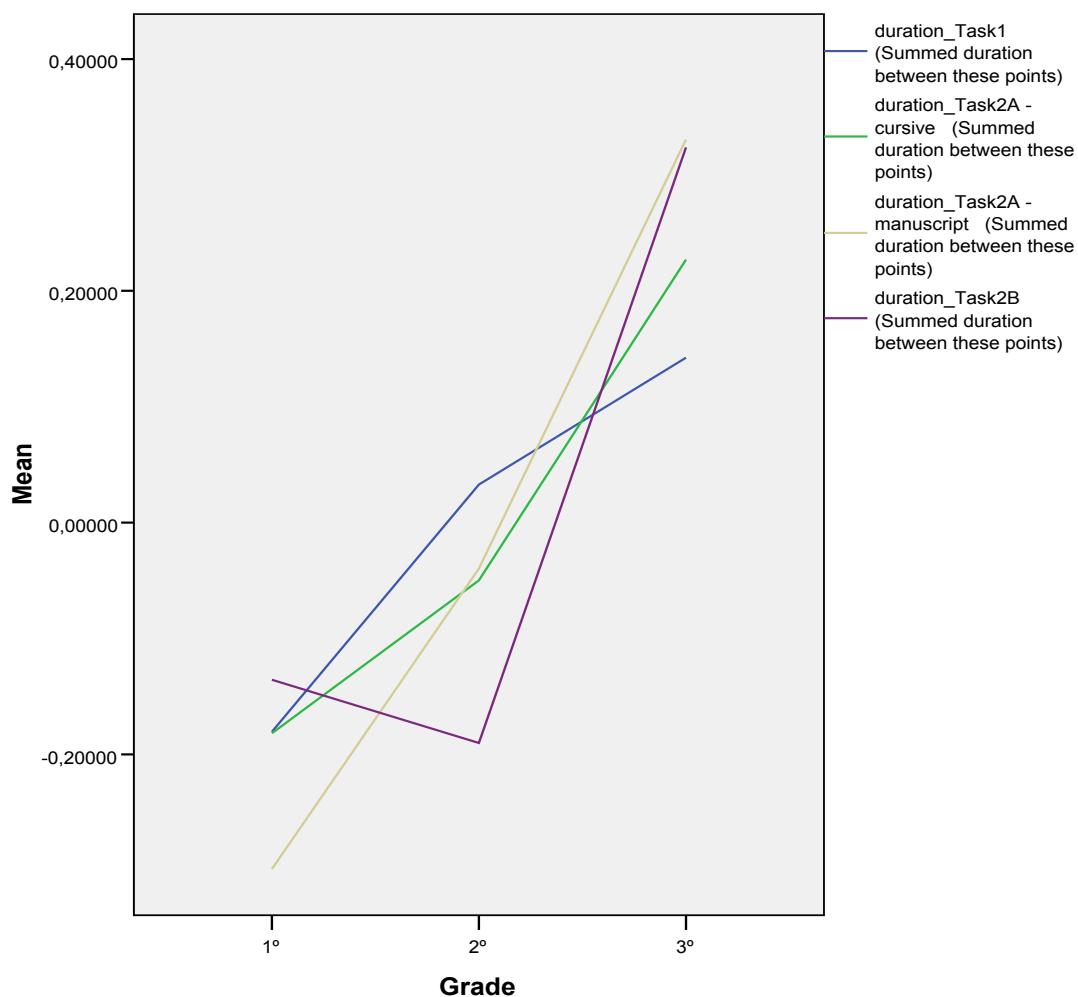
Note: Task1 = writing the alphabet in order from memory; Task2A-cursive = alphabet copying in cursive; Task2A-manuscript = alphabet copying in manuscript; Task2B = allograph selection.

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(8, 632) = 4.27, p < 0.001, \eta^2 = 0.05$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between the grades in alphabet copying in cursive, $F(2, 319) = 4.75, p < 0.01, \eta^2 = 0.02$, alphabet copying in manuscript, $F(2, 319) = 11.3, p < 0.001, \eta^2 = 0.06$; and allograph selection, $F(2, 319) = 9.02, p < 0.001, \eta^2 = 0.05$, except in writing the alphabet in order from memory ($F < 1$). All post hoc comparisons between first and third grade (for the tasks alphabet copying in cursive, alphabet copying in manuscript, and allograph selection) and comparisons between the second and third grade

(for the tasks alphabet copying in manuscript and allograph selection), using the Bonferroni method of multiple comparisons were significant ($F > 1$). That means that in children in grade 1 spent less time with the pen in contact with the tablet than those in grade 3, and children in grade 2 less than those in grade 3 on each dependent variable. This is to be expected because duration depends on the number of letters written, which was greater for the older children (see *Figure 6*).

Figure 6 Performance by grade on duration variables



Source: Author (Jiménez)

Velocity

We used variance multivariate analyses to test the difference between grades in velocity as a dependent variable. *Table 26* shows means and standard deviations of velocity in the EGWA tasks by grade.

Table 26 Means and standard deviations of velocity in the EGWA tasks by grade

		Grade			
		1	2	3	Total
velocity_Task1 (Mean tracing (writing) speed for the segment)	Mean	1.33	1.78	2.06	1.73
	N	105	109	108	322
	SD	0.48	0.57	0.73	0.67
velocity_Task2A- cursive (Mean tracing (writing) speed for the segment)	Mean	1.14	1.19	1.17	1.17
	N	105	109	108	322
	SD	0.56	0.46	0.50	0.50
velocity_Task2A- manuscript (Mean tracing (writing) speed for the segment)	Mean	0.93	1.07	1.10	1.03
	N	105	109	108	322
	SD	0.39	0.49	0.40	0.43
velocity_Task2B (Mean tracing (writing) speed for the segment)	Mean	1.24	1.61	1.65	1.50
	N	105	109	108	322
	SD	0.41	0.49	0.59	0.53

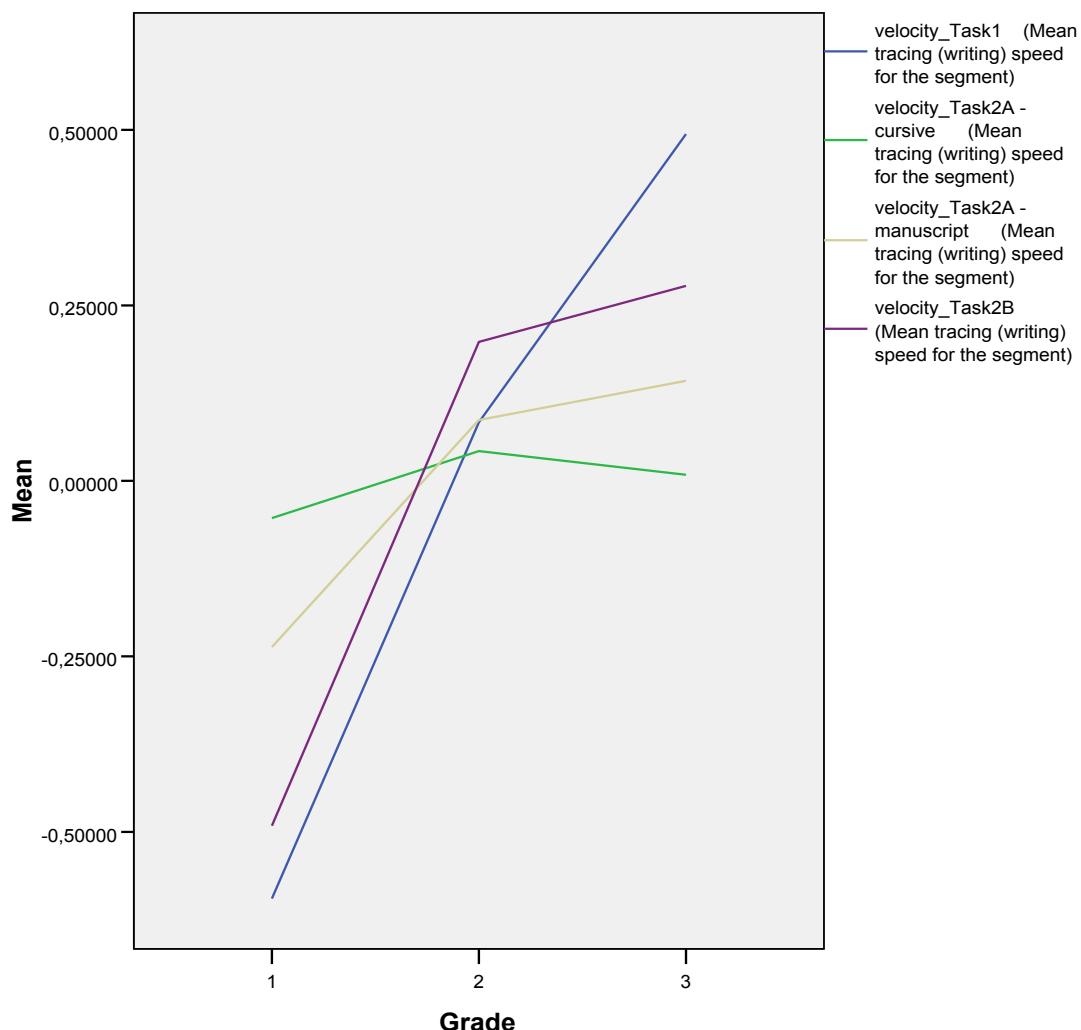
Note: Task1 = writing the alphabet in order from memory; Task2A-cursive = alphabet copying in cursive; Task2A-manuscript = alphabet copying in manuscript; Task2B = allograph selection.

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(8, 632) = 12.7, p < 0.001, \eta^2 = 0.13$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable and there were significant differences between the grades in writing the alphabet in order from memory, $F(2, 319) = 39.9, p < 0.001, \eta^2 = 0.20$, alphabet copying in manuscript, $F(2, 319) = 4.55, p < 0.05, \eta^2 = 0.02$, and allograph selection, $F(2, 319) = 21.3, p < 0.001, \eta^2 = 0.11$, except for alphabet copying in cursive ($F < 1$). All post hoc comparisons between first and third grade (for all tasks) and comparisons between second and third grade (for all tasks) using the Bonferroni method of multiple comparisons were significant ($F > 1$). For alphabet copying in manuscript post hoc comparisons between first and third grade were significant ($F > 1$). For allograph selection post hoc comparisons between first and second grade, and first and third grade, were significant ($F > 1$). That means that the average velocity that is reached by children in grade 1 was less than for those in grade 2 and grade 3,

and the average velocity was less in children from grade 2 than grade 3 for writing the alphabet in order from memory. For alphabet copying in manuscript and allograph selection the average velocity of children in grade 1 was less than for those in grade 3. And, finally the average velocity of children in grade 1 was less than for those in grade 2 for allograph selection (see *Figure 7*).

Figure 7 Performance by grade on velocity variables



Source: Author (Jiménez)

Pressure

We used variance multivariate analyses to test the difference between grades in pressure as a dependent variable. *Table 27* shows means and standard deviations of pressure in the EGWA tasks by grade.

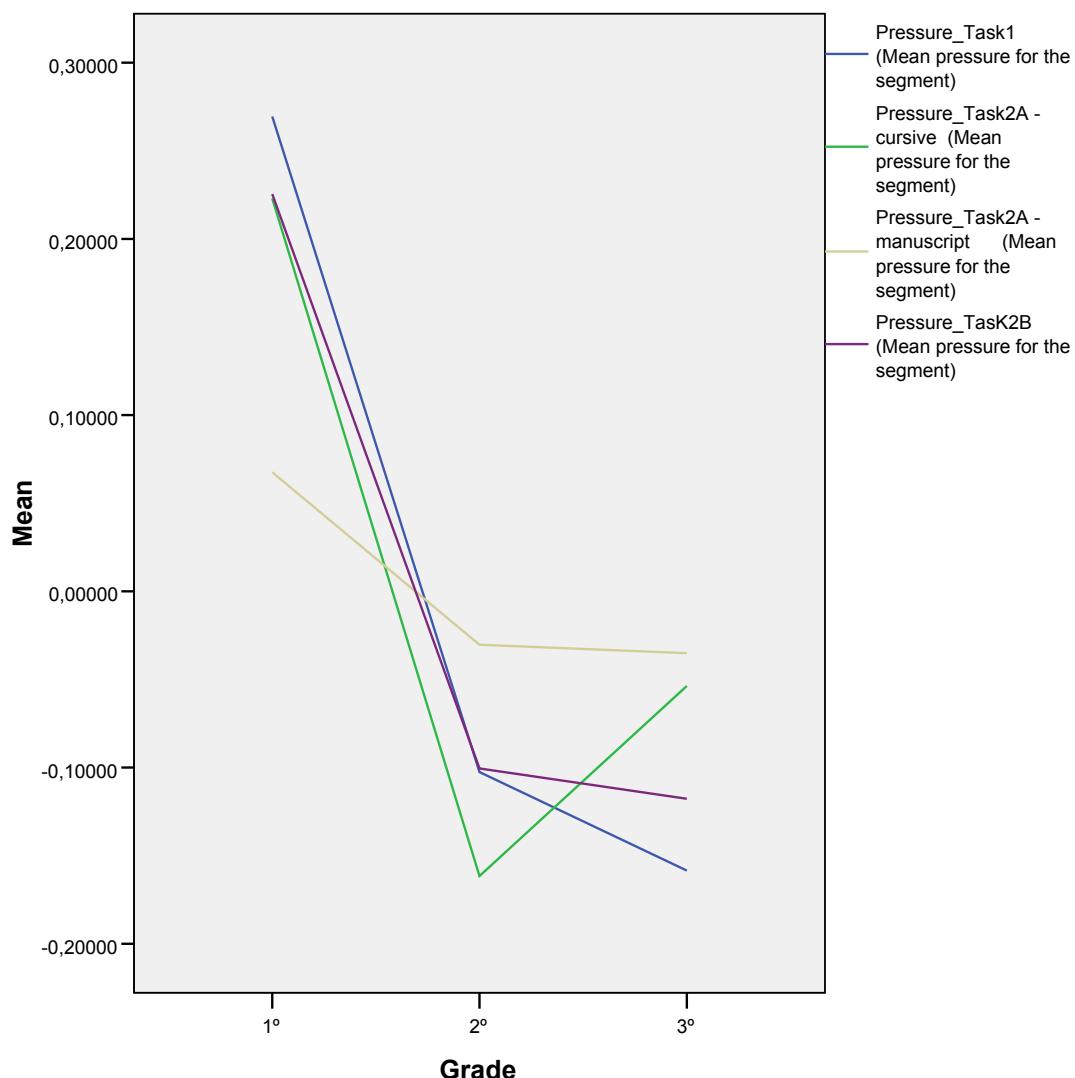
Table 27 Means and standard deviations of pressure in the EGWA tasks by grade

		Grade			
		1,00	2,00	3,00	Total
Pressure_Task1 (mean pressure for the segment)	Media	567.54	506.86	497.75	523.59
	N	105	109	108	322
	Desv. típ.	160.61	167.70	153.26	163.10
Pressure_Task2A- cursive (mean pressure for the segment)	Media	581.14	516.61	534.71	543.73
	N	105	109	108	322
	Desv. típ.	165.63	178.27	153.55	167.85
Pressure_Task2A- manuscript (Mean pressure for the segment)	Media	604.73	588.72	587.94	593.68
	N	105	109	108	322
	Desv. típ.	167.00	171.46	152.45	163.50
Pressure_Task2B (mean pressure for the segment)	Media	587.46	533.87	531.05	550.40
	N	105	109	108	322
	Desv. típ.	166.87	164.85	156.80	164.40

Note: Task1 = writing the alphabet in order from memory; Task2A-cursive = alphabet copying in cursive; Task2A-manuscript = alphabet copying in manuscript; Task2B = allograph selection.

Source: Author (Jiménez)

MANOVA revealed a statistically significant difference, $F(8, 632) = 4.0, p < 0.001, \eta^2 = 0.04$. Tests of between-subject effects were conducted after the MANOVA on each dependent variable, and there were significant differences between the grades in writing the alphabet in order from memory, $F(2, 319) = 5.91, p < 0.01, \eta^2 = 0.03$, alphabet copying in manuscript, $F(2, 319) = 4.27, p < 0.05, \eta^2 = 0.01$, and allograph selection, $F(2, 319) = 4.0, p < 0.05, \eta^2 = 0.02$, except for alphabet copying in manuscript ($F < 1$). All post hoc comparisons between first and second grade, and first and third grade (for writing the alphabet in order from memory and allograph selection tasks) using the Bonferroni method of multiple comparisons were significant ($F > 1$). For alphabet copying in cursive, post hoc comparisons between first and second grade were significant ($F > 1$). That means that children in grade 1 pressed harder with the pen than those in grade 2 and grade 3 for writing the alphabet in order from memory and allograph selection. Likewise, children in grade 1 pressed harder with the pen than those in grade 2 for alphabet copying in cursive. Finally, children in grades 2 and 3 used similar pressure with the pen (see *Figure 8*).

Figure 8 Performance by grade on pressure variables

Source: Author (Jiménez)

Some conclusions

In general, it is clear that the measures that were analysed for each of these tasks (distance, duration, velocity and pressure) are sensitive to grade level. Regarding distance, we observed an increase in all tasks over grade level, as children wrote a greater number of letters when advancing in grade level, except for alphabet copying in cursive.

Concerning real-time writing (duration), an increasing number of letters is written in a minute as a function of grade level, except for writing the alphabet in order from memory. Also, we observed an increase with grade level advancement regarding velocity of the strokes, again except for alphabet copying in cursive. Finally, analysing the pressure during writing, it is observed that children applied less pressure as they rose up the

grades. When children write with less pressure, they are able to write faster. There was an exception for alphabet copying in manuscript, where children exerted a similar pressure in all the grades.

Standardization of EGWA

Grade distribution of the sample made it possible to calculate norms for the first, second and third grades. *Tables 36 to 77* (see Annex F) include percentile ranks and number of participants contributing to the normative estimates of each EGWA task and its main components. To use the table, select the appropriate column corresponding to the grade, find the student's raw scores, and subsequently refer to the corresponding percentile rank (left part of the tables).

5.4 Summary and discussion

What is the internal structure of EGWA?

What components can we identify in writing? From theoretical frameworks, several components have been identified for understanding the writing development of younger children or children with low-level writing skills. Among these are transcription (handwriting and spelling) and text production (sentences and text) (Berninger, 2000; Berninger and Amtmann, 2003). Crawford and colleagues (2006) analysed six tasks ranging in difficulty from copying letters to story-writing in the English language. They performed a principal components analysis, and found that a four-factor model provided a better representation of the principal components contained in the data. Factor 1 encompassed story-writing tasks (total words, correct word sequences, and ideas and organization); Factor 2 contained copying letters and words; Factor 3 consisted of writing down dictated words and sentences; and Factor 4 encompassed writing sentences (measuring both total words and correct letter sequences). These four factors align well conceptually with both the theory and practice associated with the writing assessment. The exploratory factor analysis for the EGWA was conducted in the Spanish language, and principal component analysis with varimax rotation identified four main components: handwriting fluency, spelling, sentence production and text production. The first two components are related to *transcription* (that is, handwriting and spelling), and the second two components are related to *text production* (that is, sentence and text production). This factorial structure seems similar to the one found in the English language studies mentioned earlier.

Transcription

The first component, *transcription*, incorporates both handwriting (letter production) and spelling (word production) as tools needed for transcribing oral language into written text. Transcription is a basic cognitive process in writing that enables the writer to translate internal language into external written symbols, so as to express ideas in written language. Transcription ability may be especially important in beginning and developing writing in the elementary school years. Thus, the 'simple view of writing' model (Berninger and Amtmann, 2003) predicts that if children are slow or inaccurate at transcription (for instance, they have slow handwriting and poor spelling), their overall compositional quality will suffer as they

will have to devote more mental resources to transcription, leaving less brain power for composition. In addition, transcription ability has been found to uniquely predict composing length and quality in developing writers (Berninger, Abbott et al., 2009). Many studies have demonstrated that low-level developmental skills, as well as component skills such as handwriting and spelling, may provide a critical foundation in the early stages of writing that influences the degree to which a child subsequently develops higher-level composition skills (Jones and Christensen, 1999).

Handwriting: legibility and speed

Competence in handwriting is usually described in terms of legibility and speed (Graham, 1986; Graham and Weintraub, 1996). An essential ingredient in the development of handwriting competence is learning how to write correctly the letters of the alphabet. Some letters of the alphabet are more difficult to master than others, as letters differ in the number, direction and types of stroke they require. Some recent research has focused on testing a model of the mechanisms that contribute to handwriting legibility (e.g. Graham, Struck et al., 2006) (letters with added strokes and letters with missing strokes, alignment of letters on the page, letter size, except slant). Another study with implications for handwriting assessment focused on children in grades 1 to 3 who were asked to write the letters of the alphabet from memory (Graham, Weintraub et al., 2001) (assessing whether were no rotations, letter correct formation, and all parts). Previous studies have produced a growing list of attributes that contribute significantly to the prediction of text legibility, such as letter legibility, neatness, letter formation, uniformity of slant, size of letters, compactness of space in the writing and between words, steadiness of letter and word alignment, lightness and darkness of print, and type of script. Also to be considered are variables related to the writer (aspects such as gender), the assignment and the tester (Rosenblum, Weiss et al., 2003b).

Recent studies have shown that while handwriting plays an important role in the learning of written composition, writing speed explains a significant proportion of the variance in written composition (Graham, Berninger et al., 1997). Graham, Berninger and colleagues (2001b) pointed out that is surprising only a total of four studies since the 1980s have focused their attention on handwriting speed (number of letters written per minute) at two or more grade levels.

Based on reviews of previous research, in the EGWA protocol the handwriting fluency component (that is, letter production) is measured calculating the *number of letters written correctly per minute in alphabet copying*, and *letters written correctly per minute in allograph selection*. We considered letters to be written correctly when they were well aligned, included all expected parts, were correctly formed, correctly proportioned, included no additional lines or strokes, and contained no reversals or rotated parts.

Spelling

The dual-route model of spelling production (e.g. Ellis, 1982; Ellis and Young, 1996) proposes that there are at least two different systems accessed when writing to dictation, and that these operate in parallel. One is a lexical route that retrieves spellings of known words from

a memory store of word-specific knowledge, and the second is a nonlexical (or assembled) route that generates spelling using a process of sublexical sound-to-spelling conversion. The dual route model is based on the idea that to write a word you can either attend to the phonemes that form the word and the associated graphemes (to write unfamiliar words, regular or pseudowords) or retrieve the spelling from memory (for writing familiar words and those that have irregular spelling) (Ellis, 1982; Hatfield and Patterson, 1983).

In the EGWA protocol, the spelling component (in other words, word production) is measured calculating the *number of words spelled correctly in word and sentence dictation tasks, and the number of pseudowords with correct graphical representation of the sounds in the pseudoword dictation task*. For the first measurement, the child must have an orthographic representation in their mind of the spelling of arbitrarily spelled words to write them correctly. The procedure is that the meaning directly activates the written representation without the need to break the word into its phonemes/graphemes.

Therefore, we expect success at this task to indicate that the child is making use of the direct or lexical path. For the second measure, the ability to work out an appropriate spelling for pseudowords indicates a knowledge of the rules of phoneme–grapheme correspondence. If the child makes many more mistakes in writing pseudowords, it will be because they have difficulties in using the phonological route.

Text generation

Young writers' attention shifts from forming individual letters and spelling words, to constructing phrases, sentences and paragraphs. As their proficiency develops, the texts they produce become increasingly complex, progressing from random word combinations to extended narratives and organized texts (Berninger, Abbott et al., 2006). Therefore, current measures used to assess spelling or letter writing, and those that require copying and/or dictation, fail to capture the potential range of writing competencies that children in elementary grades possess. This is a period of schooling in which composition skills are emerging.

Sentence writing

Coker and Ritchey (2010) investigated the use of a sentence-writing assessment administered to children in kindergarten and first grade. They found that first-grade children demonstrated more developed sentence-writing abilities than kindergarten children. Children in grade 1 were more likely to write a sentence or multiple sentences, and more likely to write complete sentences that included mechanical features such as capital letters and punctuation.

In the EGWA protocol the sentence-writing component (in other words, sentence production) is measured by the *number of words written, number of words spelled correctly, and spacing between words*.

Written expression

To become fully literate, however, children need to move beyond single words and sentences and learn how to deal with text. Young children's early writings are characterized

as being knowledge-telling: that is, writing whatever a prompt brings to their mind. They lack higher levels of processing skills, such as revision and planning. One explanation is that children rely on a simpler approach to generating and encoding ideas because knowledge-telling makes fewer cognitive demands than processes, such as planning and revision. Children may devote less attention to planning and revision because translation, which involves generating ideas and transcribing them onto paper, is not yet automated and demands considerable cognitive energy (Graham, 1990; Graham and Harris, 2000). Previous research with curriculum-based measures has indicated that the number of words written, number of correctly spelled words, and number of correct word sequences (defined as two adjacent words that are correct) in a three-minute response to a narrative story starter serve as reliable and valid indicators of writing proficiency at the elementary school level (Deno et al., 1982; Videen et al., 1982). Alternative indices have also been studied, such as the number of correct punctuation marks, number of simple sentences, number of words in complete sentences, number of large words, T-units (i.e., a single clause which consists of a subject and a predicate), and/or mature words.

In the EGWA protocol, the text-writing component (in other words, text production) is measured by the number of written words (compositional fluency), the number of words with correct spelling (compositional spelling), word sequence, and global structure (structural elements such as the characters involved in the story, initial event or problem, implementation, and what happens at the end of the story).

In sum, according to the exploratory factor analysis for the EGWA, *Table 28* shows the main components, tasks and the main early grade writing assessment indicators.

Table 28 EGWA main components, tasks and main assessment indicators

Early Grade Writing Assessment (EGWA):		
Factors	Tasks	Main assessment indicators
Letter production	Alphabet copying	Number of letters copied correctly in one full minute
	Allograph selection	Number of letters written correctly in one full minute
Word production	Writing down dictated words with irregular spelling	Number of words spelled correctly
	Writing words that conform to spelling rules from dictation	Number of words spelled correctly
	Writing sentences from dictation	Number of words spelled correctly
	Writing pseudowords from dictation	Number of pseudowords spelled with a correct graphic representation of the sounds
	Writing the alphabet in order from memory	Number of letters written correctly in order in one full minute
Sentence production	Writing an independently composed sentence	Number of words
	Writing an independently composed sentence	Number of words spelled correctly
	Writing an independently composed sentence	Spacing between words
Text production	Writing a story	Number of written words (compositional fluency)
	Writing a story	Number of words with correct spelling (compositional spelling)
	Writing a story	Word sequence
	Writing a story	Global structure total

Source: Author (Jiménez)

According to this factorial structure we present information in more detail (see *Table 29*) about the different measures that are necessary to calculate the main assessment indicators for an EGWA task.

Table 29 Measures to calculate the main assessment indicators for an EGWA task

Early Grade Writing Assessment (EGWA)	
Task	Measures
1. Writing the alphabet in order from memory	Number of letters written correctly in order in one full minute
2. Alphabet copying and allograph selection	Time spent Number of letters written in one full minute Number of letters written correctly in the time annotated. Alignment Reversals Added strokes Missing strokes Handwriting fluency
5. Writing dictated words with inconsistent spelling	Number of words spelled correctly
6. Writing words that conform to spelling rules from dictation	Number of words spelled correctly
7. Writing pseudowords from dictation	Number of pseudowords with correct graphical representation of the sounds
8. Writing sentences from dictation	Number of words spelled correctly
9. Writing an independently composed sentence	Total number of words written (in all the time spent) Total number of words spelled correctly n (in all the time spent) Spacing between words
10. Writing a story	Total number of written words (compositional fluency) Total number of words with correct spelling (compositional spelling) Word sequences Global structure (characters involved in the story, initial event or problem, implementation, what happens at the end of the story)

Source: Author (Jiménez)

Are EGWA measures reliable?

The results show that EGWA measures are reliable. For the internal reliability of some EGWA tasks, Cronbach's alpha coefficients were 0.76, 0.90, 0.70, 0.71, 0.71, and 0.72, for word copying, sentence copying, writing dictated words with inconsistent spelling, writing words that conform to spelling rules, writing pseudowords, and writing sentences from dictation respectively.

Is there inter-rater agreement for EGWA tasks?

Overall, the interrater reliability of the EGWA ranged from high to very high.

Has EGWA concurrent and predictive validity?

The response is yes. When we analysed the correlations between EGWA and TEVET, we found a positive and significant correlation between the scores for the two tests. When we analysed the capability of the different components to correctly classify children with and without educational support using the EGWA main components scores, the discriminant function predicted group classification correctly in 65.4 per cent of children.

Are there differences between grades in the performance of EGWA tasks?

Overall, all post hoc comparisons using the Bonferroni method of multiple comparisons were significant for the majority of EGWA tasks included in the four main components ($F > 1$). That means that children in grade 1 performed significantly lower than those in grade 2 and grade 3, and children in grade 2 performed significantly lower than those in grade 3 on each dependent variable. However, there were two exceptions. First, there were no significant differences between grade 2 and grade 3 children in the number of letters copied correctly in one minute. Second, regarding the number of allograph letters written correctly in one minute, children in grade 1 performed significantly lower than those in grade 3, but not than those in grade 2. Children in grade 2 performed similarly to those in grade 3.

Finally, one of the expected outputs for piloting EGWA in the Canary Islands was the standardization of writing assessment for early grades. Grade distribution of the sample made it possible to calculate norms for grades 1, 2 and 3, and Annex J provides percentile ranks and number of participants contributing to the normative estimates of each EGWA task and its main components.

5.5 Scientific dissemination of EGWA's preliminary results and piloting with teachers

Dissemination of EGWA's preliminary results

The preliminary results and the tool developed have been disseminated widely both nationally and internationally. On the occasion of the International Meeting organized by

SIG-Writing in Porto (Portugal) from 11–13 July 2012, a dissertation was presented with the title ‘EGWA (Early Grade Writing Assessment): A tool for writing assessment in early grades’ (Jiménez, 2012b). Later, in the Symposium titled ‘Teaching Practices, Assessment and Writing Disabilities in Early Grades’ at the International Meeting arranged by the American organization Learning Disabilities Worldwide (LDW) in Oviedo (Spain) from 5–7 September 2012 (Jiménez, 2012c). At the 37th Annual Conference of the International Academy for Research in Learning Disabilities (IARLD) from 27–29 June 2013 in Boston, Mass. (Jiménez, 2013e). Finally, a presentation on EGWA was made in the session entitled ‘How can literacy assessment support 21st century literacies?’ as part of the International Literacy Day Celebrations organized by UNESCO in Paris from 9–10 September 2013 (Jiménez, 2013b).

Piloting the short version of EGWA with teachers

We piloted a short version of EGWA with Colombian teachers as part of the International Congress ‘Lectura y Escritura en la Sociedad Global’ (Reading and Writing in the Global Society) organized by the University of Norte in Barranquilla, Colombia from 12–14 June 2013 (Jiménez, 2013a). A workshop on ‘How to evaluate learning outcomes in writing in the early elementary years’ was attended by 150 Colombian teachers working in state schools in the Department of the Atlantic. The main objective was to show them how to use EGWA to assess the learning outcomes of writing in the primary grades. The feedback indicated that participants understood the design of EGWA and considered it easy to administer and useful for instructional planning.

6. Using EGWA: implications for policy dialogue

6.1 Need to strengthen the link between policy and research

This EGWA is principally intended to inform policy debates through diagnosing, at the system level, areas for improvement in early writing instruction and to improve teaching and learning practice in school. All this could be done, considering experiences of and lessons learner from other assessment tools in reading and mathematics (such as EGRA and EGMA).

Many countries are seeking to improve their education systems to ensure that children acquire the traditional basic skills of reading, writing and mathematics. Enhancing education systems to ensure that children develop the skills they need is a complex process of planning, persuasion, implementation, monitoring, evaluating, and adjusting. Interventions usually take place as part of an education policy reform (Dhunpath and Paterson, 2004).

To meet this challenge, the weak link between policy and research needs to be strengthened. Many reasons have been suggested for this weakness (Drunpath and Paterson, 2004), including that policy-makers often fail to commission appropriate research, and/or ignore or subvert the results Researchers also often pursue their own research interests, which may not coincide with current policy imperatives. These problems on the part of both researchers and policy-makers have recently been seen as essentially stemming from a failure to communicate effectively.

Now we have some previous experiences that we can use as a reference on using assessment results to inform and promote dialogue on education policy. There has been positive experience with some lessons learnt regarding using assessment results to inform policy dialogue with the application of other instruments. An instrument for the Early Grade Reading Assessment (EGRA), for instance, had been adapted in 50 countries in 70 languages by 2011 (Gove and Wetterberg, 2011) or more than 60 countries between 2007 and mid-2014 (UNESCO, 2015), from which some lessons could be learnt (Bartlett, Dowd and Jonason, 2015; Wagner, 2011). Another positive experience goes back to 2002 - 2005 when USAID worked with the Ministry of Education, El Salvador and other stakeholders to support a series of participatory assessments and studies in El Salvador that led to changes in education policy. In the next section, we try to summarize some conclusions from these experiences.

Using assessment results to inform policy dialogue

The accumulating experience with EGRA tell us that the impact on policy dialogue to inform instruction seems to be made through two separate steps (Gove, 2008), which we suggest could be also applied to the case of EGWA.

Firstly, the assessment results tend to attract the interest of policy-makers and officials, even if the assessment is not originally requested by them. Presenting the knowledge and insights generated in a comprehensive manner help policy-makers and official better

understand the main issues to be addressed. For example, in the experience with EGRA, some commentators in some countries questioned the usefulness of measures of oral reading fluency as a marker or precursor of general learning, or even specifically of reading. We might find that people also question whether handwriting speed is an effective marker or precursor of learning skills in writing. In many countries the practice is for teaching writing to focus primarily on producing well-formed, joined-up handwriting, while speed of handwriting and handwriting fluency or automaticity are neglected. However, handwriting competence is described in terms of both legibility *and* speed. This is why it is important to have access to the background literature that explains the issues (including the material referenced in this toolkit).

Secondly, the experience with EGRA also demonstrated that efforts to benchmark the results in some way could attract the attention of policy-makers and officials on the subject. The average results of an EGRA exercise, for instance, have been compared with a target set in a number of countries, while discussion regarding EGRA's international benchmarking capacity is underway (Education International, 2015; Global Partnership for Education, 2016; Learning Metrics Task Force, 2013; Technical Cooperation Group, 2017; Wagner, 2011), while EGRA's bench-marking capacity and cross-language comparability have been debated. We must keep in mind the EGRA experiences to reflect on what EGWA can learn from those experiences in the future.

There have been other recent experiences of using participatory research and informed dialogue to influence education policy, such as the experience in El Salvador supported by USAID (Rosekrans, 2006). When the policy analysis and decision-making process is informed by research findings and involves stakeholders, the education policies developed may better respond to the education development needs of the country. Some of the lessons learned that may be helpful for education policy-makers, practitioners, researchers and others involved in educational change are:

- Dialogue and communication with key stakeholders are essential to overcoming social and cultural barriers to reform;
- Joint research teams including ministry of education officials, local NGO specialists, and national academics help build new partnerships and increase ownership of results;
- Focus groups and roundtable sessions provide valuable feedback to ministries of education about stakeholders' perceptions and priorities.

6.2 Reporting results to schools

Educators know that data can be used effectively to measure child progress, evaluate programme and instructional effectiveness, guide curriculum development and resource allocation, promote accountability and, most importantly, ensure that every child learns. School system leaders and their staff can learn from results of EGWA how to build a district-wide culture of inquiry that values the use of data for sound decision-making. School board

members, parents and community members interested in helping improve writing instruction in schools are also expected to find EGWA useful for their work. A set of data to be produced helps to measure different relevant educational aspects, such as child progress, programme effectiveness and instructional effectiveness. Hence, it can guide curriculum development, be used to report to the community, and meet state and region reporting requirements. People might want to take the general child achievement analysis at grade level to a deeper level analysis, looking at the distribution of scores to understand which children are scoring below required mastery level, and how far they are scoring below this level.

We should also ask how well we are doing. For example, is a particular writing programme effective? Which children are showing the greatest gains and why? How can we target those who are showing the least improvement? There is no doubt that child achievement data can help educators understand which instructional strategies are creating the best results and see where additional training might be needed.

To report results to schools, analysts should create a simple one-page summary, including reporting by grade and gender, for each individual school. This reporting should be accompanied by explanations for how each subtest relates to instruction, and what teachers can do to improve child results (see e.g. Jiménez, 2013d).

Finally, applications of EGWA could be also used to generate discussion at the national level and to help ministries into action. This report is considered important for its potential to enhance the influence of the research in the policy domain.

6.3 Possible ways forward

This EGWA instrument has great potential. The experts who examined the instrument recommended to explore whether this Spanish EGWA instrument can be adapted in other Spanish-speaking countries, in other languages in the alphabetic system, and also outside formal school. They also suggested to examine interrelations of EGWA's components with those of early grade reading assessment (EGRA), recognizing the value of a more holistic approach to early skills development and assessment.

To better harness the potential of EGWA, we need to be aware of some issues. First, this EGWA was piloted in primary school targeting grade 1-3 children in Spain. For greater inclusiveness, however, inclusion of other children, notably children with disabilities and out-of-school children, could also be considered. Second, the range of skills assessed by this type of instrument designed based on a writing development model has its limits. While results can be informative, those results should not be mechanically translated into a limited focus of writing instruction to ensure a holistic approach to early literacy learning. Also it is important to integrate writing development with that of reading and oral language. Third, EGWA, especially the use of its results, can benefit from bringing in multiple perspectives, including cultural, sociological, anthropological and linguistic ones. Writing skills development is influenced not only by the effectiveness of the cognitive process but also other factors related to socio-economic, political, cultural and linguistic contexts. Children

from a family or community with many print materials tend to be more prepared for literacy learning in primary school, which, among other factors, should be considered in defining a pedagogical response. Finally, for these to be achieved, building partnerships and stakeholders's capacity, especially that of teachers, is a key.

It is hoped this report will inspire teachers, experts, curriculum developers, assessment administrators, and other practitioners, as well as policy-makers who strive for equipping people with the solid basic literacy skills.

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Early Grade Writing Assessment

Annexes

Annex A

EGWA Administrator Instructions and Protocol

**PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA):
Instrucciones de administración y protocolo
Cuaderno del examinador**

TAREA 1: ESCRITURA DE MEMORIA Y EN ORDEN DE LAS LETRAS DEL ALFABETO

Objetivo: el propósito de esta tarea es evaluar si el estudiante es capaz de escribir todo el alfabeto de memoria y en orden.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza y papel pautado apropiado para su nivel. El examinador utilizará en esta tarea un cronómetro o reloj con segundero.

Puntuación: indique en su formulario de recogida de datos el tiempo invertido, el número total de letras escritas en tiempo invertido, el número de letras escritas correctamente en orden en un minuto y el número de letras omitidas en orden en un minuto.

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrar en el momento en que el estudiante empieza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última. El tiempo máximo que se concede para la realización de esta tarea es de 5 minutos.
- *Número de letras escritas en tiempo invertido:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible, de tipo imprenta o cursiva, esté o no en el orden adecuado; al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Número de letras escritas correctamente por orden en un minuto:* se asigna 1 punto por cada letra legible, de imprenta o cursiva, que el alumno haya sido capaz de escribir, usando mayúsculas o minúsculas. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras escritas correctamente. Se consideran letras escritas correctamente todas aquellas que sean legibles y que se encuentren ubicadas en el orden adecuado (v. gr., en la secuencia "a, C, d..." todas las letras son correctas puesto que se encuentran en el orden adecuado; sin embargo en la secuencia "a, c, b..." no contabilizamos la letra "b" puesto que la letra "b" no ha sido colocada en el orden adecuado). Así mismo, contamos como letras correctas aquellas letras que hayan sido escritas de forma invertida siempre y cuando se encuentren ubicadas en el orden correcto (v. gr., si el niño escribe al revés la letra "J" o la "Z"). Los dígrafos (ch, rr, ll) siempre se contabilizarán en positivo y nunca en negativo (v. gr., si el niño escribe "ll" después de "l" será contabilizada como letra correcta). Si el estudiante no escribe alguno de estos dígrafos no será penalizado, es decir, en ningún caso se contabilizará como omisión de letra. Además, se contabilizará como letra correcta tanto si el estudiante escribe "q" como si escribe "qu", siempre y cuando se encuentre en posición correcta dentro del alfabeto.
- *Número de letras omitidas en orden en un minuto:* se asigna 1 punto por cada letra que el alumno haya omitido en orden; al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras que el estudiante ha omitido (v. gr., en la secuencia "a, c, d..." contabilizamos una omisión puesto que falta la letra "b"; en la secuencia "a, c, d, b, e..." contabilizamos una omisión puesto que la letra "b" no está en el orden que le corresponde dentro del alfabeto). Toda letra no colocada en su orden correcto dentro del alfabeto será considerada como letra omitida. (v. gr., si el estudiante escribe "a, b, c, z, d, e, f, g..." todas las letras que se encuentren entre la "c" y la "z" serán consideradas como letras omitidas, por tanto en este caso encontramos 23 letras omitidas y 4 letras escritas correctamente en orden ("a", "b", "c" y "z").

Cálculo de la rapidez en la escritura: la rapidez en la escritura se calcula dividiendo un minuto por el número de letras escritas correctamente en orden en un minuto ($60/\text{número de letras}$), tal como se indica en la plantilla de corrección.

Instrucciones: se solicita al estudiante que escriba todas las letras del alfabeto en orden. Se le explica que puede escribir las letras como mejor sepa hacerlo: con mayúscula, con minúscula... Se le dice que debe escribir lo más rápido que pueda. Se empieza a cronometrar cuando el estudiante comience a escribir la primera letra y se detiene el cronómetro cuando termine de escribir la última o cuando hayan transcurrido 5 minutos desde el comienzo de la tarea.

Es necesario dar expectativas de éxito al estudiante con frases como "Sé que conoces bien el abecedario o las letras del alfabeto, me gustaría que las escribieras..." o "Tu profesor me ha contado que has aprendido a escribir muy bien las letras...". Dígale: "Si no puedes hacer algunas letras, no te preocupes, continúa con las siguientes".

Empiece a cronometrar cuando el estudiante comience a escribir la primera letra. Si el estudiante no empieza a escribir cuando se le indica, entonces dígale: "Mira cómo lo hago yo", y muéstrelle cómo se hacen las dos primeras letras del alfabeto, en las dos líneas superiores colocadas en la parte superior izquierda de la plantilla: "a" y "b". No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si transcurridos 5 minutos el estudiante no ha terminado el ejercicio, se le pide que se detenga y se retira la tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo, intentando distraerlo lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o cuando haya finalizado el periodo de 5 minutos.

NOTA IMPORTANTE: si un estudiante termina de escribir el alfabeto antes de que finalice el minuto entonces debe volver a comenzar a escribirlo. Para ello es necesario indicarle, rápidamente, que debe comenzar de nuevo en la siguiente lámina. Recuerde que no debe parar el tiempo, por lo que la instrucción para que el niño comience de nuevo debe ser rápida. Una vez transcurrido el minuto se le indica que haga una marca en el papel. Finalmente, una vez que haya finalizado de escribir de nuevo el alfabeto se detiene el cronómetro y se contabiliza el tiempo invertido.

Plantilla de corrección Tarea 1

a	b	c	d	e	5	
f	g	h	i	j	10	TIEMPO INVERTIDO: _____
k	l	m	n	ñ	15	Nº LETRAS ESCRITAS EN TIEMPO INVERTIDO: _____
o	p	q	r	s	20	Nº LETRAS ESCRITAS CORRECTAMENTE EN ORDEN EN UN MINUTO: _____ (60/número de letras): _____
t	u	v	w	x	25	Nº DE LETRAS OMITIDAS EN ORDEN EN UN MINUTO: _____
y	z				27	

TAREA 2: COPIA DEL ALFABETO Y SELECCIÓN DE ALÓGRAFOS

Objetivo: el propósito de esta tarea es doble: 1) evaluar si el estudiante ha adquirido los patrones motores para la escritura de letras, y 2) evaluar si el estudiante es capaz de seleccionar el alógrafo correspondiente (es decir, la letra minúscula) para cada letra mayúscula.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. En esta tarea encontramos dos subtareas, la 2A y la 2B. En la subtarea 2A “Copia del alfabeto” el examinador contará con dos tipos de plantillas: una plantilla con el alfabeto escrito con letra de imprenta y una plantilla con el alfabeto escrito con letra cursiva. Se utilizará el formato que en el momento de la administración de esta subtarea seleccione el estudiante, es decir, únicamente deberá llenar una de las dos plantillas. En esta subtarea el estudiante deberá realizar una copia exacta de cada una de las letras. En la subtarea 2B “Selección de alógrafos”, se mostrará al estudiante una lámina que contiene todas las letras del alfabeto en mayúsculas y este deberá escribir cada letra minúscula correspondiente a cada letra mayúscula presentada.

Puntuación:

Parte 2A:

Indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También se debe indicar la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS al final de este documento):

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrar cuando empieza a escribir la primera letra y deteniendo el cronómetro cuando termine de escribir la última, cuando nos indique que no puede continuar o cuando el tiempo transcurrido desde el comienzo de la subtarea sea de 5 minutos.
- *Letras escritas en un minuto:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta, durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido:* se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas sin cometer ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en que una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- *Inversiones:* el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurrida en el conjunto de letras escritas.

- *Adición de trazos:* el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido todo trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba “qu” al copiar “q” se ignorará la “u” y no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.
- *Omisión de trazos:* el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el estudiante elige un tipo de letra (de imprenta o cursiva) y al realizar la copia emplea la modalidad contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla. Por ejemplo, si el niño elige un tipo de formato (de imprenta vs. cursiva) consideramos que debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar el empleo de un formato contrario al seleccionado. Este criterio solo se utiliza para las letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los alumnos están utilizando el formato de cursiva o de imprenta de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y de imprenta en la copia de la letra “a” es la adición o la eliminación de dos trazos.

Parte 2B:

Indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También se debe indicar la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS al final de este documento).

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrarlo cuando empieza a escribir la primera letra y deteniendo el cronómetro cuando termine de escribir la última, cuando nos indique no puede continuar o cuando el tiempo transcurrido desde el comienzo de la prueba sea de 5 minutos.
- *Letras escritas por minuto:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta, durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido:* se asigna 1 punto por cada letra que el estudiante haya sido capaz de escribir correctamente durante el tiempo invertido. Se consideran letras copiadas correctamente los alógrafos (letra minúscula) adecuadamente escritos y correspondientes a la letra mayúscula presentada. Además, en estas letras transformadas en minúscula correctamente no podrá existir ningún error de los citados a continuación para que pueda ser considerada como letra correcta: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.

Alineación: el examinador debe considerar la distancia entre el lugar en que una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.

- **Inversiones:** el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurridas en el conjunto de letras escritas.
- **Adición de trazos:** el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido todo trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba "qu" al copiar "q" se ignorará la "u" y no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.
- **Omisión de trazos:** el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: en la subtarea 2B, el estudiante puede mezclar ambos tipos de letra (de imprenta y cursiva) por lo que a la hora de la corrección de errores (alineación, inversiones, adición de trazos y omisión de trazos) debe tener en cuenta el tipo elegido por el estudiante en cada letra producida. Para ello podrá comparar cada letra copiada con su letra correspondiente según plantilla (de imprenta o cursiva) en la subtarea 2A, con el fin de que pueda apreciar más fácilmente si el estudiante ha realizado omisiones y/o adiciones de trazos. Si una letra es producida de manera que no refleje fácilmente si se trata de una letra cursiva o de imprenta, deberá elegir aquella cuya corrección penalice en menor grado al estudiante.

Cálculo de la rapidez en la escritura: en ambas partes (2A y 2B), la rapidez en la escritura se calcula dividiendo un minuto por el número de letras escritas en un minuto (60/número de letras) tal como se especifica en la plantilla de corrección.

Instrucciones:**Parte 2A:**

Se le da a elegir al estudiante entre ambas plantillas (de imprenta o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que pueda hacer más rápido. Se solicita al estudiante que copie las letras del alfabeto. Explíquele que debe copiar las letras lo mejor que pueda (deben ser lo más parecidas posible a las del modelo) sin salirse de las líneas del papel pautado y fijándose en los límites. Dígale también que debe copiar lo más rápido posible.

Es necesario dar expectativas de éxito al estudiante con frases como “Sé que sabes copiar el abecedario muy bien, me gustaría que lo escribieras...” o “Tu profesor me ha contado que has aprendido a copiar muy bien las letras...”. Dígale: “Si no puedes hacer alguna, no te preocupes, continúa con la siguiente. Ten en cuenta que debes escribir de izquierda a derecha y no de arriba abajo”. Empiece a cronometrar cuando el estudiante comience a escribir la primera letra. Si el alumno no empieza a escribir cuando se le indica, entonces debe decir: “Mira cómo lo hago yo”, y le muestra cómo se hace en las dos líneas superiores de ejemplo: “a” y “b”. No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante la realización de la prueba. Si transcurridos 5 minutos el estudiante no ha finalizado el ejercicio, se le solicita que se detenga y se da por finalizada esta subtarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo intentando distraerlo lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique no puede continuar o cuando haya finalizado el periodo de 5 minutos.

Parte 2B:

Se solicita al estudiante que escriba las letras minúsculas del abecedario. En esta ocasión, el alumno debe observar las letras mayúsculas del abecedario y escribir su correspondiente alógrafo en minúscula. Explíquele que debe escribir las letras lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Dígale que debe escribir lo más rápido posible.

Al igual que en la subtarea 2A, será necesario dar expectativas de éxito así como proponerle el juego de la línea al cabo de 1 minuto desde el comienzo de la subtarea.

Plantilla de corrección Tarea 2A

PARTE A					
a	b	c	d	e	5
f	g	h	i	j	10
k	l	m	n	ñ	15
o	p	q	r	s	20
t	u	v	w	x	25
y	z				27

TIEMPO INVERTIDO: _____

Nº LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de letras): _____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO: _____

Alineación: _____ /Inversiones: _____

Adición de trazos: _____ /Omisión de trazos: _____

Plantilla de corrección Tarea 2B

PARTE B					
A	B	C	D	E	5
F	G	H	I	J	10
K	L	M	N	Ñ	15
O	P	Q	R	S	20
T	U	V	W	X	25
Y	Z				27

TIEMPO INVERTIDO: _____

Nº LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de letras): _____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO: _____

Alineación: _____ /Inversiones: _____

Adición de trazos: _____ /Omisión de trazos: _____

TAREA 3: COPIA DE PALABRAS

Objetivo: el objetivo de esta tarea es evaluar si el estudiante ha adquirido los patrones motores necesarios para la copia de palabras.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Se entregará al estudiante una hoja de respuestas para que copie las palabras sobre la línea base. Para ello, el examinador debe contar con dos hojas de respuesta que tengan diferentes tipos de letra: de imprenta o cursiva. El estudiante podrá elegir entre ambas plantillas al inicio de la tarea.

Puntuación: debe indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También debe indicar la alineación, inversiones, adición de trazos, omisión de trazos y letras omitidas (ver EJEMPLOS al final de este documento):

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las palabras, comenzando a cronometrar cuando empieza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última letra. El tiempo máximo para la escritura de todas las palabras es de 5 minutos.
- *Letras escritas por minuto:* se asigna 1 punto por cada letra que el estudiante haya producido, sea legible o ilegible, correcta o incorrecta, durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido:* se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas sin cometerse ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en el que una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1. Bastará con que una sola letra de la palabra esté mal alineada para que en la totalidad de la palabra se asigne un 1 en alineación en la plantilla. El hecho de asignar un 1 en la totalidad de la palabra no indicará que todas las letras estén mal alineadas y por tanto sean todas incorrectas. En este apartado únicamente podrá asignar un 1 o un 0 en la totalidad de la palabra, no contabilizándose por tanto un 1 por cada letra mal alineada. Al finalizar el recuento de alineación por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las alineaciones encontradas en la totalidad de la tarea.
- *Inversiones:* el examinador debe registrar la presencia de una letra invertida (es decir, si la letra o alguna parte de la letra ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos de esa letra. Al finalizar el recuento de inversiones por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las inversiones encontradas en la totalidad de la tarea.

- *Adición de trazos:* el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido todo trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir, no será una adición de trazo si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Si el estudiante elige la plantilla de letra de imprenta y emplea en la copia de la palabra la cursiva, cada unión será considerada como adición de trazo, perteneciendo esta adición a la primera letra a la que se adhiere. Al finalizar el recuento de adiciones de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las adiciones de trazos encontradas en la totalidad de la tarea.
- *Omisión de trazos:* el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. Si el estudiante elige la plantilla cursiva y emplea en la copia de la palabra la letra de imprenta, cada desunión será considerada como omisión de trazo, perteneciendo esta omisión a la primera letra en la que está ausente el trazo de unión. Al finalizar el recuento de omisión de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las omisiones de trazos encontradas en la totalidad de la tarea.
- *Omisión de letras:* el examinador debe registrar el número de letras omitidas en cada palabra. Se considerará letra omitida aquella que no haya sido copiada o aquella que haya sido reemplazada por otra letra totalmente diferente a la que debería ser copiada, sin que se pueda modificar esta a través de adiciones u omisiones de trazos (v. gr., en la palabra “casa”, si el estudiante escribe “cas” o “case”, en ambos casos existiría una omisión de la letra “a”. Por el contrario, si el estudiante escribiese “caso”, no existiría una omisión de la “a” sino una omisión de un trazo que hace que la “a” de imprenta pase a convertirse en una “o” de imprenta). En ningún caso se considerará letra omitida el paso de una letra de imprenta a cursiva o viceversa, aunque esta no pueda ser modificada a través de adiciones u omisiones de trazos; será contabilizada como letra errónea, pero no como letra omitida. Al finalizar el recuento de letras omitidas por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las omisiones de letras encontradas en la totalidad de la tarea.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el estudiante elige un tipo de letra (de imprenta o cursiva) y al realizar la copia emplea la letra contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla a copiar. Por ejemplo, si el niño elige un tipo de formato (de imprenta vs. cursiva) consideramos que debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar el empleo de un formato contrario al seleccionado. Este criterio solo se utiliza para las letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los niños están utilizando el formato de cursiva o de imprenta de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y de imprenta en la copia de la letra “a” es la adición o eliminación de dos trazos.

Cálculo de la rapidez en la escritura: la rapidez en la escritura se calcula dividiendo un minuto por el número de letras escritas en un minuto (60/número de letras) tal como se especifica en la plantilla de corrección.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de “Omisión de letras” donde deberá colocar el número de letras que conforman la palabra no copiada y que por tanto han sido omitidas. Este criterio solo se aplicará a aquellas palabras que no hayan sido copiadas durante el tiempo invertido por el estudiante en la realización de la tarea. Aquellas palabras que no hayan sido copiadas debido a la finalización del tiempo requerido para la realización de la tarea (5 minutos) deberán ser puntuadas dejando todos sus apartados en blanco, sin contabilizar las omisiones de letras, puesto que el estudiante no ha omitido la palabra sino que no ha dispuesto de tiempo para realizarla.

Instrucciones: se le da a elegir al estudiante entre ambas plantillas (de imprenta o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que pueda hacer más rápido. Si el estudiante escoge la plantilla de letra de imprenta indíquele que debe dejar siempre un espacio entre letra y letra tal como figura en la plantilla. De la misma forma, explíquele que si escoge la plantilla de letra cursiva debe realizar la unión entre letra y letra tal y como figura en la plantilla. Explíquele que debe escribir las palabras lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Dígale que debe escribir lo más rápido que pueda pero que su tiempo no es limitado y puede terminar la tarea. Es necesario dar expectativas de éxito al estudiante con frases como “Sé que sabes copiar palabras muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes hacer alguna, no te preocupes, continúa con la siguiente”.

Antes de comenzar con la tarea, usted debe realizar la primera palabra de ejemplo situada en el borde superior de la plantilla de copiado. Indíquele mientras tanto cómo debe hacer para no salirse de las pautas lineales marcadas en la plantilla, cómo debe dejar o no espacios (dependiendo de si ha elegido letra de imprenta o cursiva) y cómo debe realizar todos los trazos que contiene cada una de las letras que conforman la palabra. Empiece a cronometrar cuando el estudiante comience a escribir la primera palabra. Si el estudiante no empieza a escribir cuando se le indica o manifiesta que no sabe cómo hacerlo, entonces debe decir: “Mira cómo lo hago yo con otro ejemplo”, y se le muestra cómo lo hace de nuevo con el segundo ejemplo situado en el borde superior de la lámina. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si transcurridos 5 minutos el estudiante no ha terminado el ejercicio entonces se detiene y se da por finalizada esta tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de esta tarea.

Plantilla de corrección Tarea 3

TAREA 3		TIEMPO INVERTIDO: _____			
Copia palabras	Casa	Luna	Codo	Foca	Dedo
					Subtotal A
					Camino
					Tejado
					Cometa
					Verano
					Salado
					Subtotal B
					Puntuación total (A+B)

Alineación	Nº LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de letras): _____			
	Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO: _____			
Inversiones	PUNTUACIÓN TOTAL: Alineación: _____ /Inversiones: _____			
Adición de trazos	Adición de trazos: _____ /Omisión de trazos: _____			
Omisión de trazos	Omisión de trazos: _____ /Omisión de letras: _____			
Omisión de letras				
Total				

TAREA 4: COPIA DE FRASES

Objetivo: el objetivo de esta tarea es evaluar si el estudiante ha adquirido los patrones motores necesarios para la escritura de frases.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Se presenta al estudiante una hoja de respuestas para que copie las frases en la línea base. Para ello, el examinador cuenta con dos hojas de respuesta que tienen diferente tipo de letra: de imprenta o cursiva. El estudiante podrá elegir entre ambas plantillas al inicio de la tarea.

Puntuación: indicar en su formulario de recogida de datos el tiempo invertido, número de letras escritas en un minuto y número de letras escritas correctamente en tiempo invertido. También se debe indicar la alineación, inversiones, adiciones de trazos, omisiones de trazos, letras omitidas, espacios entre palabras y palabras omitidas (ver EJEMPLOS al final de este documento):

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las palabras, comenzando a cronometrar cuando empieza a escribir la primera palabra y deteniendo el cronómetro cuando termina de escribir la última palabra. El tiempo máximo para la escritura de las frases es de 5 minutos.
- *Letras escritas por minuto:* se asigna 1 punto por cada letra que el estudiante haya producido, sea legible o ilegible, correcta o incorrecta, durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido:* se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas sin cometerse ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en el que una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1. Bastará con que una sola letra de la palabra esté mal alineada para que en la totalidad de la palabra se asigne un 1 en alineación en la plantilla. El hecho de asignar un 1 en la totalidad de la palabra no indicará que todas las letras estén mal alineadas y por tanto sean todas incorrectas. En este apartado únicamente podrá asignar un 1 o un 0 en la totalidad de la palabra, sin contabilizarse por tanto un 1 por cada letra mal alineada. Al finalizar el recuento de alineación por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las alineaciones encontradas en la totalidad de la tarea.
- *Inversiones:* el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos. Al finalizar el recuento de inversiones por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las inversiones encontradas en la totalidad de la tarea.

- *Adición de trazos:* el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido cualquier trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Si el estudiante elige la plantilla de imprenta y emplea en la copia de la palabra la letra cursiva, cada unión será considerada como adición de trazo, perteneciendo esta adición a la primera letra a la que se adhiere. Al finalizar el recuento de adiciones de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las adiciones de trazos encontradas en la totalidad de la tarea.
- *Omisión de trazos:* el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo, si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. Si el estudiante elige la plantilla cursiva y emplea en la copia de la palabra la letra de imprenta, cada desunión será considerada como omisión de trazo, perteneciendo esta omisión a la primera letra en la que está ausente el trazo de unión. Al finalizar el recuento de omisión de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las omisiones de trazos encontradas en la totalidad de la tarea.
- *Espacio entre palabras:* por cada espacio entre palabras que el alumno respete la puntuación es 1. No se contabilizará el espacio existente entre la palabra “perro” y “Bajo”.
- *Palabras omitidas:* el examinador debe registrar el número de palabras omitidas. Debe indicar en su formulario de recogida de datos el número total de palabras omitidas en la frase.
- *Letras omitidas:* el examinador debe registrar el número de letras omitidas en cada palabra. Se considerará letra omitida aquella que no haya sido copiada o aquella que haya sido reemplazada por otra letra totalmente diferente a la que debería ser copiada, sin que se pueda modificar esta a través de adiciones u omisiones de trazos (v. gr., en la palabra “niño”, el estudiante escribe “niñ” o “niñe”, en ambos caso existiría una omisión de la letra “o”. En el caso de que el estudiante escribiese “niña”, no existiría una omisión de la “o” sino una adición de un trazo que hace que la “o” de imprenta pase a convertirse en una “a” de imprenta). En ningún caso se considerará letra omitida el paso de una letra de imprenta a cursiva o viceversa, aunque esta no pueda ser modificada a través de adiciones u omisiones de trazos; será contabilizada como letra errónea, pero no como letra omitida. Al finalizar el recuento de letras omitidas por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatorio de todas las omisiones de letras encontradas en la totalidad de la tarea.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el estudiante elige un tipo de letra (de imprenta o cursiva) y al realizar la copia emplea la letra contraria, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla a copiar. Por ejemplo, si el alumno elige un tipo de formato (de imprenta vs. cursiva) consideramos que el niño debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar cuando el niño utiliza un formato contrario al seleccionado. Este criterio sólo se utiliza para las letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los estudiantes están utilizando el formato de cursiva o de imprenta de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y de imprenta en la copia de la letra “a” es la adición o eliminación de dos trazos.

Nota: en esta tarea “qu”, “rr”, “ll” y “ch” serán contabilizadas como una única letra.

Nota: si no se reproduce el punto o coma no se contabilizará como error. En cambio, si se reproduce la letra en mayúscula cuando debería ir en minúscula o viceversa sí se contabilizará como letra errónea.

Cálculo de la rapidez en la escritura: la rapidez en la escritura se calcula dividiendo un minuto por el número de letras escritas en un minuto (60/número de letras) tal como se especifica en la plantilla de corrección.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de “Palabras omitidas” donde deberá colocar un 1 puesto que la palabra ha sido omitida. Este criterio solo se llevará a cabo en aquellas palabras que no hayan sido copiadas durante el tiempo invertido por el estudiante en la realización de la tarea. Aquellas palabras que no hayan sido copiadas debido a la finalización del tiempo requerido para la realización de la tarea (5 minutos) deberán ser puntuadas dejando todos sus apartados en blanco, sin contabilizarlas como palabras omitidas, puesto que el estudiante no ha omitido la palabra sino que no ha dispuesto de tiempo para realizarla.

Si el tiempo finaliza interrumpiendo la escritura de una palabra en su totalidad, esta podrá ser considerada de dos maneras: se analizará como una palabra escrita siempre y cuando al estudiante le haya dado tiempo de escribir al menos la mitad de las letras que conforman la palabra (v. gr., si el estudiante ha escrito “Bajo la lluvia escucha el saxof” cuando se cumplen los 5 minutos, “saxofón” será valorada en todos los apartados como si hubiera sido escrita en su totalidad, exceptuando en el apartado “letras omitidas” donde deberá colocar el número de letras omitidas). En caso contrario la palabra no será valorada en ningún apartado (v. gr., si el estudiante ha escrito “Bajo la lluvia escucha el sa” cuando se cumplen los 5 minutos, “saxofón” no será valorada en ninguno de los apartados, como si la palabra no hubiera sido escrita, al encontrarse fuera del tiempo utilizado para la realización de la tarea).

Instrucciones: se le da a elegir al estudiante entre ambas plantillas (de imprenta o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que pueda hacer más rápido. Si el estudiante escoge la plantilla de letra de imprenta indíquele que debe dejar siempre un espacio entre letra y letra tal como figura en la plantilla, de la misma forma explíquele que si escoge la plantilla de letra cursiva debe realizar la unión entre letra y letra tal y como figura en la plantilla. Se solicita al estudiante que copie la frase. Explíquele que debe escribir la frase lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Es necesario dar expectativas de éxito al alumno con frases como “Sé que sabes copiar frases muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir”. Dígale: “Si no puedes copiar alguna palabra o alguna letra, no te preocupes, continúa con la siguiente”.

Antes de comenzar con la tarea, usted debe realizar las tres primeras palabras de la frase de ejemplo situada en la hoja inmediatamente anterior a la plantilla de copiado de frases. Indíquele mientras lo hace cómo debe hacer para no salirse de las pautas lineales marcadas en la plantilla, cómo debe dejar o no espacios (dependiendo de si ha elegido letra de imprenta o cursiva) y cómo debe realizar todos los trazos que contiene cada una de las letras que conforman la palabra. Empiece a cronometrar cuando el estudiante comience a escribir la primera palabra. Si el estudiante no empieza a escribir cuando se le indica o manifiesta que no sabe cómo hacerlo, entonces debe decir: “Mira cómo lo hago yo con otro ejemplo”, y se le muestra cómo lo hace de nuevo con las siguientes palabras que conforman la frase de ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si transcurridos 5 minutos el estudiante no ha terminado el ejercicio entonces se detiene y se da por finalizada esta tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de esta tarea.

Plantilla de corrección Tarea 4

TAREA 4													TOTAL
Copia de frases	Al	pequeño	niño	le	gustan	los	kiwis	y	jugar	con	su	perro	
Alineación												Bajo	la
Inversiones												lluvia	escucha
Adición de trazos												el	saxofón
Omisión de trazos												feliz	y
Palabras omitidas												emocionado	
Letras omitidas													
TIEMPO INVERTIDO: _____ N° LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de letras): _____													
N° LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO: _____ ESPACIOS ENTRE PALABRAS _____ /19													

TAREA 5: DICTADO DE PALABRAS DE ORTOGRAFÍA ARBITRARIA NO REGLADA (CON INCONSISTENCIAS EN LAS CORRESPONDENCIAS FONEMA-GRAFEMA)

Objetivo: el objetivo es evaluar si el estudiante es capaz de escribir palabras que se escriben de forma diferente a como se pronuncian en ausencia de una regla ortográfica, lo cual indicaría que ha memorizado su representación léxica. Se trata de palabras que presentan una ortografía arbitraria no reglada. El estudiante debe tener memorizada la representación ortográfica de las palabras de ortografía arbitraria para escribirlas bien. Este conocimiento implica la activación directa de la representación de la palabra sin necesidad de realizar la conversión fonema-grafema. Con esta tarea se pretende averiguar si el estudiante utiliza la ruta léxica u ortográfica.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las palabras en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de palabras con ortografía correcta. También se debe indicar la sustitución en cada palabra, omisiones, letras añadidas, traslaciones, y pronunciación si la hubiere:

- *Número de palabras con ortografía correcta*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera que una palabra está escrita correctamente cuando su representación ortográfica es correcta, es decir, cuando la palabra es escrita tal y como figura en la plantilla de corrección.
- *Sustitución*: el examinador debe registrar si existe o no sustitución en cada palabra. Se produce una sustitución cuando el niño reemplaza la letra crítica (letra marcada en negrita en la plantilla de corrección) por otra alternativa que también representa ese fonema. Cada palabra posee una o varias letras alternativas. Estas son: **Veneno**: B. **Papaya**: LL. **Noveno**: B. **Cometa**: K/Q/QU. **Boda**: V. **Lleno**: Y. **Cuna**: K/Q/QU. **Harina**: -. **Paje**: G. **Quita**: Q/K/KU. **Gitana**: J. **Llama**: Y. **Hada**: -. **Guerra**: GU. **Cena**: S/Z. **Guitarra**: G. **Sapo**: Z. **Jirafa**: G. **Zapato**: S. **Cohete**: -. La ausencia de la letra “h” indicará la existencia de una sustitución.
- *Omisiones*: el examinador debe registrar el número de letras omitidas en cada palabra. Se considera omisión cuando el estudiante no escribe una o más letras de la palabra, o cuando alguna de las letras es sustituida por otra, siempre y cuando no se trate de la sustitución de la letra crítica por su alternativa (v. gr., si el estudiante debe escribir “veneno” y escribe “veneo” o “venemo”, en ambas palabras existe una omisión de la “n”; si el estudiante debe escribir “boda” y escribe “poda”, existe una omisión de la “b” y no una sustitución puesto que la “b” ha sido cambiada por “p” y no por su letra alternativa “v”).
- *Adición de letras*: el examinador debe registrar el número de letras añadidas en cada palabra. Este tipo de error consiste en la incorporación, por parte del estudiante, de letras que no forman parte de la palabra (v. gr., harina/harinias).
- *Traslaciones*: el examinador debe registrar si existe o no una o varias traslaciones en cada palabra. Este tipo de error ocurre cuando el estudiante cambia el orden de las letras que componen la palabra (v. gr., trece/terce). Se contará únicamente un punto por cada palabra que contenga traslaciones (no se sumará el número de traslaciones existentes dentro de la misma palabra si hay más de una). Si el número de letras de la palabra es superior o inferior a lo que corresponde, NO existirá una traslación, sino que se identificará como adiciones u omisiones de letras (v. gr., si el niño debe escribir “cuna” y escribe “ucnan” no existirá una traslación de la “u”, puesto que el número de letras en la palabra es superior a la original. En este caso encontramos

2 omisiones (“c” y “u”) y una adición (“n”).

- **Pronunciación:** es necesario anotar si el estudiante pronuncia la palabra o parte de la palabra mientras la escribe. Escriba en la casilla de la columna correspondiente un 1 si la pronuncia y en caso contrario un 0.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de “Letras omitidas” donde deberá colocar el número de letras omitidas y en el apartado de “Ortografía correcta” donde deberá puntuar 0. Este criterio solo se aplicará a aquellas palabras que no hayan sido copiadas durante el tiempo invertido por el estudiante en la realización de la tarea. Aquellas palabras que no hayan sido copiadas debido a la finalización del tiempo requerido para la realización de la tarea (5 minutos) deberán ser puntuadas dejando todos sus apartados en blanco, sin contabilizar las letras omitidas, puesto que el estudiante no ha omitido la palabra sino que no ha dispuesto de tiempo para realizarla.

Instrucciones: se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna palabra, no te preocupes, continúa con la siguiente”. Empiece dictando las primeras dos palabras de ensayo (yate, gusano). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace el primer ejemplo. Recuerde que no debe repetir en voz alta la palabra mientras que la escribe, pues el estudiante puede tomarla como ejemplo y utilizar esta estrategia a la hora de reproducir las siguientes palabras. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 5

TAREA 5												
Dictado palabras ortografía arbitraria	Veneno	PapaYa	NoVeno	Cometa	Boda	LLeno	Cuna	Harina	PaJe	QUita	Gitana	LLama
Ortografía correcta/incorrecta (1=correcta/0=incorrecta)											Hada	GUerra
Sustituciones (letra crítica)											Cena	GUitarra
Omisiones de letras											Sapo	Jirafa
Adición de letras											Zapato	CoHete
Traslaciones												TOTAL
¿Pronuncia la palabra mientras la escribe?												

TAREA 6: DICTADO DE PALABRAS QUE CONTIENEN ALGUNA REGLA ORTOGRÁFICA

Objetivo: el objetivo es evaluar si el estudiante es capaz de escribir palabras que se ajustan a alguna regla ortográfica, lo que indicaría que las ha memorizado. Por tanto, el objetivo de esta tarea es evaluar el uso de la ruta léxica. Las reglas valoradas son las siguientes:

- Se escribe “m” antes de “p” y “b” (v. gr., sombrero, ombligo).
- Se debe emplear “r” al comienzo de las palabras (v. gr., radio), así como después de las letras “l”, “n” y “s” (v. gr., sonreír); se debe emplear “rr” entre 2 vocales (v. gr., perro) cuando el sonido es de “r” fuerte.
- Cuando las palabras empiezan por hue- o hie- se utiliza la letra “h” (v. gr., hueso, hielo).
- Se escriben con “y” las palabras que terminan con este fonema, siempre y cuando el acento no recaiga sobre la última sílaba (v. gr., rey).
- Todos los verbos que terminan con -aba se escriben con “b” (v. gr., caminaba).
- Todos los verbos que terminan en -bir (v. gr., subir) se escriben con “b”, menos hervir, servir y vivir.
- Las palabras que terminan en -evo o -ave (v. gr., nuevo, suave) se escriben con la letra “v” excepto mancebo, placebo, recebo, sebo, árabe y jarabe.
- Las palabras que terminan en -bilidad se escriben con la letra “b” (v. gr., debilidad) excepto civilidad y movilidad.
- Las palabras que terminan en -jero, -jera o -jería (v. gr., pasajero, cajera, relojería) se escriben con “j”.
- Las palabras que terminan en -logía (v. gr., tecnología) se escriben con “g”.
- Las palabras que terminan en -illo,-illa (v. gr., pestillo, taquilla) se escriben con "ll".
- Las palabras que terminan en -iva se escriben con “v” excepto criba, giba y piba.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las palabras en la línea base.

Puntuación: indicar en el formulario de recogida de datos el número de palabras en las que el estudiante utiliza correctamente la regla ortográfica:

- *Uso correcto vs. incorrecto de la regla ortográfica:* se asigna 1 punto si el estudiante ha sido capaz de transcribir correctamente la regla ortográfica. Se considera que el estudiante ha utilizado correctamente la regla ortográfica cuando escribe correctamente la parte de la palabra que contiene toda la regla ortográfica (todas las letras que se encuentran en negrita en la plantilla de corrección). Es necesario que el estudiante escriba todas las letras que conforman la regla de forma adecuada (v. gr., si el estudiante debe escribir “cepillo” y escribe “sepillo” o “pillo”, en ambos casos le será asignado un 1, puesto que ha utilizado correctamente la regla ortográfica: -illo. Si el estudiante debe escribir “cajera” y escribe “cajero” o “cajere”, en ambos casos le será asignado un 0, puesto que no ha utilizado correctamente la regla ortográfica en su totalidad: -jera). No se penalizará la ausencia de tilde.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá dejar la casilla en blanco en la plantilla de corrección.

Instrucciones: se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna palabra, no te preocupes, continúa con la siguiente”. Empiece dictando las primeras dos palabras de ensayo (limpio, hierba). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: "Mira cómo lo hago yo", y mostrarle cómo se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 6

TAREA 6	
Dictado de palabras regladas	Hueco
	ViVa
	ReY
	PasaJero
	AlRededor
	SonRisa
	NoMbре
	Hielo
	CaMpo
	AmaBa
	SuBir
	SuaVe
	CepiLlo
	DeBilidad
	CaJera
	Rosa
	ReloJería
	TecnoloGía
	NueVo
	SiLLa
	TOTAL

TAREA 7: DICTADO DE PSEUDOPALABRAS

Objetivo: averiguar si el estudiante es capaz de escribir grafemas que se corresponden con determinados fonemas en palabras inventadas. Una correcta ortografía de las pseudopalabras indica el conocimiento de las reglas de conversión fonema-grafema. Si el estudiante comete muchos errores en la escritura de pseudopalabras indica dificultades en el uso de la ruta fonológica. Además estas palabras contienen determinadas reglas ortográficas: si el estudiante aplica la regla ortográfica indicará que la ha memorizado.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las pseudopalabras en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de pseudopalabras escritas correctamente. También debe indicar el uso correcto o incorrecto de las reglas ortográficas:

- *Número de pseudopalabras con correcta representación gráfica de los sonidos:* si el estudiante ha escrito la pseudopalabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la pseudopalabra incorrectamente la puntuación es 0. Se considera que una pseudopalabra, palabra inventada no existente en nuestra lengua, está escrita correctamente cuando el estudiante ha sido capaz de transformar cada fonema en su correspondiente grafema. Se consideran válidas todas las palabras que suenan igual, tanto si se ajustan como si no a las reglas ortográficas (v. gr., si el estudiante debe escribir “hiefe” y escribe “ife” o “yefe”, ambas serán consideradas como correctas puesto que su lectura suena igual que la pseudopalabra dictada).
- *Uso correcto vs. incorrecto de la regla ortográfica:* se asigna 1 punto por cada regla ortográfica que el alumno haya sido capaz de transcribir correctamente, ubicada en una palabra concreta. La palabra será puntuada positivamente en este apartado siempre y cuando cumpla la regla (v. gr., si el niño debe escribir “lambo” y escribe “tambo” o “pambo”, ambas serán consideradas como correctas puesto que en ambas se respeta la regla ortográfica “m” antes de “b”). Cada pseudopalabra contiene en negrita la regla ortográfica que debe ser escrita en su totalidad para que pueda ser asignado 1 punto en este apartado.

Nota: las pseudopalabras “nempu” y “lambo”, aunque estén escritas con “n” (“nenpu” y “lanbo”), tendrán una representación gráfica de los sonidos correcta porque suenan igual.

Nota: es necesario tener en cuenta que una pseudopalabra puede contener una mala representación gráfica de alguno de sus sonidos y, sin embargo, contener un buen uso de la regla ortográfica y viceversa (v. gr., si el niño debe escribir “rumu” y escribe “romo”, su puntuación en el primer apartado “escritura con representación gráfica de todos los sonidos” será 0, mientras que en el segundo, “uso de la regla ortográfica” será 1, puesto que la ha escrito respetando la regla “r” al comienzo de la pseudopalabra; si el niño debe escribir “hiefe” y escribe “yefe”, su puntuación en el primer apartado “escritura con representación gráfica de todos los sonidos” será 1, mientras que en el segundo, “uso de la regla ortográfica”, será 0, puesto que la ha escrito sin respetar la regla “hie” al comienzo de la pseudopalabra). No se penalizará la ausencia de tilde.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, asignar un 0 en el apartado “Escritura con representación gráfica de todos los sonidos” y dejar la casilla en blanco en el apartado de “Uso de regla ortográfica”.

Instrucciones: solicite al estudiante que escriba las palabras inventadas que se le dictan. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna de las palabras inventadas, no te preocunes, continúa con la siguiente”. Empiece dictando las primeras dos palabras inventadas que sirven de ejemplo (pambu, vetenaje). Repita dos veces cada pseudopalabra lentamente y pronunciando correctamente. Si el estudiante solicita que sea repetida la palabra inventada, solo se permitirá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: "Mira cómo lo hago yo", y mostrarle cómo se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 7

TAREA 7	
Dictado de pseudopalabras	NeMpu
	Hueta
	NaY
	Rumu
	FeliLlo
	MinRa
	FoiVa
	Hiefe
	LaMbo
	TenaBa
	CaBir
	TeaVe
	DoeVo
	TaJería
	MoJera
	TaJero
	ToBilidad
	FuloGía
	TalRe
	FiLLa
	TOTAL

TAREA 8: DICTADO DE FRASES

Objetivo: evaluar la capacidad del estudiante de escribir frases que le son dictadas.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba la frase en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de palabras con ortografía correcta, uso de letras mayúsculas, uso de acentos, número de espacios entre palabras y uso de signos de puntuación. También se debe indicar la alineación, inversiones, sustituciones, adición de letras y omisión de letras:

- *Número de palabras con ortografía correcta:* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera correcta aquella palabra que no contenga ninguna falta de ortografía y que haya sido reproducida exactamente igual que la palabra dictada de la plantilla de corrección. En este caso NO se penalizará el uso de la minúscula al comienzo de la frase ni el no uso de la tilde (v. gr., si el niño debe escribir “El” y escribe “el” no será penalizada la ausencia de la mayúscula por lo que “el” será considerada palabra correcta; si el niño debe escribir “elefante” y escribe “Elefante” la palabra será considerada como incorrecta, pues utiliza una letra mayúscula dónde no debe; si el niño debe escribir “más” y escribe “mas”, será considerada como palabra correcta). Además, aquellas palabras que hayan sido escritas separadas o adheridas a otras serán penalizadas en este apartado con un 0 (v. gr., si el estudiante escribe “delos”, tanto “de” como “los” obtendrán en este apartado un 0; lo mismo ocurre si escribe “mun do”).
- *Uso de las letras mayúsculas:* por cada letra mayúscula que el estudiante escriba correctamente la puntuación es 1.
- *Acentos:* por cada acento (o tilde) que el estudiante escriba correctamente la puntuación es 1.
- *Espacio entre palabras:* por cada espacio entre palabras que el estudiante respete la puntuación es 1.
- *Uso de los signos de puntuación:* por cada signo de puntuación que el estudiante utilice correctamente la puntuación es 1.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en el que una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- *Inversiones:* el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos.
- *Sustituciones:* este tipo de error consiste en el reemplazo una letra por otra, siempre y cuando ambas letras no suenen de la misma forma dentro de la palabra (v. gr., si el niño debe escribir “más” y escribe “tas”, será considerado como una sustitución de la “m” por la “t”).

- *Adición de letras*: el examinador debe registrar el número de letras añadidas en cada palabra. Este tipo de error consiste en la incorporación, por parte del estudiante, de letras que no forman parte de la palabra (v. gr., uno/unos).
- *Omisiones*: el examinador debe registrar el número de letras omitidas en cada palabra. Se considera omisión cuando el estudiante no escribe una o más letras de la palabra, o cuando alguna de las letras es sustituida por otra, siempre y cuando la letra sustituida tenga el mismo sonido que la letra que la sustituye (v. gr., si el estudiante debe escribir "mundo" y escribe "mumndo" o debe escribir "distintiva" y escribe "distintia", en ambas palabras existe una omisión (de la "n" en "mundo" y de la "v" en "distintiva").

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de "Ortografía correcta" donde deberá puntuar 0 y el apartado de "Omisiones" donde deberá colorar el número de letras omitidas.

Instrucciones: se solicita al estudiante que escriba las frases que se le van a dictar. Es necesario dar expectativas de éxito al estudiante con frases como "Sé que sabes escribir muy bien, me gustaría que lo hicieras..." o "Tu profesor me ha contado que has aprendido muy bien a escribir...". Dígale: "Si no puedes escribir alguna palabra, no te preocupes, continúa con la siguiente". Empiece dictando la frase de ensayo (El juguete está roto). Primero diga la frase y a continuación cada palabra lentamente y pronunciando correctamente, dando tiempo para que el estudiante pueda escribirla. No proporcione un modelo visual de la frase. Cuando haya completado cada palabra de la frase rápidamente diga la siguiente palabra. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más. Debe recordar que primero se dictará la primera oración y una vez que el niño la haya escrito se procederá a dictar la segunda. Recuerde que no debe verbalizar los puntos finales de cada frase.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: "Mira cómo lo hago yo", y mostrarle cómo se hace con las dos primeras palabras del ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo, así como que en esta tarea debe tener en cuenta que debe realizar correctamente la alineación de las palabras dentro de la pauta marcada para escribir.

Plantilla de corrección Tarea 8

TAREA 8												TOTAL	MAYÚSCULAS: _____ /2
Dictado de frases	El elefante es uno de los mamíferos más grandes del mundo. La característica física más distintiva es su trompa.												
Ortografía correcta												ACENTOS: _____ /5	
Alineación												ESPACIOS ENTRE PALABRAS: _____ /18	
Inversiones												SIGLOS DE PUNTUACIÓN: _____ /2	
Sustituciones													
Adición de letras													
Omisiones													

TAREA 9: COMPOSICIÓN Y ESCRITURA INDEPENDIENTE DE FRASES

Objetivo: evaluar si el estudiante es capaz de escribir dos frases de forma independiente. Con esta tarea valoramos la habilidad del estudiante para traducir ideas en proposiciones lingüísticas a través de la escritura.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas para que escriba las frases en la línea base.

Puntuación: indicar en su formulario de recogida de datos el tiempo invertido, número de palabras escritas en cada periodo de tiempo: en 1 minuto, en 2 minutos, en el total de la tarea (hasta 5 minutos), número de palabras con ortografía correcta en cada periodo de tiempo, uso de letras mayúsculas, uso de acentos, espacios entre palabras y uso de signos de puntuación:

- *Tiempo invertido:* anote el tiempo total que el estudiante ha empleado en escribir las frases. Este tiempo no debe ser superior a 5 minutos.
- *Número de palabras escritas durante el primer intervalo de tiempo (primer minuto):* se asigna 1 punto por cada palabra que el alumno haya escrito de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentre separadas o que se adhieran a otras (v. gr., si escribe “mellamo” o “gus ta”, ambas palabras serán directamente eliminadas sin tenerse en cuenta en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., “feh”) siempre y cuando estas no se refieran a onomatopeyas (v. gr., “pam”, “bum”...).
- *Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto):* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.

Se considera que una palabra está escrita correctamente cuando:

- No contiene faltas de ortografía.
- En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.
- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra sea ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación será contabilizada en el apartado “Uso de acentos”.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...).

Se consideran palabras incorrectas:

- Las palabras escritas con minúscula que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Aquellas palabras escritas en mayúscula cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando existan discordancias de género, número o verbo, una de las palabras implicadas en la construcción gráfica será incorrecta (v. gr., en “el niña” una de las dos palabras deberá ser contabilizada como palabra incorrecta).

- *Número de palabras escritas durante el segundo intervalo (segundo minuto):* se asigna 1 punto por cada palabra que el estudiante haya escrito de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en “Número de palabras escritas en el primer intervalo de tiempo (primer minuto)”.

- *Número de palabras con ortografía correcta escritas durante el segundo intervalo (segundo minuto)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en “Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto)”.
- *Número total de palabras escritas (total en todo el tiempo invertido)*: se asigna 1 punto por cada palabra que el alumno haya escrito, esté escrita de manera correcta o incorrecta, en todo el tiempo invertido en la tarea. Recuerde que no se trata de hacer un sumatorio de los intervalos 1 y 2, puesto que el tiempo de realización de la tarea puede ser de hasta 5 minutos.
- *Número total de palabras con ortografía correcta (total en todo el tiempo invertido)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Recuerde que no se trata de hacer un sumatorio de los intervalos 1 y 2, puesto que el tiempo de realización de la tarea puede ser de hasta 5 minutos.
- *Uso de las letras mayúsculas*: por cada letra mayúscula que escriba el alumno correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.
- *Acentos*: por cada acento (o tilde) que el alumno haya escrito correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.
- *Espacio entre palabras*: por cada espacio entre palabras que el alumno respete la puntuación es 1. Se contabilizarán los espacios existentes entre dos palabras, exceptuando cuando varias palabras hayan sido categorizadas como “palabras eliminadas” en cuyo caso solo se contabilizarán los espacios que se encuentran en ambos extremos (v. gr., si el estudiante escribe “yo me llamoadrian yme gusta el futbol”, serán contabilizados 5 espacios, es decir, que el espacio que se encuentra entre “llamoadrian” y “yme” no se contabilizará) y cuando se produzca el espacio de separación entre ambas frases. Por otra parte el espacio existente entre una palabra y la marca realizada por el estudiante (cuando transcurre 1 minuto y cuando transcurren 2 minutos) será contabilizado (v. gr., si el estudiante escribe “Yo me llamo / Adrián” en el primer intervalo se contabilizarán 3 espacios y en el segundo 0), exceptuando cuando esta línea se encuentre al finalizar una frase, en cuyo caso no será contabilizado. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.
- *Uso de los signos de puntuación*: por cada signo de puntuación que el alumno utilice correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.

NOTA IMPORTANTE: se considera que el estudiante ha escrito una frase cuando ha escrito varias palabras de cuya combinación se puede derivar un significado con sentido.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa el minuto?

Si el estudiante no sobrepasa el minuto en la realización de la tarea, usted deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente rellenará las del primer intervalo y las del total, en cuyo caso ambas puntuaciones serán iguales.

Instrucciones: el examinador debe propiciar una conversación con el estudiante acerca de sus intereses. Debe pedir al estudiante que le cuente cuáles son sus juegos favoritos, sus hobbies, etc. Después de que el estudiante describa una o dos situaciones, se le pide que escriba dos frases acerca de lo que han hablado en la conversación. Indíquele que primero debe escribir una frase y a continuación una segunda inmediatamente debajo de la primera. Explíquele brevemente lo que es una frase: un conjunto de palabras con sentido. Comience a cronometrar el proceso una vez que el estudiante haya comenzado a escribir.

Si el estudiante no empieza a escribir cuando se le indica, entonces debe decir: "Mira cómo lo hago yo", y mostrarle cómo se hace la primera frase de ejemplo (Yo monto a caballo por las tardes con mi madre). La segunda frase de ejemplo es: "Mi caballo preferido se llama Pegaso". No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca en el papel justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello se debe cronometrar el primer minuto e indicarle que haga la marca en ese momento, así como al cabo de 2 minutos (pero el estudiante NO debe saber que solo tiene 5 minutos). NO detenga el cronómetro: deje que el estudiante termine de escribir todas las palabras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de la tarea.

Plantilla de corrección Tarea 9

TAREA 9: Escritura de frases	TIEMPO INVERTIDO: _____			
		1º intervalo (1')	2º intervalo (2')	TOTAL (Tiempo invertido, máximo 5')
NÚMERO TOTAL DE PALABRAS ESCRITAS				
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA				
USO DE LETRAS MAYÚSCULAS				
USO DE ACENTOS				
ESPACIOS ENTRE PALABRAS				
USO DE SIGNOS DE PUNTUACIÓN				

TAREA 10: ESCRITURA DE UNA HISTORIA

Objetivo: los estudiantes necesitan ir más allá de las palabras y aprender cómo lidiar con el texto. Asimismo, el objetivo de esta prueba es evaluar si el estudiante ha adquirido las habilidades necesarias para la escritura narrativa. La escritura narrativa y expositiva son estructuras diferentes que poseen diferente gramática. Las estructuras narrativas son más fáciles porque tienen bien definidos los componentes que los niños utilizan a la hora de escribir y se aprenden a edades tempranas (introducción, nudo, desenlace...). En contraste, la escritura expositiva es más difícil porque requiere otro tipo de organización de conocimientos y se adquiere más tarde.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas para que escriba el texto en la línea base.

Puntuación: indicar en su formulario de recogida de datos el tiempo invertido, así como los siguientes apartados en cada intervalo de tiempo (en los primeros cinco minutos, en los siguientes cinco minutos, en tiempo total): número de palabras escritas, número de palabras con ortografía correcta, uso de letras mayúsculas, uso de acentos, secuencia de palabras correctas, uso de signos de puntuación y procesos de planificación utilizados en el texto escrito. No contabilice ninguno de estos apartados si el estudiante no cumple con el objetivo principal de esta tarea: narrar una historia.

- *Tiempo invertido:* anote el tiempo total que el estudiante ha invertido en escribir la narración. Este tiempo no debe ser superior a 10 minutos.
- *Número de palabras escritas durante el primer intervalo de tiempo (los 5 primeros minutos):* se asigna 1 punto por cada palabra que el estudiante haya escrito de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentren separadas o que se adhieran a otras (v. gr., si escribe “mellamo” o “gus ta”, ambas palabras serán directamente eliminadas sin tenerse en cuenta en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., “feh”) siempre y cuando estas no se refieran a onomatopeyas (v. gr., “pam”, “bum”...).
- *Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos):* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.

Se considera que una palabra está escrita correctamente cuando:

- No contiene faltas de ortografía.
- En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.
- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra sea ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación será contabilizada en el apartado “Uso de acentos”.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...).

Se consideran palabras incorrectas:

- Las palabras escritas con minúscula que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Aquellas palabras escritas con mayúscula inicial cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando existan discordancias de género, número o verbo, una de las palabras implicadas en la construcción gráfica será incorrecta (v. gr., en “el niña” una de las dos palabras deberá ser contabilizada como palabra incorrecta).

- *Número de palabras escritas durante el segundo intervalo (los 5 siguientes minutos)*: se asigna 1 punto por cada palabra que el alumno haya escrito de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en “Número de palabras escritas en el primer intervalo de tiempo (los 5 primeros minutos)”.
- *Número de palabras con ortografía correcta escritas durante el segundo intervalo (los 5 siguientes minutos)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en “Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos)”.
- *Número total de palabras escritas (los 10 minutos totales)*: se asigna 1 punto por cada palabra que el alumno haya escrito de manera correcta o incorrecta.
- *Número total de palabras con ortografía correcta (los 10 minutos totales)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.
- *Uso de las letras mayúsculas*: por cada letra mayúscula que escriba el alumno correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.
- *Acentos*: por cada acento (o tilde) que el alumno haya escrito correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.
- *Secuencia de palabras correctas*: las secuencias de palabras se componen de grupos de dos palabras únicamente. Se asigna 1 punto a cada secuencia de dos palabras que sea plausible en nuestro idioma, es decir, por cada secuencia coherente de dos palabras.

Esta secuencia solo se verá interrumpida cuando exista:

- Un punto que finalice una frase.
- Una discordancia de verbo, género o número.
- Una palabra categorizada como “eliminada” (v. gr., “mellamo” o “lla mo”).

Nota: la existencia de una coma (,) o de una palabra categorizada como “incorrecta” (v. gr., “sapato”) no hará que la secuencia se rompa. Un ejemplo en el conteo de la secuencia de palabras correctas es: “yo me caí con la bicleta. Nunca me caído con ella.” En este caso encontramos 8 secuencias correctas de palabras (yo-me, me-caí, caí-con, con-la, la-bicleta, Nunca-me, caído-con, con-ella).

Además, debe tener en cuenta que la secuencia existente entre la última palabra de un intervalo y la primera del siguiente será siempre contabilizada hacia el intervalo que se encuentre primero (v. gr., si el estudiante escribe “yo me / llamo Pedro”, en el primer intervalo existen 2 secuencias (“yo-me” y “me llamo”) y en el segundo intervalo, 1 (“llamo-Pedro”).

- *Uso de los signos de puntuación*: por cada signo de puntuación que el estudiante utilice correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.

- *Procesos de planificación:* se anotará 1 punto cuando la categoría esté presente en el texto y un 0 si no lo está. Las categorías son las siguientes:
 - *Cuándo sucede la historia:* ubica temporalmente las acciones o narraciones del cuento: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.
 - *Personajes que intervienen en la historia:* nombra a algún sujeto que realiza una acción.
 - *Suceso inicial o problema:* alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, o el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.
 - *Ejecución:* cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho”, “caminó al colegio”...
 - *Qué sucede al final de la historia:* se valora cuando el estudiante explicita el final o terminación de la historia.

Nota: solo podrá contabilizarse un 1 ó un 0 en cada apartado, independientemente de que exista más de un personaje por intervalo. El intervalo total será un sumatorio de los intervalos 1 y 2 por lo que podrá contener los siguientes valores: 0, 1 ó 2. Los personajes, así como la ejecución de acciones asignadas a estos, no podrán ser atribuidos al segundo intervalo si ya han sido puntuados en el primero. Para que puedan ser contabilizados en el segundo apartado deberá tratarse de personajes aún no nombrados en el primer intervalo. Además, tanto el apartado de “Sucedido inicial o problema” como el de “Qué sucede al final de la historia” solo podrán ser contabilizados en uno de los dos apartados, puesto que estos hechos solo pueden ocurrir una vez en la historia.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa los 5 primeros minutos?

Si el estudiante no sobrepasa los primeros 5 minutos en la realización de la tarea, usted deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente llenará las del primer intervalo y las del total, en cuyo caso ambas puntuaciones serán iguales.

Instrucciones: se solicita al estudiante que escriba un cuento o historia basándose en una imagen que le presentamos. Presentamos al estudiante una hoja de respuestas con una imagen y le decimos: “Voy a mostrarte una imagen para que escribas una historia. Debes tomarte un tiempo para ver bien la imagen (déjale 30 segundos) y luego debes empezar a escribir. Intenta recordar alguna historia parecida que te haya ocurrido a ti o a alguien que tú conozcas”. Si el estudiante nos indica que no sabe realizar la tarea podremos ayudarle escribiéndole las dos primeras palabras de la historia.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la palabra que está escribiendo intentando distraerlo lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar los 5 primeros minutos e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 10 minutos). NO detenga el cronómetro: deje que termine de escribir y siga cronometrando el proceso hasta que haya terminado de escribir la última letra o hayan transcurridos los diez minutos.

NOTA IMPORTANTE: deje que el estudiante realice el ejercicio proporcionándole un máximo de 10 minutos. Cuando el estudiante haya terminado el ejercicio, debe revisar la legibilidad de la escritura para comprobar que comprende todo lo que el estudiante ha querido expresar. Esto le ayudará luego en el proceso de corrección de la narración. Si hay alguna palabra ilegible es el momento de preguntar al estudiante qué quiso decir y anotarlo encima de la palabra ilegible.

Plantilla de corrección Tarea 10

TAREA 10: Escritura de una historia	TIEMPO INVERTIDO: _____		
		1º intervalo (5')	2º intervalo (10')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
USO DE LETRAS MAYÚSCULAS			
USO DE ACENTOS			
SECUENCIA DE PALABRAS CORRECTAS			
USO DE SIGNOS DE PUNTUACIÓN			

TAREA 10			
CATEGORÍAS	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
Cuándo sucede la historia: ubica temporalmente las acciones o narraciones del cuento: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.			
Personajes que intervienen en la historia: nombra a algún sujeto que realiza una acción.			
Suceso inicial o problema: alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.			
Ejecución: cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho”, “caminó al colegio...”.			
Qué sucede al final de la historia: se valora cuando el alumno/a explicita el final o terminación de la historia.			

Ejemplos**Alineación****Inversiones****Adición de trazos****Omisión de trazos**

Examples	Alignment	Reversal	Added stroke	Missing Stroke
o	ooo	o o	o	o
l	lll	l l	l	l
n	n n n	h s l	n	n

Annex B

EGWA examiner sheet

PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA): Cuadernillo del examinador

CÓDIGOS Y DATOS DEL COLEGIO

CÓDIGO CIAL:

<input type="checkbox"/>							
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

CÓDIGO DEL COLEGIO:

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

CÓDIGO PROYECTO:

<input type="checkbox"/>					
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

NÚMERO DE AULAS POR GRADO:

L1 L2 L3 L4

LOCALIZACIÓN:

URBANO RURAL SUB-URBANO

NÚMERO DE NIÑOS POR CLASE:

< 25 ENTRE 25-35 > 35 **ESTUDIANTE**

CURSO: 1º EDUCACIÓN PRIMARIA <input type="checkbox"/> 2º EDUCACIÓN PRIMARIA <input type="checkbox"/> 3º EDUCACIÓN PRIMARIA <input type="checkbox"/> ¿Ha recibido apoyo educativo?: Sí <input type="checkbox"/> No <input type="checkbox"/> ¿Qué tipo de letra le fue enseñada? De imprenta <input type="checkbox"/> Cursiva <input type="checkbox"/> Ambas <input type="checkbox"/> ¿Qué idiomas habla? ¿Cuál aprendió primero? ¿Cuál utiliza más?	Repetiendo <input type="checkbox"/> Repetiendo <input type="checkbox"/> Repetiendo <input type="checkbox"/> ¿Está incluido en Educación Especial? Sí <input type="checkbox"/> No <input type="checkbox"/> Si es así, ¿bajo qué categoría? ¿Qué tipo de letra ha elegido el alumno? De imprenta <input type="checkbox"/> Cursiva <input type="checkbox"/>
SEXO: Masculino <input type="checkbox"/> Femenino <input type="checkbox"/> Fecha de nacimiento: ____ / ____ / ____ (DD/ MM/ AAAA)	Fecha de aplicación: ____ / ____ / ____ (DD/ MM/ AAAA)

COMENTARIOS: (Si ve alguna cosa que es relevante para la evaluación del estudiante o algún aspecto que podría afectar o ser tenido en cuenta en los resultados, por favor, indíquelo)

CORRECCIONES**TAREA 1**

a	b	c	d	e	5	
f	g	h	i	j	10	
k	l	m	n	ñ	15	
o	p	q	r	s	20	
t	u	v	w	x	25	
y	z				27	

TIEMPO INVERTIDO: _____
 Nº LETRAS ESCRITAS EN TIEMPO INVERTIDO: _____
 Nº LETRAS ESCRITAS CORRECTAMENTE EN ORDEN
 EN UN MINUTO: _____ (60/número de letras): _____
 Nº DE LETRAS OMITIDAS EN ORDEN EN UN MINUTO: _____

TAREA 2

PARTE A						
a	b	c	d	e	5	
f	g	h	i	j	10	
k	l	m	n	ñ	15	
o	p	q	r	s	20	
t	u	v	w	x	25	
y	z				27	

TIEMPO INVERTIDO: _____
 Nº LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de
 letras): _____
 Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO
 INVERTIDO: _____
 Alineación: _____ /Inversiones: _____
 Adición de trazos: _____ /Omisión de trazos: _____

PARTE B						
A	B	C	D	E	5	
F	G	H	I	J	10	
K	L	M	N	Ñ	15	
O	P	Q	R	S	20	
T	U	V	W	X	25	
Y	Z				27	

TIEMPO INVERTIDO: _____
 Nº LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de
 letras): _____
 Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO
 INVERTIDO: _____
 Alineación: _____ /Inversiones: _____
 Adición de trazos: _____ /Omisión de trazos: _____

TAREA 3	Copia palabras	Casa	Luna	Codo	Foca	Dedo	Subtotal A	Camino	Tejado	Cometa	Verano	Salado	Subtotal B	Puntuación total
Alineación														
Inversiones														
Adición de trazos														
Omisión de trazos														
Omisión de letras														
Total														

PUNTUACIÓN TOTAL: Alineación: _____ /Inversiones: _____
Adición de trazos: _____ /Omisión de trazos: _____ /Omisión de letras: _____

TAREA 4	Copia de frases	Al pequeño niño le gustan los kiwis y jugar con su perro Bajo la lluvia escucha el saxofón feliz y emocionado	TOTAL
Alineación			
Inversiones			
Adición de trazos			
Omisión de trazos			
Palabras omitidas			
Letras omitidas			

TIEMPO INVERTIDO: _____ N° LETRAS ESCRITAS EN UN MINUTO: _____ (60/número de letras): _____
N° LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO: _____ ESPACIOS ENTRE PALABRAS _____ /19

TAREA 5	Dictado palabras ortografía arbitraria no reglada	Veneno	PapaYá	NoVeno	Cometa	Boda	LLeno	Cuna	Harina	PaJe	QUita	Gitana	LLama	Hada	GUerra	Cena	GUITarra	Sapo	Jirafa	Zapato	CoHete	TOTAL
Ortografía correcta/incorrecta (1=correcta/0=incorrecta)																						
Sustituciones (letra crítica)																						
Omisiónes de letras																						
Adición de letras																						
Traslaciones																						
¿Pronuncia la palabra mientras la escribe?																						

TAREA 6	Dictado de palabras que contienen alguna regla ortográfica	Hueco	ViVa	ReY	PasaJero	AlRededor	SonRisa	NoMbre	Hielo	CaMpo	AmaBa	Subir	SuaVe	CepiLlo	DeBilidad	CaJera	Rosa	ReloJería	TecnoloGía	NueVo	SiLLa	TOTAL
Ortografía correcta/incorrecta 1=correcta/0=incorrecta																						

TAREA 7	Dictado de pseudopalabras	NeMpu	Hueta	NaY	Rumu	FeliLlo	MinRa	FoiVa	Hiefe	LaMbo	TenaBa	CaBir	TeaVe	DoeVo	TaJería	Mojera	TaJero	ToBilidad	FuloGía	TalRe	FiLLa	TOTAL
Escríptura con representación gráfica de todos los sonidos (1=correcta/0=incorrecta)																						

TAREA 8																		MAYÚSCULAS: _____/2
Dictado de frases	El	elefante																ACENTOS: _____/5
Ortografía correcta		es	uno	de	los	mamíferos	más	grandes	del	mundo.	La	característica	física	más	distintiva		ESPACIOS ENTRE PALABRAS: _____/18	
Alineación																	SIGNOS DE PUNTUACIÓN: _____/2	
Inversiones																		
Sustituciones																		
Adición de letras																		
Omisiones																		

TAREA 9: Composición y escritura independiente de frases	TIEMPO INVERTIDO: _____
	1º intervalo (1')
	2º intervalo (2')
	TOTAL (Tiempo invertido, máximo 5')
NÚMERO TOTAL DE PALABRAS ESCRITAS	
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA	
USO DE LETRAS MAYÚSCULAS	
USO DE ACENTOS	
ESPACIOS ENTRE PALABRAS	
USO DE SIGNOS DE PUNTUACIÓN	

TAREA 10: Escritura de una historia	TIEMPO INVERTIDO: _____		
		1º intervalo (5')	2º intervalo (10')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
USO DE LETRAS MAYÚSCULAS			
USO DE ACENTOS			
SECUENCIA DE PALABRAS CORRECTAS			
USO DE SIGNOS DE PUNTUACIÓN			

TAREA 10			
CATEGORÍAS	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
Cuándo sucede la historia: ubica temporalmente las acciones del cuento o narraciones: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.			
Personajes que intervienen en la historia: nombra a algún sujeto que realiza una acción.			
Suceso inicial o problema: alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.			
Ejecución: cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho, caminó al colegio...”.			
Qué sucede al final de la historia: se valora cuando el alumno/a explicita el final o terminación de la historia.			

Annex C

EGWA student sheet

PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA): Cuadernillo del estudiante

CÓDIGO CIAL:	<input type="text"/>	CÓDIGO DEL COLEGIO:	<input type="text"/> <input type="text"/>
CÓDIGO PROYECTO:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		

TAREA 1

TAREA 2 (PARTE A)

a

b

a

b

c

d

e

f

g

h

i

j

k

l

m

n

ñ

o

p

q

r

s

t

U

V

W

X

y

Z

TAREA 2 (PARTE B)

A

B

A

B

C

D

E

F

G

H

I

J

K

L

M

N

Ñ

O

P

Q

R

S

T

U

V

W

X

Y

Z

TAREA 3

niña

marido

casa

luna

codo

foca

dedo

camino

tejado

cometa

verano

salado

TAREA 4

Ejemplos

La casa está junto al parque.

La casa está junto al parque.

Al pequeño niño le gustan los

kiwis y jugar con su perro.

Bajo la lluvia escucha el saxofón

feliz y emocionado.

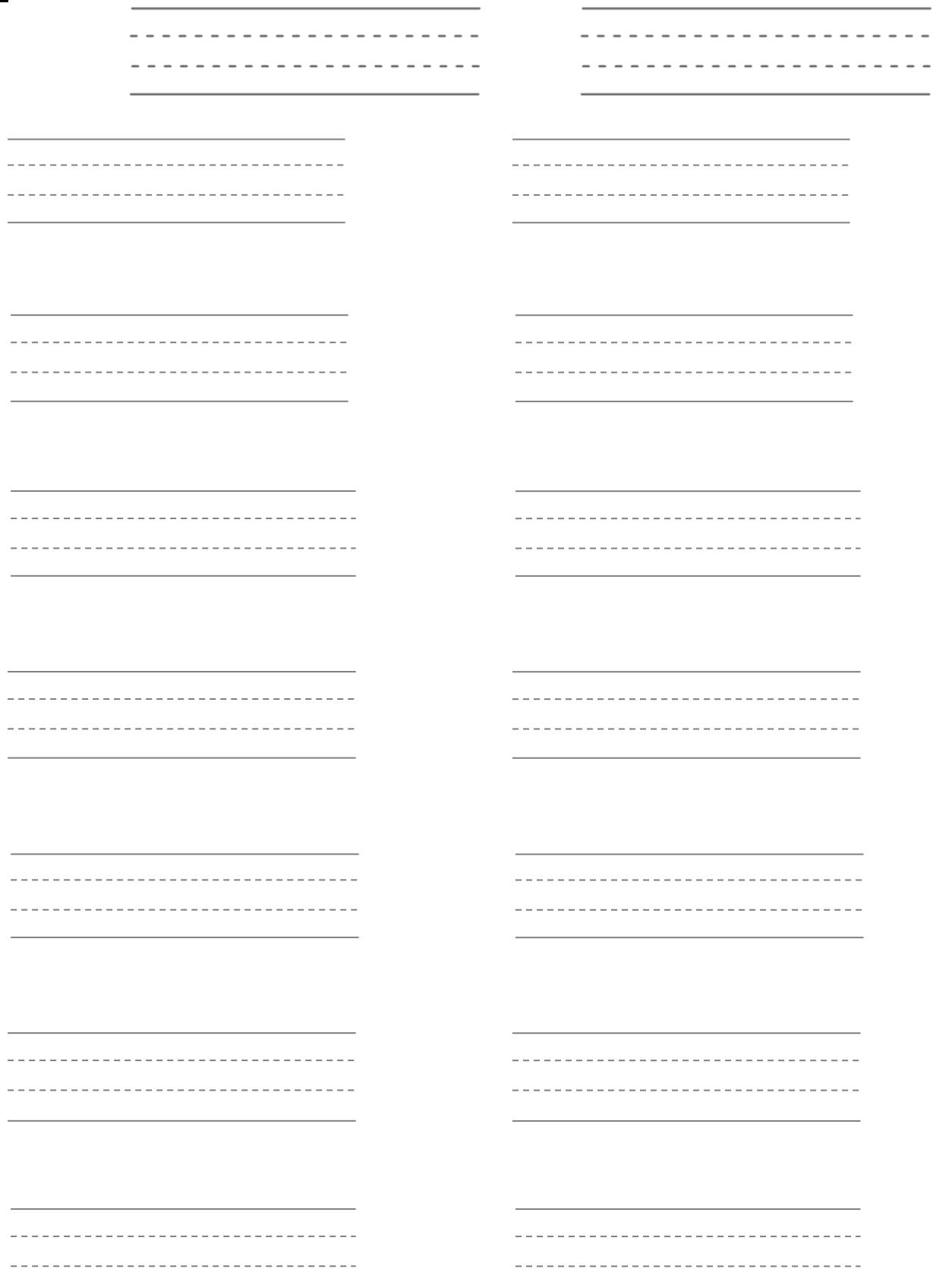
Al pequeño niño le gustan
los kiwis y jugar con su
perro.

Bajo la lluvia escucha el
saxofón feliz y emocionado.

TAREA 5

<hr/>	<hr/>
---	---

TAREA 6



The page contains two columns of handwriting practice lines. Each column consists of four rows of horizontal lines. The top and bottom lines are solid black, while the middle two are dashed grey, providing a guide for letter height and placement.

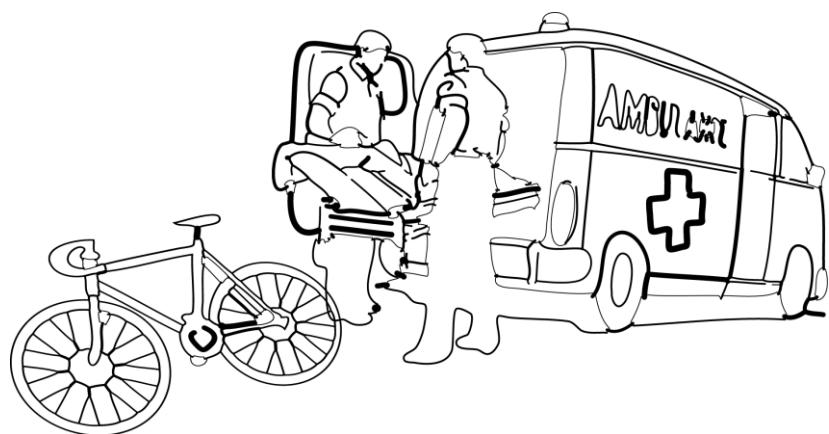
TAREA 7

The page contains two columns of handwriting practice lines. Each column consists of four rows of horizontal lines. The top row is a solid black line. The second row is a dashed black line. The third row is a solid black line. The bottom row is a dashed black line. This pattern repeats four times in each column, providing a total of eight rows of lines for handwriting practice.

TAREA 8

TAREA 9

TAREA 10



Annex D

EGRA-R Administrator Instructions and Protocol

**PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA):
Instrucciones de administración y protocolo
Cuaderno del examinador**

TAREA 1: ESCRITURA DE MEMORIA Y EN ORDEN DE LAS LETRAS DEL ALFABETO

Objetivo: el propósito de esta tarea es evaluar si el estudiante es capaz de escribir todo el alfabeto de memoria y en orden.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza y papel pautado apropiado para su nivel. El examinador utilizará en esta tarea un cronómetro o reloj con segundero.

Puntuación: indique en su formulario de recogida de datos el número de letras escritas correctamente en orden en un minuto.

- *Número de letras escritas correctamente en orden en un minuto:* se asigna 1 punto por cada letra legible, de imprenta o cursiva, que el alumno haya sido capaz de escribir, usando mayúsculas o minúsculas. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras escritas correctamente.

Se consideran letras escritas correctamente todas aquellas que sean legibles y que se encuentren ubicadas en el orden adecuado (v. gr., en la secuencia “a, C, d...” todas las letras son correctas puesto que se encuentran en el orden adecuado; sin embargo en la secuencia “a, c, b...” no contabilizamos la letra “b” puesto que la letra “b” no ha sido colocada en el orden adecuado).

Así mismo, contamos como letras correctas aquellas letras que hayan sido escritas de forma invertida siempre y cuando se encuentren ubicadas en el orden correcto (v. gr., si el niño escribe al revés la letra “J” o la “Z”).

Los dígrafos (ch, rr, ll) siempre se contabilizarán en positivo y nunca en negativo (v. gr., si el niño escribe “ll” después de “l” será contabilizada como letra correcta). Si el estudiante no escribe alguno de estos dígrafos no será penalizado, es decir, en ningún caso se contabilizará como omisión de letra. Además, se contabilizará como letra correcta tanto si el estudiante escribe “q” como si escribe “qu”, siempre y cuando se encuentre en posición correcta dentro del alfabeto.

Toda letra no colocada en su orden correcto dentro del alfabeto será considerada como letra omitida, es decir, como letra incorrecta. (v. gr. si el estudiante escribe “a, b, c, z, d, e, f, g...” todas las letras que se encuentren entre la “c” y la “z” serán consideradas como letras omitidas, por tanto en este caso encontramos 23 letras omitidas (letras incorrectas) y 4 letras escritas correctamente en orden (“a”, “b”, “c” y “z”).

Instrucciones: se solicita al estudiante que escriba todas las letras del alfabeto en orden. Se le explica que puede escribir las letras como mejor sepa hacerlo: con mayúscula, con minúscula... Se le dice que debe escribir lo más rápido que pueda.

Es necesario dar expectativas de éxito al estudiante con frases como “Sé que conoces bien el abecedario o las letras del alfabeto, me gustaría que las escribieras...” o “Tu profesor me ha contado que has aprendido a escribir muy bien las letras...”. Dígale: “Si no puedes hacer algunas letras, no te preocupes, continúa con las siguientes”.

Empiece a cronometrar cuando el estudiante comience a escribir la primera letra. Si el estudiante no empieza a escribir cuando se le indica, entonces dígale: “Mira cómo lo hago yo”, y muéstrelle cómo se hacen las dos primeras letras del alfabeto, en las dos líneas superiores colocadas en la parte superior izquierda de la plantilla: “a” y “b”.

No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si transcurridos 5 minutos el estudiante no ha terminado el ejercicio, se le pide que se detenga y se retira la tarea.

Antes de comenzar el ejercicio es IMPORTANTE proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo, intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o cuando haya finalizado el periodo de 5 minutos.

NOTA IMPORTANTE: si un estudiante termina de escribir el alfabeto antes de que finalice el minuto entonces debe volver a comenzar a escribirlo. Para ello es necesario indicarle, rápidamente, que debe comenzar de nuevo en la siguiente lámina. Recuerde que no debe parar el tiempo, por lo que la instrucción para que el niño comience de nuevo debe ser rápida. Una vez transcurrido el minuto se le indica que haga una marca en el papel. Finalmente, una vez que haya finalizado de escribir de nuevo el alfabeto se detiene el cronómetro.

Plantilla corrección Tarea 1

a	b	c	d	e	5	
f	g	h	i	j	10	
k	l	m	n	ñ	15	Nº LETRAS ESCRITAS CORRECTAMENTE EN ORDEN EN UN MINUTO: _____
o	p	q	r	s	20	
t	u	v	w	x	25	
y	z				27	

TAREA 2: COPIA DEL ALFABETO Y SELECCIÓN DE ALÓGRAFOS

Objetivo: el propósito de esta tarea es doble: 1) evaluar si el estudiante ha adquirido los patrones motores para la escritura de letras, y 2) evaluar si el estudiante es capaz de seleccionar el alógrafo correspondiente (es decir, la letra minúscula) para cada letra mayúscula.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. En esta tarea encontramos dos subtareas, la 2A y la 2B. En la subtarea 2A “Copia del alfabeto” el examinador contará con dos tipos de plantillas: una plantilla con el alfabeto escrito con letra de imprenta y una plantilla con el alfabeto escrito con letra cursiva. Se utilizará el formato que en el momento de la administración de esta subtarea seleccione el estudiante, es decir, únicamente deberá llenar una de las dos plantillas. En esta subtarea el estudiante deberá realizar una copia exacta de cada una de las letras. En la subtarea 2B “Selección de alógrafos”, se mostrará al estudiante una lámina que contiene todas las letras del alfabeto en mayúsculas y este deberá escribir cada letra minúscula correspondiente a cada letra mayúscula presentada.

Puntuación:

Parte 2A:

Indicar en su formulario de recogida de datos el tiempo invertido (TI), el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido (LTI). También se debe indicar la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS al final de este documento). Además se calculará la fluidez= LTI/TIx60.

- *Tiempo invertido (TI):* se anota el tiempo (en segundos) que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrar cuando empieza a escribir la primera letra y deteniendo el cronómetro cuando termine de escribir la última, cuando nos indique que no puede continuar o cuando el tiempo transcurrido desde el comienzo de la subtarea sea de 5 minutos.
- *Letras escritas en un minuto:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido (LTI):* se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas sin cometerse ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en que una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- *Inversiones:* el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurrida en el conjunto de letras escritas.

- *Adición de trazos:* el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido todo trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba “qu” al copiar “q” se ignorará la “u” y no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.
- *Omisión de trazos:* el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el estudiante elige un tipo de letra (de imprenta o cursiva) y al realizar la copia emplea la modalidad contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla.

Parte 2B:

Indicar en su formulario de recogida de datos el tiempo invertido (TI), el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido (LTI). También se debe indicar la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS al final de este documento). Además se calculará la fluidez= LTI/TIx60.

- *Tiempo invertido (TI):* se anota el tiempo (en segundos) que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrarlo cuando empieza a escribir la primera letra y deteniendo el cronómetro cuando termine de escribir la última, cuando nos indique que no puede continuar o cuando el tiempo transcurrido desde el comienzo de la prueba sea de 5 minutos.
- *Letras escritas en un minuto:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Letras escritas correctamente en tiempo invertido (LTI):* se asigna 1 punto por cada letra que el estudiante haya sido capaz de escribir correctamente durante el tiempo invertido. Se consideran letras copiadas correctamente los alógrafos (letra minúscula) adecuadamente escritos y correspondientes a la letra mayúscula presentada. Además, en estas letras transformadas en minúscula correctamente no podrá existir ningún error de los citados a continuación para que pueda ser considerada como letra correcta: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- *Alineación:* el examinador debe considerar la distancia entre el lugar en que una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.

- *Inversiones*: el examinador debe registrar la presencia de toda letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v. gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, sin analizarse la alineación, la adición o la omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurridas en el conjunto de letras escritas.
- *Adición de trazos*: el examinador debe registrar la presencia de toda letra con un trazo añadido. Se considera trazo añadido todo trazo que no pertenezca a la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba “qu” al copiar “q” se ignorará la “u” y no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.
- *Omisión de trazos*: el examinador debe registrar la presencia de toda letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla. Solo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: en la subtarea 2B, el estudiante puede mezclar ambos tipos de letras (de imprenta y cursiva) por lo que a la hora de la corrección de errores (alineación, inversiones, adición de trazos y omisión de trazos) debe tener en cuenta el tipo elegido por el estudiante en cada letra producida. Para ello podrá comparar cada letra copiada con su letra correspondiente según plantilla (de imprenta o cursiva) en la subtarea 2A, con el fin de que pueda apreciar más fácilmente si el estudiante ha realizado omisiones y/o adiciones de trazos. Si una letra es producida de manera que no refleje fácilmente si se trata de una letra cursiva o de imprenta, deberá elegir aquella cuya corrección penalice en menor grado al estudiante.

Instrucciones:**Parte 2A:**

Se le da a elegir al estudiante entre ambas plantillas (de imprenta o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que pueda hacer más rápido. Se solicita al estudiante que copie las letras del alfabeto. Explíquele que debe copiar las letras lo mejor que pueda (deben ser lo más parecidas posible a las del modelo) sin salirse de las líneas del papel pautado y fijándose en los límites. Dígale también que debe copiar lo más rápido posible.

Es necesario dar expectativas de éxito al estudiante con frases como “Sé que sabes copiar el abecedario muy bien, me gustaría que lo escribieras...” o “Tu profesor me ha contado que has aprendido a copiar muy bien las letras...”. Dígale: “Si no puedes hacer alguna, no te preocupes, continúa con la siguiente. Ten en cuenta que debes escribir de izquierda a derecha y no de arriba abajo”. Empiece a cronometrar cuando el niño comience a escribir la primera letra. Si el alumno no empieza a escribir cuando se le indica, entonces debe decir: “Mira cómo lo hago yo”, y le muestra cómo se hace en las dos líneas superiores de ejemplo: “a” y “b”. No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante la realización de la prueba. Si cuando haya transcurrido 5 minutos el estudiante no ha finalizado el ejercicio, se le solicita que se detenga y se da por finalizada esta subtarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo intentando distraerlo lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique no puede continuar o cuando haya finalizado el periodo de 5 minutos.

Parte 2B:

Se solicita al estudiante que escriba las letras minúsculas del abecedario. En esta ocasión, el alumno debe observar las letras mayúsculas del abecedario y escribir su correspondiente alógrafo en minúscula. Explíquele que debe escribir las letras lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Dígale que debe escribir lo más rápido posible.

Al igual que en la subtarea 2A, será necesario dar expectativas de éxito así como proponerle el juego de la línea al cabo de 1 minuto desde el comienzo de la subtarea.

Plantilla de corrección Tarea 2A

PARTE A					
a	b	c	d	e	5
f	g	h	i	j	10
k	l	m	n	ñ	15
o	p	q	r	s	20
t	u	v	w	x	25
y	z				27

TIEMPO INVERTIDO (TI) (en segundos): _____
 Nº DE LETRAS ESCRITAS EN UN MINUTO: _____
 Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI): _____
 FLUIDEZ: (LTI) _____ / (TI) _____ x60 = _____
 Alineación: _____ / Inversiones: _____
 Adición de trazos: _____ / Omisión de trazos: _____

Plantilla de corrección Tarea 2B

PARTE B					
A	B	C	D	E	5
F	G	H	I	J	10
K	L	M	N	Ñ	15
O	P	Q	R	S	20
T	U	V	W	X	25
Y	Z				27

TIEMPO INVERTIDO (TI) (en segundos): _____
 Nº DE LETRAS ESCRITAS EN UN MINUTO: _____
 Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI): _____
 FLUIDEZ: (LTI) _____ / (TI) _____ x60 = _____
 Alineación: _____ / Inversiones: _____
 Adición de trazos: _____ / Omisión de trazos: _____

TAREA 5: DICTADO DE PALABRAS DE ORTOGRAFÍA ARBITRARIA NO REGLADA (CON INCONSISTENCIAS EN LAS CORRESPONDENCIAS FONEMA-GRAFEMA)

Objetivo: el objetivo es evaluar si el estudiante es capaz de escribir palabras que se escriben de forma diferente a como se pronuncian en ausencia de una regla ortográfica, lo cual indicaría que ha memorizado su representación léxica. Se trata de palabras que presentan una ortografía arbitraria no reglada. El estudiante debe tener memorizada la representación ortográfica de las palabras de ortografía arbitraria para escribirlas bien. Este conocimiento implica la activación directa de la representación de la palabra sin necesidad de realizar la conversión fonema-grafema. Con esta tarea se pretende averiguar si el estudiante utiliza la ruta léxica u ortográfica.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las palabras en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de palabras con ortografía correcta.

- *Número de palabras con ortografía correcta:* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera que una palabra está escrita correctamente cuando su representación ortográfica es correcta, es decir, cuando la palabra es escrita tal y como figura en la plantilla de corrección.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá dejar el espacio en blanco en la plantilla de corrección.

Instrucciones: se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna palabra, no te preocunes, continúa con la siguiente”. Empiece dictando las primeras dos palabras de ensayo (yate, gusano). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace el primer ejemplo. Recuerde que no debe repetir en voz alta la palabra mientras que la escribe, pues el estudiante puede tomarla como ejemplo y utilizar esta estrategia a la hora de reproducir las siguientes palabras. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 5

TAREA 5														
Dictado palabras ortografía arbitraria														
	Veneno	PapaYa	NoVeno	Cometa	Boda	LLeno	Cuna	Harina	PaJe	QUita	Gitana	LLama	Hada	GUerra
Ortografía correcta/incorrecta (1=correcta/0=incorrecta)	TOTAL													

TAREA 6: DICTADO DE PALABRAS QUE CONTIENEN ALGUNA REGLA ORTOGRÁFICA

Objetivo: el objetivo es evaluar si el estudiante es capaz de escribir palabras que se ajustan a alguna regla ortográfica, lo que indicaría que las ha memorizado. Por tanto, el objetivo de esta tarea es evaluar el uso de la ruta léxica. Las reglas valoradas son las siguientes:

- Se escribe “m” antes de “p” y “b” (v. gr., sombrero, ombligo).
- Se debe emplear “r” al comienzo de las palabras (v. gr., radio), así como después de las letras “l”, “n” y “s” (v. gr., sonreír); se debe emplear “rr” entre 2 vocales (v. gr., perro) cuando el sonido es de “r” fuerte.
- Cuando las palabras empiezan por hue- o hie- se utiliza la letra “h” (v. gr., hueso, hielo).
- Se escriben con “y” las palabras que terminan con este fonema, siempre y cuando el acento no recaiga sobre la última sílaba (v. gr., rey).
- Todos los verbos que terminan con -aba se escriben con “b” (v. gr., caminaba).
- Todos los verbos que terminan en -bir (v. gr., subir) se escriben con “b”, menos hervir, servir y vivir.
- Las palabras que terminan en -evo y -ave (v. gr., nuevo, suave), se escriben con la letra “v” excepto mancebo, placebo, recebo, sebo, árabe y jarabe.
- Las palabras que terminan en -bilidad se escriben con la letra “b” (v. gr., debilidad) excepto civilidad y movilidad.
- Las palabras que terminan en -jero, -jera, -jería (v. gr., pasajero, cajera, relojería) se escriben con “j”.
- Las palabras que terminan en -logía (v. gr., tecnología) se escriben con “g”.
- Las palabras que terminan en -illo,-illa (v. gr., pestillo, taquilla) se escriben con “ll”.
- Las palabras que terminan en –iva se escriben con “v” excepto criba, giba y piba.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las palabras en la línea base.

Puntuación: indicar en el formulario de recogida de datos el número de palabras en las que el estudiante utiliza correctamente la regla ortográfica.

- *Uso correcto vs. incorrecto de la regla ortográfica:* se asigna 1 punto si el estudiante ha sido capaz de transcribir correctamente la regla ortográfica. Se considera que el estudiante ha utilizado correctamente la regla ortográfica cuando este escribe correctamente la parte de la palabra que contiene toda la regla ortográfica (todas las letras que se encuentran en negrita en la plantilla de corrección). Es necesario que el estudiante escriba todas las letras que conforman la regla de forma adecuada (v. gr., si el estudiante debe escribir “cepillo” y escribe “sepillo” o “pillo”, en ambos casos le será asignado un 1, puesto que ha utilizado correctamente la regla ortográfica: -illo. Si el estudiante debe escribir “cajera” y escribe “cajero” o “cajere”, en ambos casos le será asignado un 0, puesto que no ha utilizado correctamente la regla ortográfica en su totalidad: -jera). No se penalizará la ausencia de tilde.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el trámite de la tarea, usted deberá dejar el espacio en blanco en la plantilla de corrección.

Instrucciones: se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna palabra, no te preocunes, continúa con la siguiente”. Empiece dictando las primeras dos palabras de ensayo (limpio, hierba). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 6

TAREA 6	
Dictado de palabras regladas	Hueco
	ViVa
	ReY
	PasaJero
	AlRededor
	SonRisa
	NoMbre
	Hielo
	CaMpo
	AmaBa
	SuBir
	SuaVe
	CepiLlo
	DeBilidad
	CaJera
	Rosa
	ReloJería
	TecnoloGía
	NueVo
	SiLLa
	TOTAL

TAREA 7: DICTADO DE PSEUDOPALABRAS

Objetivo: averiguar si el estudiante es capaz de escribir grafemas que se corresponden con determinados fonemas en palabras inventadas. Si el estudiante comete muchos errores en la escritura de pseudopalabras indica dificultades en el uso de la ruta fonológica.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba las pseudopalabras en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de pseudopalabras escritas correctamente:

- *Número de pseudopalabras con correcta representación gráfica de los sonidos:* si el estudiante ha escrito la pseudopalabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la pseudopalabra incorrectamente la puntuación es 0. Se considera que una pseudopalabra, palabra inventada no existente en nuestra lengua, está escrita correctamente cuando el estudiante ha sido capaz de transformar cada fonema en su correspondiente grafema. Se consideran válidas todas las palabras que suenan igual, tanto si se ajustan como si no a las reglas ortográficas (v. gr., si el estudiante debe escribir “hife” y escribe “ife” o “yefe”, ambas serán consideradas como correctas puesto que su lectura suena igual que la pseudopalabra dictada).

Nota: las pseudopalabras “nempu” y “lambo”, aunque estén escritas con “n” (“nenpu” y “lanbo”), tendrán una representación gráfica de los sonidos correcta porque suenan igual.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá dejar el espacio en blanco en la plantilla de corrección.

Instrucciones: solicite al estudiante que escriba las palabras inventadas que se le dictan. Es necesario dar expectativas de éxito al niño con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir”. Dígale: “Si no puedes escribir alguna de las palabras inventadas, no te preocupes, continúa con la siguiente”. Empiece dictando las primeras dos palabras inventadas que sirven de ejemplo (pambu, vetenaje). Repita dos veces cada pseudopalabra lentamente y pronunciando correctamente. Si el estudiante solicita que la palabra inventada sea repetida sólo podrá hacerlo una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Plantilla de corrección Tarea 7

TAREA 7	
Dictado de pseudopalabras	NeMpu
	Hueta
	NaY
	Rumu
	FeliLlo
	MinRa
	FoiVa
	Hiefe
	LaMbo
	TenaBa
	CaBir
	TeaVe
	DoeVo
	TaJería
	MoJera
	TaJero
	ToBilidad
	FuloGía
	TalRe
	FiLLa
	TOTAL

TAREA 8: DICTADO DE FRASES

Objetivo: evaluar la capacidad del estudiante de escribir frases que le son dictadas.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. Presentamos al estudiante una hoja de respuestas para que escriba la frase en la línea base.

Puntuación: indicar en su formulario de recogida de datos el número de palabras con ortografía correcta:

- *Número de palabras con ortografía correcta:* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera palabra correcta aquella palabra que no contenga ninguna falta de ortografía y que haya sido reproducida exactamente igual que la palabra dictada de la plantilla de corrección. En este caso NO se penalizará el uso de la minúscula al comienzo de la frase ni el no uso de la tilde (v. gr., si el niño debe escribir “El” y escribe “el” no será penalizada la ausencia de la mayúscula por lo que “el” será considerada palabra correcta; si el niño debe escribir “elefante” y escribe “Elefante” la palabra será considerada como incorrecta, pues utiliza una letra mayúscula dónde no debe; si el niño debe escribir “más” y escribe “mas”, será considerada como palabra correcta). Además, aquellas palabras que hayan sido escritas separadas o adheridas a otras serán penalizadas en este apartado con un 0 (v. gr., si el estudiante escribe “delos”, tanto “de” como “los” obtendrán en este apartado un 0; lo mismo ocurre si escribe “mun do”).

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, usted deberá, en la plantilla de corrección, dejar la casilla en blanco en el apartado correspondiente a la palabra no escrita.

Instrucciones: se solicita al estudiante que escriba las frases que se le van a dictar. Es necesario dar expectativas de éxito al estudiante con frases como “Sé que sabes escribir muy bien, me gustaría que lo hicieras...” o “Tu profesor me ha contado que has aprendido muy bien a escribir...”. Dígale: “Si no puedes escribir alguna palabra, no te preocupes, continúa con la siguiente”. Empiece dictando la frase de ensayo (El juguete está roto). Primero diga la frase y a continuación cada palabra lentamente y pronunciando correctamente, dando tiempo para que el estudiante pueda escribirla. No proporcione un modelo visual de la frase. Cuando haya completado cada palabra de la frase rápidamente diga la siguiente palabra. Si el estudiante pide la repetición de una palabra solo podrá hacerlo una vez más. Debe recordar que primero se dictará la primera oración y una vez que el niño la haya escrito se procederá a dictar la segunda. Recuerde que no debe verbalizar los puntos finales de cada frase.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace con las dos primeras palabras del ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo, así como que en esta tarea debe tener en cuenta que debe realizar correctamente la alineación de las palabras dentro de la pauta marcada para escribir.

Plantilla de corrección Tarea 8

TAREA 8	
Dictado de frases	El elefante es uno de los mamíferos más grandes del mundo.
Ortografía correcta	La característica física más distintiva es su trompa.
	TOTAL

TAREA 9: COMPOSICIÓN Y ESCRITURA INDEPENDIENTE DE FRASES

Objetivo: evaluar si el estudiante es capaz de escribir dos frases de forma independiente. Con esta tarea valoramos la habilidad del estudiante para traducir ideas en proposiciones lingüísticas a través de la escritura.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas para que escriba las frases en la línea base.

Puntuación: indicar en su formulario de recogida de datos el tiempo invertido, número de palabras escritas en cada periodo de tiempo: en 1 minuto, en 2 minutos, en el total de la tarea (hasta 5 minutos), número de palabras con ortografía correcta en cada periodo de tiempo y espacios entre palabras:

- *Tiempo invertido:* anote el tiempo total (en segundos) que el estudiante ha invertido en escribir ambas frases. El tiempo invertido no podrá superar 5 minutos.
- *Número de palabras escritas durante el primer intervalo de tiempo (primer minuto):* se asigna 1 punto por cada palabra que el alumno haya escrito, esté escrita de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentre separadas o que se adhieran a otras (v. gr., si escribe “mellamo” o “gus ta”, ambas palabras serán directamente eliminadas sin tenerse en cuenta en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., “feh”) siempre y cuando estas no se refieran a onomatopeyas (v. gr., “pam”, “bum”...).
- *Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto):* si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.

Se considera que una palabra está escrita correctamente cuando:

- No contiene faltas de ortografía.
- En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.
- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra sea ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación no será penalizada.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...).

Se consideran palabras incorrectas:

- Las palabras escritas con minúscula que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Las palabras que escritas en mayúscula cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando existan discordancias de género, número o verbo, una de las palabras implicadas en la construcción gráfica será incorrecta (v. gr., en “el niña” una de las dos palabras deberá ser contabilizada como palabra incorrecta).

- *Número de palabras escritas durante el segundo intervalo (segundo minuto):* se asigna 1 punto por cada palabra que el estudiante haya escrito, esté escrita de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en “Número de palabras escritas en el primer intervalo de tiempo (primer minuto)”.

- *Número de palabras con ortografía correcta escritas durante el segundo intervalo (segundo minuto)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en “Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto)”.
- *Número total de palabras escritas (total en todo el tiempo invertido)*: se asigna 1 punto por cada palabra que el alumno haya escrito, esté escrita de manera correcta o incorrecta en todo el tiempo invertido en la tarea. Recuerde que no se trata de hacer un sumatorio de los intervalos 1 y 2, puesto que el tiempo de realización de la tarea puede ser de hasta 5 minutos.
- *Número total de palabras con ortografía correcta (total en todo el tiempo invertido)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Recuerde que no se trata de hacer un sumatorio de los intervalos 1 y 2, puesto que el tiempo de la realización de la tarea puede ser de hasta 5 minutos.
- *Espacio entre palabras*: por cada espacio entre palabras que el alumno respete la puntuación es 1. Se contabilizarán los espacios existentes entre dos palabras, exceptuando cuando varias palabras hayan sido categorizadas como “palabras eliminadas”, en cuyo caso sólo se contabilizarán los espacios que se encuentran en ambos extremos (v. gr., si el estudiante escribe “yo me llamo adrian yme gusta el futbol”, serán contabilizados 5 espacios, por lo que el espacio que se encuentra entre “llamoadrian” y “yme” no se contabilizará) y cuando se produzca el espacio de separación entre ambas frases (ya que en las instrucciones hemos indicado que debe escribir primero una frase y debajo otra, siendo este espacio influenciado por el examinador). Por otra parte, el espacio existente entre una palabra y la marca realizada por el estudiante (cuando transcurre 1 minuto y cuando transcurren 2 minutos) será contabilizado (v. gr., si el estudiante escribe “Yo me llamo / Adrián” en el primer intervalo se contabilizarán 3 espacios y en el segundo 0), exceptuando cuando esta línea se encuentre al finalizar una frase, en cuyo caso no será contabilizado. Este apartado será calculado individualmente tanto en los intervalos 1 y 2, como en el tiempo total invertido en la tarea.

NOTA IMPORTANTE: se considera que el estudiante ha escrito una frase cuando ha escrito varias palabras de cuya combinación se puede derivar un significado con sentido.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa el minuto?

Si el estudiante no sobrepasa el minuto en la realización de la tarea, usted deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente rellenará las del primer intervalo y las del total, que en este caso ambas tendrán las mismas puntuaciones.

Instrucciones: el examinador debe propiciar una conversación con el estudiante acerca de sus intereses. Debe pedir al estudiante que le cuente cuáles son sus juegos favoritos, sus hobbies, etc. Después de que el estudiante describa una o dos situaciones, se le pide que escriba dos frases acerca de lo que han hablado en la conversación. Indíquele que primero debe escribir una frase y a continuación una segunda inmediatamente debajo de la primera. Explíquele brevemente lo que es una frase: un conjunto de palabras con sentido. Comience a cronometrar el proceso una vez que el estudiante haya comenzado a escribir.

Si el estudiante no empieza a escribir cuando se le indica, entonces debe decir: “Mira cómo lo hago yo”, y mostrarle cómo se hace la primera frase de ejemplo (Yo monto a caballo por las tardes con mi madre). La segunda frase de ejemplo es: “Mi caballo preferido se llama Pegaso”.

No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando deba hacer una marca en el papel justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello se debe cronometrar el primer minuto e indicarle que haga la marca en ese momento, así como al cabo de 2 minutos (pero el estudiante NO debe saber que solo tiene 5 minutos). NO detenga el cronómetro: deje que el estudiante termine de escribir todas las palabras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de la tarea.

Plantilla de corrección Tarea 9

TAREA 9: Escritura de frases	TIEMPO INVERTIDO (en segundos): _____		
	1º intervalo (1')	2º intervalo (2')	TOTAL (Tiempo invertido, máximo 5')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
ESPACIOS ENTRE PALABRAS			

TAREA 10: ESCRITURA DE UNA HISTORIA

Objetivo: los estudiantes necesitan ir más allá de las palabras y aprender cómo lidiar con el texto. Asimismo, el objetivo de esta prueba es evaluar si el estudiante ha adquirido las habilidades necesarias para la escritura narrativa. La escritura narrativa y expositiva son estructuras diferentes que poseen diferente gramática. Las estructuras narrativas son más fáciles porque tienen bien definidos los componentes que los niños utilizan a la hora de escribir y se aprenden a edades tempranas (introducción, nudo, desenlace...). En contraste, la escritura expositiva es más difícil porque requiere otro tipo de organización de conocimientos y se adquiere más tarde.

Materiales: cada estudiante necesita un lápiz sin goma similar al que normalmente utiliza. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas para que escriba el texto en la línea base.

Puntuación: indicar en su formulario de recogida de datos el tiempo invertido, así como los siguientes apartados en cada intervalo de tiempo (en los primeros cinco minutos, en los siguientes cinco minutos, en tiempo total): número de palabras escritas, número de palabras con ortografía correcta, secuencia de palabras correctas y procesos de planificación utilizados en el texto escrito. No contabilice ninguno de estos apartados si el estudiante no cumple con el objetivo principal de esta tarea: narrar una historia.

- *Tiempo invertido*: anote el tiempo total (en segundos) que el estudiante ha invertido en escribir la narración. Este tiempo no debe ser superior a 10 minutos.
- *Número de palabras escritas durante el primer intervalo de tiempo (los 5 primeros minutos)*: se asigna 1 punto por cada palabra que el estudiante haya escrito, esté escrita de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentren separadas o que se adhieran a otras (v. gr., si escribe “mellamo” o “gus ta”, ambas palabras serán directamente eliminadas sin contarse en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., “feh”) siempre y cuando estas no se refieran a onomatopeyas (v. gr., “pam”, “bum”...).
- *Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.

Se considera que una palabra está escrita correctamente cuando:

- No contiene faltas de ortografía.
- En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.
- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra sea ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación no será penalizada.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...).

Se consideran palabras incorrectas:

- Las palabras escritas con minúscula que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Las palabras escritas con mayúscula inicial cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando existan discordancias de género, número o verbo, una de las palabras implicadas en la construcción gráfica será incorrecta (v. gr., en “el niña” una de las dos palabras deberá ser contabilizada como palabra incorrecta).

- *Número de palabras escritas durante el segundo intervalo (los 5 siguientes minutos)*: se asigna 1 punto por cada palabra que el alumno haya escrito, esté escrita de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en “Número de palabras escritas en el primer intervalo de tiempo (los 5 primeros minutos)”.
- *Número de palabras con ortografía correcta escritas durante el segundo intervalo (los 5 siguientes minutos)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en “Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos)”.
- *Número total de palabras escritas (los 10 minutos totales)*: se asigna 1 punto por cada palabra que el alumno haya escrito, esté escrita de manera correcta o incorrecta.
- *Número total de palabras con ortografía correcta (los 10 minutos totales)*: si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.
- *Secuencia de palabras correctas*: las secuencias de palabras se componen de grupos de dos palabras únicamente. Se asigna 1 punto a cada secuencia de dos palabras que sea plausible en nuestro idioma, es decir, por cada secuencia coherente de dos palabras.

Esta secuencia solo se verá interrumpida cuando exista:

- Un punto que finalice una frase.
- Una discordancia de verbo, género o número.
- Una palabra categorizada como “eliminada” (v. gr., “mellamo” o “lla mo”).

Nota: la existencia de una coma (,) o de una palabra categorizada como “incorrecta” (v. gr., “sapato”) no hará que la secuencia se rompa. Un ejemplo en el conteo de la secuencia de palabras correctas es: “yo me caí con la bicleta. Nunca me caído con ella.” En este caso encontramos 8 secuencias correctas de palabras (yo-me, me-caí, caí-con, con-la, la-bicleta, Nunca-me, caído-con, con-ella).

Además, debe tener en cuenta que la secuencia existente entre la última palabra de un intervalo y la primera del siguiente será siempre contabilizada hacia el intervalo que se encuentre primero (v. gr., si el estudiante escribe “yo me / llamo Pedro”, en el primer intervalo existen 2 secuencias (“yo-me” y “me llamo”) y en el segundo intervalo, 1 (“llamo-Pedro”).

- *Procesos de planificación*: se anotará 1 punto cuando la categoría esté presente en el texto y un 0 si no lo está. Las categorías son las siguientes:
 - *Cuándo sucede la historia*: ubica temporalmente las acciones o narraciones del cuento o: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.
 - *Personajes que intervienen en la historia*: nombra a algún sujeto que realiza una acción.
 - *Suceso inicial o problema*: alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente o el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.
 - *Ejecución*: cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho”, “caminó al colegio”...
 - *Qué sucede al final de la historia*: se valora cuando el estudiante explicita el final o terminación de la historia.

Nota: solo podrá contabilizarse un 1 ó un 0 en cada apartado, independientemente de que exista más de un personaje por intervalo. El intervalo total será un sumatorio de los intervalos 1 y 2, por lo que podrá contener los siguientes valores: 0, 1 ó 2. Los personajes, así como la ejecución de acciones asignadas a estos, no podrán ser atribuidos al segundo intervalo si ya han sido puntuados en el primero. Para que puedan ser puntuados en el segundo apartado deberá tratarse de personajes aún no nombrados en el primer intervalo. Además, tanto el apartado de “Suceso inicial o problema” como el de “Qué sucede al final de la historia” solo podrán ser contabilizados en uno de los dos apartados, puesto que estos hechos solo pueden ocurrir una vez en la historia.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa los 5 primeros minutos?

Si el estudiante no sobrepasa los primeros 5 minutos en la realización de la tarea, usted deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente llenará las del primer intervalo y las del total, que en este caso ambas tendrán las mismas puntuaciones.

Instrucciones: se solicita al estudiante que escriba un cuento o historia basándose en una imagen que le presentamos. Presentamos al estudiante una hoja de respuestas con una imagen y le decimos: “Voy a mostrarte una imagen para que escribas una historia. Debes tomarte un tiempo para ver bien la imagen (déjale 30 segundos) y luego debes empezar a escribir. Intenta recordar alguna historia parecida que te haya ocurrido a ti o a alguien que tú conozcas”. Si el estudiante nos indica que no sabe realizar la tarea podremos ayudarle escribiéndole las dos primeras palabras de la historia.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que mientras esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la palabra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar los 5 primeros minutos e indicarle que haga la marca en ese momento (pero el estudiante NO debe saber que solo tiene 10 minutos). NO detenga el cronómetro: deje que termine de escribir y siga cronometrando el proceso hasta que haya terminado de escribir la última letra o hayan transcurridos los diez minutos.

NOTA IMPORTANTE: deje que el estudiante realice el ejercicio proporcionándole un máximo de 10 minutos. Cuando el estudiante haya terminado el ejercicio, debe revisar la legibilidad de la escritura para comprobar que comprende todo lo que el estudiante ha querido expresar. Esto le ayudará luego en el proceso de corrección de la narración. Si hay alguna palabra ilegible es el momento de preguntar al estudiante qué quiso decir y anotarlo encima de la palabra ilegible.

Plantilla de corrección Tarea 10

TAREA 10: Escritura de una historia	TIEMPO INVERTIDO (en segundos): _____				
	1º intervalo (5')		2º intervalo (10')		
NÚMERO TOTAL DE PALABRAS ESCRITAS					
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA					
SECUENCIA DE PALABRAS CORRECTAS					

TAREA 10			
CATEGORÍAS	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
Cuándo sucede la historia: ubica temporalmente las acciones o narraciones del cuento: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.			
Personajes que intervienen en la historia: nombra a algún sujeto que realiza una acción.			
Suceso inicial o problema: alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.			
Ejecución: cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho”, “caminó al colegio...”.			
Qué sucede al final de la historia: se valora cuando el alumno/a explicita el final o terminación de la historia.			

ANEXO

Ejemplos

Alineación

Inversiones

Adición de trazos

Omisión de trazos

Examples	Alignment	Reversal	Added stroke	Missing Stroke
o	o o o	o o	o	o
l	l l l	l l	l	l
r	r r r	h u d	r	r

Annex E

EGWA-R Examiner sheet

PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA): Cuadernillo del examinador

Apellidos: _____

Nombre: _____

Edad: _____ años y _____ meses

Fecha: ____ / ____ / ____

Cuso: _____ Grupo: _____ nº: ____ sexo: M F
Centro: _____ Localidad: _____

Plantillas de corrección

TAREA 1

a	b	c	d	e	5	
f	g	h	i	j	10	
k	l	m	n	ñ	15	
o	p	q	r	s	20	
t	u	v	w	x	25	
y	z				27	

Nº LETRAS ESCRITAS CORRECTAMENTE EN ORDEN EN UN MINUTO:_____

TAREA 2

PARTE A						
a	b	c	d	e	5	
f	g	h	i	j	10	
k	l	m	n	ñ	15	
o	p	q	r	s	20	
t	u	v	w	x	25	
y	z				27	

TIEMPO INVERTIDO (TI) (en segundos):_____

Nº DE LETRAS ESCRITAS EN UN MINUTO:_____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI):_____

FLUIDEZ: $(LTI) / (TI) \times 60 =$ _____

Alineación:_____ / Inversiones:_____

Adición de trazos:_____ / Omisión de trazos:_____

PARTE B						
A	B	C	D	E	5	
F	G	H	I	J	10	
K	L	M	N	Ñ	15	
O	P	Q	R	S	20	
T	U	V	W	X	25	
Y	Z				27	

TIEMPO INVERTIDO (TI) (en segundos):_____

Nº DE LETRAS ESCRITAS EN UN MINUTO:_____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI):_____

FLUIDEZ: $(LTI) / (TI) \times 60 =$ _____

Alineación:_____ / Inversiones:_____

Adición de trazos:_____ / Omisión de trazos:_____

TAREA 5	Dictado de palabras ortográfica arbitraria no reglada	Veneno
Ortografía correcta/incorrecta (1=correcta/0=incorrecta)	PapaYa	NoVeno
	Cometa	Boda
	Lleno	Cuna
	Harina	PaJe
	Quita	Gitana
	Llama	Hada
	GUerra	Cena
	Guitarra	Sapo
	Jirafa	Zapato
	CoHete	TOTAL

TAREA 6	Dictado de palabras que contienen alguna regla ortográfica	Hueco
Ortografía correcta/incorrecta 1=correcta/0=incorrecta	ViVa	ReY
	Pasajero	AlRededor
	SonRisa	NoMbre
	Hielo	CaMpo
	AmaBa	SuBir
	SuaVe	Cepillo
	DeBilidad	DeBilidad
	CaJera	Rosa
	ReloJería	ReloJería
	TecnoloGía	NueVo
	SiLLa	TOTAL

TAREA 7	Dictado de pseudopalabras	NeMpu
Escritura con representación gráfica de todos los sonidos.(1=correcto/0=incorrecta)	Hueta	NaY
	Rumu	FeliLlo
	MinRa	FoiVa
	Hiefe	LaMbo
	TenaBa	CaBir
	TeaVe	DoeVo
	TaJería	Mojera
	TaJero	ToBilidad
	FuloGía	TalRe
	FiLLa	TOTAL

TAREA 8	Dictado de frases	TOTAL
	El elefante es uno de los mamíferos más grandes del mundo.	
	La característica física más distintiva es su trompa.	
	TOTAL	

TAREA 9: Composición y escritura independiente de frases	TIEMPO INVERTIDO (en segundos): _____		
	1º intervalo (1')	2º intervalo (2')	TOTAL (Tiempo invertido, máximo 5')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
ESPACIOS ENTRE PALABRAS			

TAREA 10: Escritura de una historia	TIEMPO INVERTIDO (en segundos): _____		
	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
SECUENCIA DE PALABRAS CORRECTAS			

TAREA 10	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
Cuándo sucede la historia: ubica temporalmente las acciones o narraciones del cuento: “Érase una vez...”; “Después de las vacaciones de verano...”; “El otro día por la mañana...”.			
Personajes que intervienen en la historia: nombra a algún sujeto que realiza una acción.			
Suceso inicial o problema: alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, el problema al que se enfrenta el personaje principal: “Le dijeron que tenía que levantarse para ir al colegio...”.			
Ejecución: cuando el personaje va realizando distintas acciones diferentes a las anteriores: “desayunó mucho”, “caminó al colegio...”.			
Qué sucede al final de la historia: se valora cuando el alumno/a explicita el final o terminación de la historia.			

Annex F

EGWA-R Student sheet

PRUEBA PARA LA EVALUACIÓN INICIAL DE LA ESCRITURA (EGWA): Cuadernillo del estudiante

CÓDIGO CIAL:	<input type="text"/>	CÓDIGO DEL COLEGIO:	<input type="text"/> <input type="text"/>
CÓDIGO PROYECTO:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		

TAREA 1

TAREA 2 (PARTE A)

a

b

a

b

e

f

g

h

i

j

k

l

m

n

ñ

o

p

q

r

s

t

U

V

W

X

y

Z

TAREA 2 (PARTE B)

A

B

A

B

C

D

E

F

G

H

I

J

K

L

M

N

Ñ

O

P

Q

R

S

T

U

V

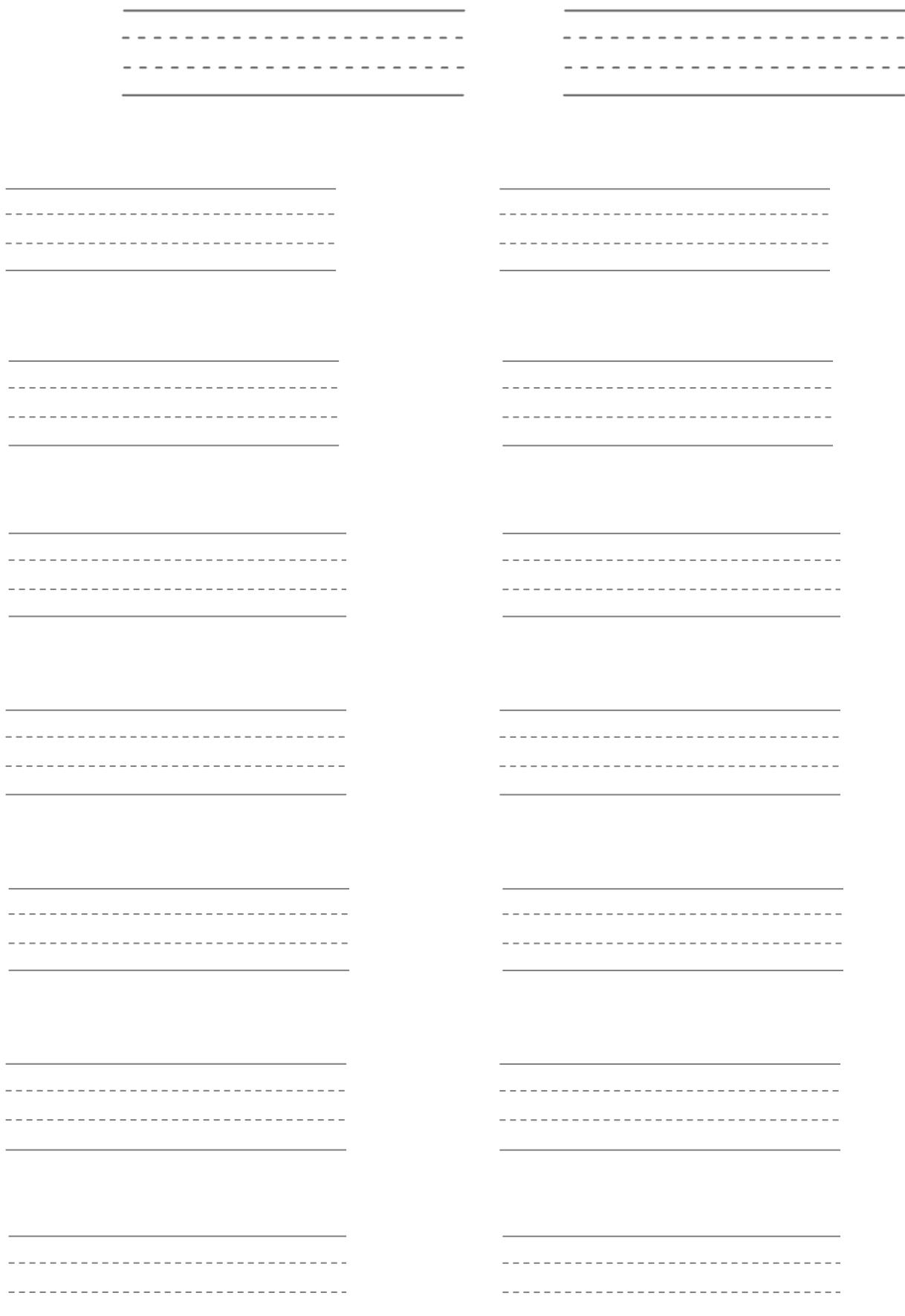
W

X

Y

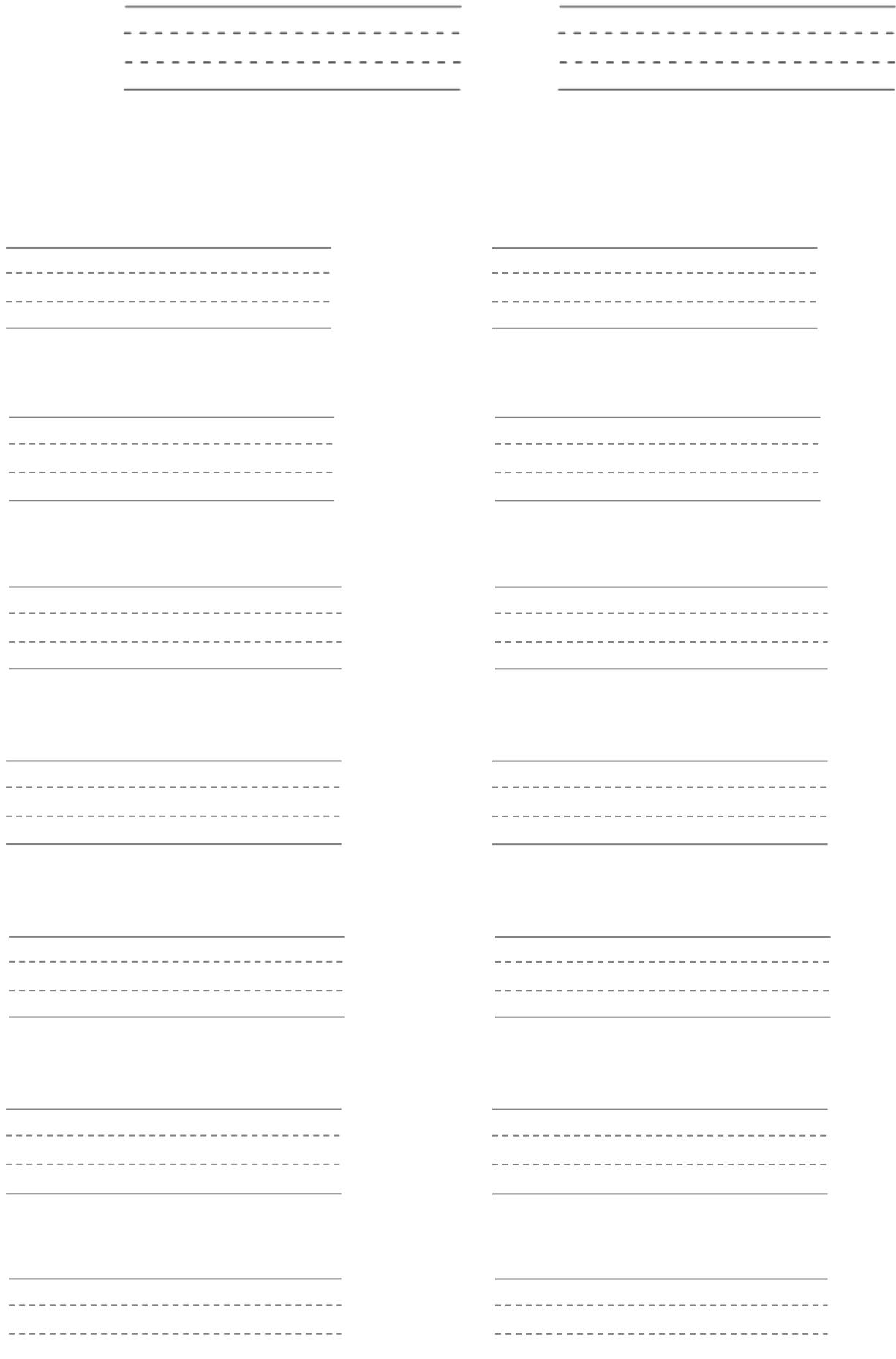
Z

TAREA 5



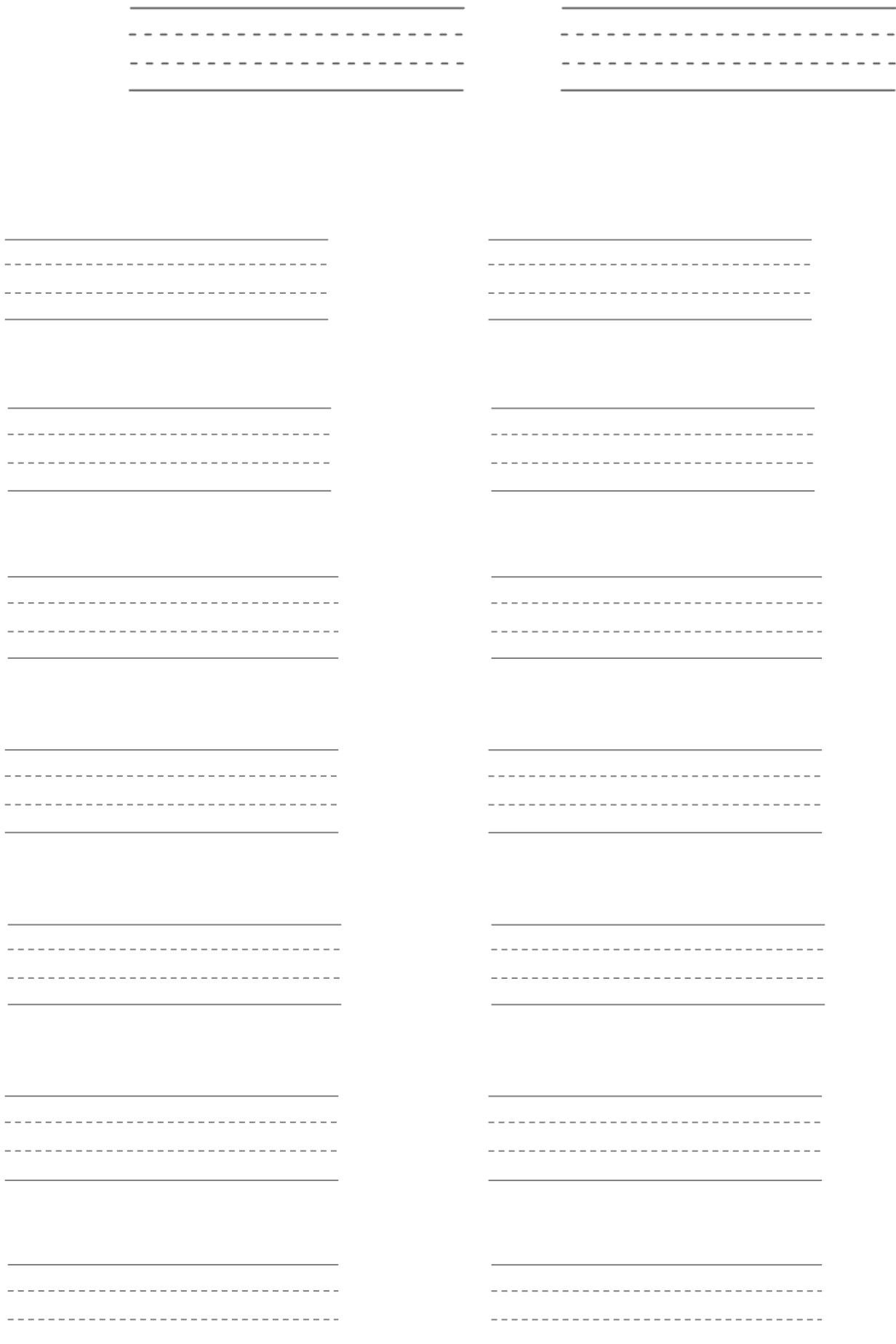
The page contains two columns of handwriting practice lines. Each column consists of four rows of horizontal lines. The top row is a solid line, followed by a dashed midline, followed by another dashed midline, and a bottom solid line. This pattern repeats four times in each column.

TAREA 6



The page contains two columns of handwriting practice lines. Each column consists of four sets of horizontal lines. Each set includes a solid top line, a dashed midline, and a solid bottom line. The columns are positioned side-by-side, providing space for writing practice.

TAREA 7



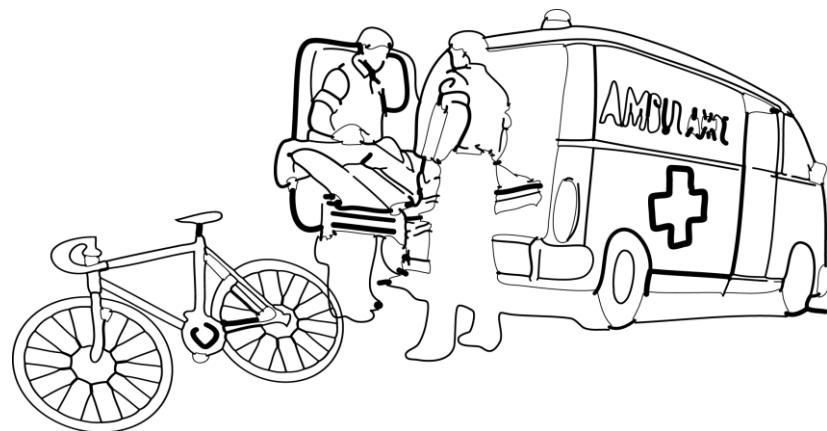
The page contains two columns of handwriting practice lines. Each column consists of four sets of horizontal lines. Each set includes a solid top line, a dashed midline, and a solid bottom line. The columns are positioned side-by-side, providing space for writing practice.

TAREA 8

TAREA 9

Handwriting practice lines for Tarea 9. There are 10 rows of handwriting lines, each consisting of a solid top line, a dashed midline, and a solid bottom line.

TAREA 10



Annex G

English translation of EGWA-R Administrator Instructions and Protocol

EARLY GRADE WRITING ASSESSMENT (EGWA) Description of tasks, administration and scoring procedures

Task 1 Writing the alphabet in order from memory

Target: The purpose of this task is to see if the child is able to reproduce all alphabet letters in order from memory.

Materials: A pencil similar to the one the child typically uses, without an eraser. Lined paper appropriate to the student's grade level. A timer or watch with a second hand.

Scoring: Indicate on the data collection form (see Annex) the number of letters written correctly in order in one full minute.

- * *Number of letters written correctly in order in one full minute:* assign 1 point for each legible letter the child has written, whether manuscript or cursive, uppercase or lowercase. After correction and counting, indicate the total number of letters written correctly on the data collection form.

All those letters that are legible and that are located in the right order are considered correct (for example, in the sequence 'a, c, d ...' all the letters are correct since they are in the proper order; however, in the sequence 'a, c, b ...' the letter 'b' is not counted as it has not been placed in the right order). Mark as correct those letters written in an inverted form, but located in the correct order (such as an upside-down 'j' or 'z'). Digraphs (such as 'ch', 'rr', 'll') are always valued positively and never counted negatively (so if the child writes 'll' after 'l', it will be counted as a correct letter). Children that do not include digraphs are not penalized; in no case is this considered a letter omission. In addition, letters are considered correct as long as they are in the correct position in the alphabet (for instance both 'q' and 'qu' are considered correct, as long as they are in the correct position).

Every letter that has not been placed in the correct order of the alphabet is considered omitted. For example if the child writes 'a, b, c, z, d, e, f, g ...', treat all the letters between the 'c' and 'z' as missing letters, so the total is twenty-three missing letters and four letters written correctly in order ('a', 'b', 'c' and 'z').

Instructions: Ask children to write all the letters of the alphabet in order. They should write the letters in the way they prefer, which could be uppercase or lowercase, cursive or manuscript. Tell them to write as fast as possible. Start timing when the child begins to write

the first letter and stop timing when they finish writing the last letter, or five minutes after the beginning of the task if they have not already finished.

It is necessary to give the child expectations of success. Use phrases such as ‘I know you know well the alphabet or letters of the alphabet, try to write them down’ or ‘Your teacher told me you’ve learned well to write letters.’ Tell the student, ‘If you don’t know some letters, don’t worry, but carry on with those you do know.’

Start timing when the child begins to write the first letter. If the child does not start writing when prompted, then say, ‘See how I do it’, and write the first two letters of the alphabet on the top two lines at the upper left of the answer sheet: ‘a’ ‘b’. Ignore spaces and do not penalize children for omissions or incorrect writing during the process. Note that children should always write from left to right and top to bottom. If after five minutes the child has not completed the exercise, ask them to stop and to leave the task.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the student. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. The examiner (who is timing the task) asks the child to make this mark after the first minute. Children must not know they have only five minutes to complete the task, or that the time taken is relevant. It is important to distract children as little as possible from the activity. Do not stop the stopwatch after a minute: let them finish writing all the letters and continue to time the process until they have finished writing the last letter. Only stop timing when children indicate that they cannot continue or after the full five minutes is up.

IMPORTANT NOTE: If a child finishes writing the alphabet in less than a minute, they should start writing it again. Tell the child rapidly to start again on the next piece of paper. Do not stop the timer, and give this instruction rapidly. After the first minute is up, tell the child to make a mark on the paper. Once they have finished writing the alphabet again, stop the timer and make the calculations.

Correction template Task 1

a	b	c	d	e	5
f	g	h	i	j	10
k	l	m	n	ñ	15
o	p	q	r	s	20
t	u	v	w	x	25
y	z				27

Nº LETRAS ESCRITAS CORRECTAMENTE EN ORDEN EN UN

MINUTO: _____

Task 2 Alphabet copying and allograph selection

Target: The purpose of this task is twofold: 1) to see if the child has acquired the motor patterns for writing letters, and 2) to see if the child is able to select the correct allograph (lower-case letter) for each capital letter.

Materials: Each child needs a pencil similar to the one they normally use, without an eraser. The researcher requires a stopwatch or clock with a second hand. This task comprises two subtasks, 2A and 2B. For subtask 2A, 'Alphabet copying', the researcher needs two types of answer sheets: one with the alphabet written in manuscript and one with the alphabet written in cursive. Select the manuscript or cursive letter template depending on the type of format the children are learning at school; children only have to fill in one of the two answer sheets. For subtask 2A, the child must make an exact copy of each of the letters. For subtask 2B, 'Allograph selection', the child gets an answer sheet containing all the letters of the alphabet in capital letters. Ask them to write the lowercase letter for each capital letter presented.

Scoring

Part 2A

Indicate on the data collection form the time spent, the number of letters written in one full minute, and number of letters written correctly in the time spent. Also record the alignment, reversals, added strokes and missing strokes (see examples at the end of this document).

Also, calculate fluency using the formula LTI/TIx60.

- * **Time spent (T1):** record the time (in seconds) the child takes to write all the letters, starting the timer the moment they start to write the first letter and stopping the timer when they finish the last one. Also stop timing if the child says they cannot continue, or if five minutes has elapsed since the beginning of the subtask.
- * **Letters written in one full minute:** assign 1 point for each letter the child produces in the first minute, whether it is legible or illegible, right or wrong. After correction and counting, total up the number of letters produced on the data collection form.
- * **Letters written correctly in the time spent (LT1):** assign 1 point for each letter the child has copied correctly. Copied letters are considered correct when none of the following errors have been committed: misalignment, reversals, added strokes and

missing strokes. If there is any such error, consider it an incorrect letter and do not count it in this section. After correction and counting, note down the total number of letters written correctly.

- * **Alignment:** Consider where a letter should normally sit on the baseline and where it is actually seated, except for those letters that are not recognizable. If the letter sits exactly where it should on the baseline, score 0. If the letter is seated above or below the baseline, score 1. In other words, score 1 for an alignment error and 0 for correct alignment.
- * **Reversals:** Record any occurrence of inverted letters: that is, if the letter or any part of it has been reversed or rotated incorrectly. Writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’ are examples of reversals. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. Note on the data collection form the total number of reversals in the set of written letters.
- * **Added strokes:** Record each occurrence of a letter with an added stroke. Any strokes not shown on the original letter in the template for copying are considered as added strokes. Do not take into account the characteristics of the letter stroke. In other words, score only the added strokes, not their length or inclination. (A stroke is not an added stroke if it is longer or more tilted than it should be, but otherwise correct.) If children write ‘qu’ when copying ‘q’, ignore the ‘u’: this is not counted as an added stroke. Note on the data collection form the total number of added strokes in the set of written letters.
- * **Omission of strokes:** Record each occurrence of a letter with omitted strokes: that is, the absence of any stroke shown in the original letter on the template. Do not take into account the characteristics of the letter stroke. In other words, score only the missing strokes, not their length or inclination. If a stroke is shorter or less inclined than it should be, but is present, it is not a missing stroke. Note on the data collection form the total number of omitted strokes from the set of written letters.

Note: Each letter may contain one or more of these errors. Note that when the child has chosen a font (manuscript or cursive) but written the letter in the other style, the following letters cannot be modified through additions or omissions of strokes: ‘f’, ‘b’, ‘k’, ‘p’, ‘q’, ‘r’,

's', 'v', 'w', 'x' and 'y'. All others can be modified through additions or omissions of strokes until the letter is exactly equal to the letter model of the template that has to be copied. In other words, when the child chooses a type of format for letter copying (script or cursive), then this is the format of the template they are given, and they should reproduce it exactly. It is treated as an error when the child uses the other format, but this criterion is only used for those letters that can be modified by adding or deleting strokes. The main reason is that we cannot be sure whether children are using the cursive or script format for those letters. For example, the only difference between cursive and script format in copying the letter 'a' is adding or deleting two strokes.

Part 2B

Indicate on the data collection form the time spent, the number of letters written in one full minute and the number of letters written correctly in the time spent. Also record the alignment, reversals, added strokes and missing strokes (see examples at the end of this document). Also, calculate fluency using the formula $LTI/TI \times 60$.

- * **Time spent (T1):** record the time (in seconds) the child has spent in writing all the letters, starting the timer the moment they start to write the first letter and stopping the timer when they finish writing the last one. Stop timing if the child says they cannot continue or when the maximum time (five minutes) have elapsed since the beginning of the subtask.
- * **Letters written in one full minute:** assign 1 point for each letter the child has produced in the first minute, whether legible or illegible, right or wrong. After correction and counting, note the total number of letters produced on the correction template.
- * **Letters written correctly in the time spent (LT1):** assign 1 point for each letter the child has written correctly in the time spent. If a child has adequately written the allograph (lower case) for the presented capital letter, it is considered correct. It is not correct if it shows misalignment, reversals, added strokes or missing strokes. Any of these errors mean the letter should be judged incorrect and not counted in this section. After corrections, count and indicate the total number of letters written correctly.

- * **Alignment:** Consider where a letter should normally sit on the baseline and where it is actually seated, except for letters that are not recognizable. If the letter sits exactly where it should on the baseline, score 0. If the letter is seated above or below the baseline, score 1. In other words, an alignment error scores 1, and correct alignment scores 0.
- * **Reversals:** Record any occurrence of inverted letters: that is, if the letter or any part of it has been reversed or rotated incorrectly. Writing ‘p’ instead of ‘b’, ‘d’ for ‘q’ and ‘u’ for ‘n’ are examples of reversals. When a letter is inverted, take into account only the reversal; do not analyse the alignment or the addition or omission of strokes. Note on the data collection form the total number of reversals in the set of written letters.
- * **Added strokes:** Record each occurrence of a letter with an added stroke. Any strokes not shown on the original letter on the answer sheet are considered as added strokes. Do not take into account the characteristics of the letter stroke. In other words, score only the added strokes, not their length or inclination. (A stroke is not an added stroke if it is longer or more tilted than it should be, but otherwise correct.) If children write ‘qu’ when copying ‘q’, ignore the ‘u’: this is not counted as an added stroke. Note on the data collection form the total number of added strokes in the set of written letters.
- * **Missing strokes:** Record each occurrence of a letter with omitted strokes: that is, the absence of any stroke shown in the original letter on the answer sheet. Do not take into account the characteristics of the letter stroke. In other words, score only the missing strokes, not their length or inclination. Note on the data collection form the total number of omitted strokes from the set of written letters.

Note: In Subtask 2B, children can mix both types of letters (manuscript and cursive). So when correcting the errors (alignment, reversals, added strokes and missing stokes), take into account the font chosen by the child for each letter produced. To do this you can compare each copied letter with the letter (manuscript or cursive) shown on the template for task 2A. If it is not clear whether a letter has been written in cursive or manuscript style, choose the template most advantageous to the student.

Instructions

Part 2A

Invite the child to choose either the manuscript or cursive template, whichever they consider easier and feel they can do faster. Ask them to copy the letters of the alphabet, staying within the lines of the ruled paper and using their preferred style, cursive or manuscript. Whichever is chosen, the copy should be as close as possible to the model. Tell the child too to copy as fast as possible.

You need to give the child expectations of success. Use phrases such as ‘I know you know to copy the alphabet very well, I’d like you to write it’, or ‘Your teacher has told me you’ve learned to copy the letters very well.’ Say, ‘If you can’t do something, don’t worry, just carry on with the next letter.’

Note that the child must write from left to right and top to bottom. Start timing when the child begins to write the first letter. If the child does not start writing when prompted, say ‘See how I do it’, and write the first two letters of the alphabet on the top two lines at the upper left of the template: ‘a’, ‘b’. Do not count spaces or penalize children for omissions or incorrect writing while performing the test. If after five minutes the child has not completed the exercise, ask them to stop and leave this subtask.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the student. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. Tell the child to make the mark after the first minute, but not that they only have five minutes to complete the task, or that the time taken is being measured. It is important to distract the child as little as possible from the activity. Do not stop the stopwatch at the end of a minute: let them finish writing all the letters and continue to time the process until they have finished writing the last letter. Do stop timing if the child indicates that they cannot continue or if they have not finished the task at the end of five minutes.

Part 2B

Ask the child to write the lower-case letters of the alphabet. This time, they are shown the capital letters of the alphabet and must write the corresponding lower-case allograph.

Explain that they must write the letters within a space between the parallel horizontal lines of the ruled paper (show them if necessary). Tell them to write as fast as possible.

As for Subtask 2A, it is necessary to give expectations of success and propose the task as a ‘play of marking the letter’ from the beginning.

Correction template Task 2A

PARTE A					
a	b	c	d	e	5
f	g	h	i	j	10
k	l	m	n	ñ	15
o	p	q	r	s	20
t	u	v	w	x	25
y	z				27

TIEMPO INVERTIDO (TI) (en segundos): _____

Nº DE LETRAS ESCRITAS EN UN MINUTO: _____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI): _____

FLUIDEZ: (LTI) _____ / (TI) _____ x60= _____

Alineación: _____ / Inversiones: _____

Adición de trazos: _____ / Omisión de trazos: _____

Correction template Task 2B

PARTE B					
A	B	C	D	E	5
F	G	H	I	J	10
K	L	M	N	Ñ	15
O	P	Q	R	S	20
T	U	V	W	X	25
Y	Z				27

TIEMPO INVERTIDO (TI) (en segundos): _____

Nº DE LETRAS ESCRITAS EN UN MINUTO: _____

Nº LETRAS ESCRITAS CORRECTAMENTE EN TIEMPO INVERTIDO (LTI): _____

FLUIDEZ: (LTI) _____ / (TI) _____ x60= _____

Alineación: _____ / Inversiones: _____

Adición de trazos: _____ / Omisión de trazos: _____

Task 5 Writing dictated words with inconsistent spelling

Target: The objective is to assess if the child is able to write words that are spelled differently than they are pronounced – that is, words that do not conform to any spelling rules.

If children are able to write words that do not conform to any spelling rules, this indicates they have memorized their orthographic representation. The child must have an orthographic representation of the arbitrary spelled words to write them well. The procedure is that the meaning directly activates the written representation without the need to break the word into its phonemes or graphemes. Therefore, this is a method of assessing whether the child is using the direct or the lexical route.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. Give the child an answer sheet, where words should be written on the ruled lines.

Scoring: Indicate on the data collection form the number of words spelled correctly.

- * *Number of words spelled correctly:* If the child has written the word correctly, score
 1. If the word is incorrect, score 0. A word is considered spelled correctly when its orthographic representation is correct: that is, when the word is written as it appears on the data collection form.

Scoring when a child does not write a word or several words

When the child does not write one or more words during the task, leave the cell corresponding to the word blank.

Instructions: Ask the child to write down words that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you know write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the first two words of the test (*yate, gusano*). Repeat twice, slowly and pronouncing each word correctly. If the child asks if the word can be repeated, do so only once more. Be aware that the children must always write from left to right and top to bottom.

If the child does not begin to write the first word of the test when you dictate it, say ‘See how I do it’, and write it down as an example. Do not repeat the word aloud while writing, as the child might take this as a model and use this strategy when trying to write the following words. Ignore spaces and do not penalize the child for omissions or incorrectly spelled words during the exercise.

Correction template Task 5

TAREA 5	
Dictado palabras ortografía arbitraria	Veneno
	PapaYa
	NoVeno
	Cometa
	Boda
	LLeno
	Cuna
	Harina
	PaJe
	QUita
	Gitana
	LLama
	Hada
	GUerra
	Cena
	GUitarra
	Sapo
	Jirafa
	Zapato
	CoHete
	TOTAL

Task 6 Writing words that conform to spelling rules from dictation

Target: If the child is able to write words that conform to spelling rules, this indicates that they have memorized these rules, recalling the orthographic representation. This task aims to determine the use of the lexical route by the student. The rules to evaluate are the following:

- * Write ‘m’ before ‘p’ and ‘b’ (*sombrero* [hat], *ombligo* [navel]).
- * The letter ‘r’ is written at the beginning of a word (*radio* [radio]) and after ‘l’, ‘n’, and ‘s’ (*sonreír* [smile]). The double ‘rr’ is written in inter-vowel position (*perro* [dog]) and sounds stronger.
- * The letter ‘h’ is written when the sound is ‘hue’, ‘hie’ (as in *hueso* [bone], *hielo* [ice]).
- * The letter ‘y’ is written at the end of a word and when the stress mark does not fall on that letter (*rey* [king]).
- * All verbs ending in ‘aba’ are written with ‘b’ (e.g. *caminaba* [walking]).
- * All verbs ending in ‘bir’ (e.g. *subir* [top]) are written with ‘b’, except *hervir* [to boil], *servir* [to serve], and *vivir* [to live].
- * Words ending in -evo, -ave (*nuevo* [again], *suave* [smooth]) are written with the letter ‘v’ except for *mancebo*, *placebo*, *recebo*, *sebo*, *árabe*, *jarabe*.
- * Words ending in ‘bilidad’ are spelled with the letter ‘b’ (*debilidad* [weakness]) except *civilidad* [civility] and *movilidad* [mobility].
- * Words ending in -jero, -jera, -jería (*pasajero* [passenger], *cajera* [cashier], *relojería* [watches]) are written with the letter ‘j’.
- * Words ending in -logía (*tecnología* [technology]) are written with the letter ‘g’.
- * Words ending in -illo,-illa (*pestillo* [latch], *taquilla* [box office]) are written with a double ‘ll’.
- * Words ending in -iva are written with ‘v’ except *criba*, *jiba*, *piba*.

Materials: Each child needs a pencil similar to the one they normally use with no eraser. Give the child the answer sheet, on which the words have to be written on the ruled lines.

Scoring: Indicate on the data collection form the number of words in which the child has used the correct spelling rule.

- * *Correct versus incorrect spelling rule:* Score 1 point if the child has used the spelling rule correctly. The child has successfully used the spelling rule correctly if they have written correctly the part of the word that contains the spelling rule (all the relevant letters are in bold on the data collection form). It is necessary for children to write properly the letters that make up the rule, so for example if the word is *cepillo* and the child writes ‘sepillo’ or ‘pillo’, score 1 point for correct use of the correct spelling rule -illo, in spite of the misspelling elsewhere in the word. If the word is *cajera* and the child writes ‘cajero’ or ‘cajere’, score 0 because they did not entirely use the spelling rule -jera. Do not penalize children if they do not use the stress mark.

Scoring when the child does not write one or more words

When children do not write one or more words during the task, leave the corresponding cells blank.

Instructions: Ask the child to write down the words that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you know write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the first two words of the test (*limpio, hierba*). Repeat twice slowly, pronouncing each word correctly. If the child asks you to repeat a word, do so only once more.

If the child does not begin to write the first word of the test when you dictate it, say ‘See how I do it’ and write it down as an example. Do not count spaces or penalize the child for omissions or incorrectly written words during the exercise. Children should always write from left to right and top to bottom.

Correction template Task 6

TAREA 6	
Dictado de palabras regladas	Hueco
	ViVa
	ReY
	PasaJero
	AlRededor
	SonRisa
	NoMbre
	Hielo
	CaMpo
	AmaBa
	SuBir
	SuaVe
	CepiLlo
	DeBilidad
	CaJera
	Rosa
	ReloJería
	TecnoloGía
	NueVo
	SiLLa
	TOTAL

Task 7 Writing pseudowords from dictation

Target: The objective is to assess if the child is able to write the graphemes that correspond to the phonemes of the word. The spelling of pseudowords indicates knowledge of the rules of phoneme-grapheme correspondence. If the child makes many more mistakes in writing pseudowords, it will imply they have difficulties in using the phonological route. These pseudowords also follow certain spelling rules: if the child applies the rule, this indicates they have memorized it.

Materials: Each child needs a pencil similar to the one they normally use, with no eraser. Give the child an answer sheet and ask them to write the pseudowords on the ruled lines.

Scoring: Indicate on the data collection form the number of pseudowords written correctly.

- * **Number of pseudowords with correct graphical representation of the sounds:**
 If the child has written the pseudoword correctly, score 1. For incorrect spelling, score 0. A pseudoword – an invented word that does not exist in our language – is judged to be written correctly when the child has transformed each phoneme into its corresponding graphemes. All the words written in a way that can be pronounced like the dictated word are valid, whether or not they conform to spelling rules. For example, if the pseudoword dictated is *hiefe* and the child writes ‘iefes’ or ‘yefe’, these are considered correct since they both sound like the pseudoword.

Note: The pseudowords *nempu* and *lambo* sound the same in Spanish as ‘nenpu’ and ‘lanbo’. So score 1 point if the child spells the words with either an ‘m’ or an ‘n’, as the graphical representation of the sounds is correct for both spellings.

Scoring when a child does not write one or more words

When children do not write one or more words during the task, leave the cell corresponding to this word blank.

Instructions: Ask the child to write down the invented words you will dictate. You need to give the child expectations of success with phrases like ‘I know you know write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write any of the invented words, don’t worry, continue with the next one.’ Start dictating the first two invented words as examples (*pambu, vetenaje*). Repeat twice slowly, pronouncing each pseudoword correctly. If the child asks for a pseudoword to be repeated, do so only once more.

If the child does not begin to write the first example when it is dictated, say ‘See how I do it’, and write out the first example. Ignore spaces and do not penalize the child for omissions or incorrect spelling during the exercise. Children should always write from left to right and top to bottom.

Correction template Task 7

TAREA 7	
Dictado de pseudopalabras	
	NeMpu
	Hueta
	NaY
	Rumu
	FeliLlo
	MinRa
	FoiVa
	Hiefe
	LaMbo
	TenaBa
	CaBir
	TeaVe
	DoeVo
	Tajería
	MoJera
	Tajero
	ToBilidad
	FuloGía
	TalRe
	FiLLa
	TOTAL

Task 8 Writing a sentence from dictation

Target: Assess if the child is able to write a sentence from dictation.

Materials: Each child needs a pencil similar to the one they normally use, with no eraser. Give the child an answer sheet on which the sentence should be written on the ruled lines.

Scoring: Indicate on your data collection form the number of words spelled correctly.

- * **Number of words spelled correctly:** If the child has written the word correctly, score 1. If the spelling is incorrect, score 0. A word is considered correct when there are no spelling errors and it has been reproduced exactly like the dictated word on the data collection form. In this task do *not* penalize the use of lowercase letters at the beginning of the sentence, missing stress marks (for example, if the child should write ‘El’ and writes ‘el’), or the absence of capital letters. So ‘el’ will be considered a correct word. If the child should write ‘elefante’ and write ‘Elefante’, that is considered incorrect, as it uses a capital letter when none is needed. If the child should write ‘más’ and writes ‘mas’, this is considered a correct word. Failure to separate or attach words to or from each another correctly scores 0 in this section. For instance, if the child writes ‘delos’ when *de los* is correct, give a 0 to both ‘de’ and ‘los’. The same applies for ‘mun do’ instead of the correct *mundo*.

Scoring when the child does not write one or more words

When children do not write one or more words during the task, leave the cells that correspond to the word blank

Instructions: Ask the child to write down a sentence that you are going to dictate. You need to give the child expectations of success with phrases like ‘I know you know write very well, I wish you would ...’ or ‘Your teacher told me you’ve learned to write very well.’ Say, ‘If you can’t write a word, don’t worry, continue with the next one.’ Start dictating the test sentence (*El juguete está roto*). First say the sentence, then repeat each word slowly, pronouncing them correctly, giving the child the time to write. Do not show a visual model of the sentence. When you complete each word of the sentence, quickly say the next word. If the child asks you to repeat a word, do so only

once. You must remember to dictate the first sentence and give the child time to write it down completely, then proceed to dictate the second. Remember not to verbalize the endpoints of each sentence.

If the child does not begin to write the first example when you dictate it, say 'See how I do it', and show the child how to do the first two words of the example. Ignore spaces and do not penalize the child for omissions or incorrect writing during the exercise. Children must remember always to write from left to right and top to bottom, and should be aware that they must write within the ruled lines on the answer paper.

Correction template Task 8

TAREA 8	
Dictado de frases	El elefante es uno de los mamíferos más grandes del mundo. La característica física más distintiva es su trompa.
Ortografía correcta	
	TOTAL

Task 9 Writing an independently composed sentence

Target: To assess if the child is able to write an independently composed sentence.

This task assesses the ability of the child to convert oral language into written language.

Materials: Each child needs a pencil similar to the one they normally use, with no eraser. You need a stopwatch or clock with a second hand. Give the child a ruled answer sheet and ask them to write on the ruled lines.

Scoring: Indicate on your data collection form the time spent, the number of words written in each period of time: in one minute, two minutes, in the entire task (up to five minutes), number of words spelled correctly in each period of time and the spaces between words.

- * **Time spent:** enter the total time that the child takes to write the sentences. This time should not exceed five minutes.
- * **Number of words written during the first time interval (one minute):** score 1 point for each word the child has written, whether it is spelled correctly or incorrectly. Do not include words that are wrongly separated from or joined to other words. If for example the child writes ‘mellamo’ instead of *me llamo* or ‘gus ta’ instead of *gusta*, ignore both words and do not count them in any of the cells on the data collection form. Similarly, do not count words that do not exist in Spanish, such as ‘Feh’, except for words used onomatopoeically to refer to sounds, such as ‘Pam’ and ‘bum’.
- * **Number of words written with correct spelling during the first time interval (one minute):** If the child has written the word correctly, score 1. If the child has written the word incorrectly, score 0.
A word is regarded as spelled correctly when:
 - * it does not contain misspellings
 - * for any words written in a foreign language (such as English), it is considered correct only if it is written correctly in that foreign language
 - * the word starts a sentence and its first letter is not capitalized, but the word is spelled correctly

- * it is spelled correctly but a stress mark is omitted (this is dealt with in the section ‘Using stress marks’)
- * a numerical quantity is expressed in numbers (1, 2, 3 ...).

A word is considered to be incorrect when:

- * the first letter is written in lowercase, but it should be written with a capital letter (for instance, it is a proper name)
- * the word is written in upper case when it should not be, since it is not a proper name (such as ‘Gato’ [Cat]) or there is a capital letter in the middle of the word (such as ‘gaTo’ [cAt]);
- * there is a mismatch of gender, number or verb, or one of the words involved in a syntactic construction is incorrect. For instance, if the child writes ‘el niña’ when it should be *la niña*, count one of the two words as incorrect.
- * **Number of words written during the second time interval (second minute):** score 1 point for each word that the child has written, whether it is spelled correctly or incorrectly. The same criteria are used as specified above for ‘Number of words written during the first time interval (one minute)’.
- * **Number of words written with correct spelling during the second time interval (second minute):** If the child has written the word correctly, score 1; incorrectly, score 0. Use the criteria outlined above to determine correct or incorrect spellings.
- * **Total number of words written (total in all the time taken):** score 1 point for each word that the child has written in the total time spent on this task, whether it is written correctly or not. This might not be a sum of words written in interval 1 and interval 2, as the time spent performing the task can be five minutes maximum.
- * **Total number of words spelled correctly (total in the time taken):** As above, score 1 for correct and 0 for incorrect spelling. This might not be a sum of words written in interval 1 and interval 2, as the time spent performing the task can be five minutes maximum.

- * **Spacing between words:** For each space between words that children have included correctly, score 1. This applies to spaces between each two words, but not between ‘eliminated words’ (words eliminated from the count because of one of the errors mentioned above). So if the child writes ‘yo me llamo adrian yme gusta el football’ instead of *yo me llamo adrian y me gusta el football*, count five spaces, not including the space between ‘llamo adrian yme’ since this entire phrase is eliminated. Do not count the space between the last word of a sentence and the first word of the next sentence. Do count the space between a word and the line the child makes as requested to mark one minute and two minutes elapsing. So if the child writes ‘Yo me llamo / Adrián’, count in the first time interval three spaces, and in the second time interval 0 spaces. When this line is at the end of a sentence, do not count the space. This section is calculated individually for the first time interval, the second time interval, and the total time spent on the task.

IMPORTANT NOTE: The child is considered to have written a sentence when several words have been set down that convey a meaning that makes sense.

Scoring when the child finishes writing in less than one minute

If the child takes less than one minute to perform the task, leave all cells for the second interval blank, and complete scores for only the first interval and the total. In that case both these sections will have the same scores.

Instructions: Start up a conversation with the child about their interests. Ask about their favourite games, hobbies and so on. Once the child has said one or two things, ask them to write two sentences on what they have just described. Ask them to write one sentence and then add a second immediately below the first. Explain briefly what a sentence is: a set of meaningful words. Start timing the process when the child starts writing.

If the child does not start writing when prompted, say ‘See how I do it’, and write down a sentence as an example (such as *Yo monto a caballo por las tardes con mi madre* [I ride a horse in the afternoon with my mother]). The second example sentence might be *Mi caballo preferido se llama Pegaso* [My favourite horse is called Pegaso].

Ignore spaces and do not penalize the child for omissions or incorrect writing during the exercise. Children should always write from left to right and top to bottom.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the student. The game is that at some unexpected point in the task they will be told to make a mark just below the letter they are writing. Time from the moment the child starts to write, and tell them to make the mark after the first minute (but not that they only have five minutes to complete the task, or that you are timing them). It is important to distract the child as little as possible from the activity. Do not stop the stopwatch after one minute, let them finish writing all the words, and continue to time the process until they have finished writing the last letter. Stop timing if the child indicates they cannot continue or after the full five minutes is up.

Correction template Task 9

TAREA 9: Escritura de frases	TIEMPO INVERTIDO (en segundos): _____		
	1º intervalo (1')	2º intervalo (2')	TOTAL (Tiempo invertido, máximo 5')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
ESPACIOS ENTRE PALABRAS			

Task 10 Writing a story

Target: Children need to move beyond single words and sentences and learn how to deal with text. Therefore, the aim of this task is to assess if the child has acquired narrative-writing ability. Narrative writing and expository writing are two different structures and have different grammars. Narrative structures are easier because they have well-defined components that children acquire understanding of from early ages (a beginning, event, an outcome and so on). In contrast, expository writing is more difficult because it requires another kind of organization of knowledge. This assessment is limited to narrative ability.

Materials: Each child needs a pencil similar to the one they normally use, with no eraser. You will need a stopwatch or clock with a second hand. Give the child a ruled answer sheet on which the text should be written on the ruled lines.

Scoring: Indicate on the data collection form the time taken, and the following sections for each time interval (first time interval (five minutes), the second time interval (next five minutes), and full time): number of written words, number of words with correct spelling, word sequence and planning processes used in the written text. Do not count any of these points if the child does not meet the primary objective of this task: telling a story.

- * **Time spent:** enter the total time the child has taken writing the narrative. This time should not exceed ten minutes.
- * **Number of words written during the first time interval (the first five minutes):** Score 1 point for each word the child has written, whether it is spelled correctly or incorrectly. Do not include words that are incorrectly separated from or joined to other words. For example, if the child writes ‘mellamo instead of *me llamo* or ‘gus ta’ instead of *gusta*, eliminate both words and do not count them in any of the scoring sections for this task. Similarly, do not count words that do not exist in Spanish, such as ‘Feh’, unless they are correctly used as onomatopoeiac conveyance of a sound such as ‘Pam’ or ‘bum’.
- * **Number of words written with correct spelling during the first time interval (the first five minutes):** Score 1 for words written correctly, 0 for words written incorrectly.

A word is regarded as spelled correctly when:

- * it does not contain misspellings
- * for any words written in a foreign language (such as English), it is considered correct only if it is written correctly in that foreign language
- * the word starts a sentence and its first letter is not capitalized, but the word is spelled correctly
- * it is spelled correctly but a stress mark is omitted (this is dealt with in the section ‘Using stress marks’)
- * a numerical quantity is expressed in numbers (1, 2, 3 ...).

A word is considered to be incorrect when:

- * the first letter is written in lowercase, but it should be written with a capital letter (for instance, it is a proper name)
- * the word is written in upper case when it should not be, since it is not a proper name (such as ‘Gato’ [Cat]) or there is a capital letter in the middle of the word (such as ‘gaTo’ [cAt])
- * there is a mismatch of gender, number or verb, or one of the words involved in a syntactic construction is incorrect. For instance, if the child writes ‘el niña’ when it should be *la niña*, count one of the two words as incorrect.
- * **Number of words written during the second time interval (the next five minutes):** Score 1 for each word that the child has written, whether it is spelled correctly or incorrectly. Use the criteria outlined for the first time interval above.
- * **Number of words written with correct spelling during the second time interval (the next five minutes):** Score 1 for correct spelling, 0 for incorrect spelling. Use the criteria outlined for the first time interval above.
- * **Total number of words written (ten minutes in total):** Score 1 for each word that the child has written, whether it is spelled correctly or incorrectly.
- * **Total number of words spelled correctly (ten minutes total):** Score 1 for correct spelling, 0 for incorrect spelling.

- * **Correct word sequence:** a word sequence is composed of groups of two words only. Score 1 point for each sequence of two words that is plausible in our language; in other words, for every coherent sequence of two words.

This sequence is broken only when there is:

- * a full stop that ends a sentence
- * a mismatch of gender, number or verb
- * a word that is categorized as ‘eliminated’ (as with the example above, ‘mellamo’ or ‘lla mo’).

Note: The existence of a comma (,) or a word categorized as ‘wrong’ (such as ‘sapato’ instead of *zapato*) will not break the sequence. As a example, take the word sequence ‘yo me caí con la bicicleta. Nunca me caído con ella.’ It contains eight correct sequences of words (*yo-me*, *me-caí*, *caí-con*, *con-la*, *la-bicicleta*, *Nunca-me*, *caído-con*, *con-ella*). The pair *me-caído* is not counted, because between *me* and *caído* the conjugated verb *he* is missing, therefore this is not a correct sequence.

Note too that the sequence between the last word of a time interval and the first word of the next time interval is always be counted in the first interval score. For instance if the child writes ‘Yo me / llamo Pedro’, there are two word sequences (*yo-me* and *me-llamo*) in the first time interval and one word sequence in the second time interval (*llamo-Pedro*).

- * **Planning processes:** assign 1 point when the category is present in the text and 0 if it is not. The categories are:

- * **Where the story takes place:** Does the child mention the place where the action is (such as in a village or a school)?
- * **Characters involved in the story:** Does the child name a character who performs an action?
- * **Initial event or problem:** Score 1 for any phrase or expression that indicates the reason or reasons why things happen later, the problem that the main character has to face (such as ‘He was told he had to get up for school ...’).

- * **Implementation:** This considers subsequent actions the character takes (such as, ate a big breakfast, walked to school ...).
- * **What happens at the end of the story:** Does the child explain the end of the story?

Note: Assign just one 1 or a 0 in each category, regardless of whether more than one instance of the category appears in the story. The total time is a summation of the first time interval and second time interval, so the values that can be obtained are 0, 1 or 2. The characters and the execution of actions assigned to the first interval may not also be assigned to the second time interval if they have been scored in the first. In order for a 1 to be given for the second time interval, there must be another instance of the category. Furthermore, the sections ‘Initial event or problem’ and ‘What happens at the end of the story’ can only be counted in one of the two time intervals, as these events can occur only once in the story.

Scoring when the child finishes writing in less than five minutes

If the child does not take more than five minutes to complete the task, leave the cells related to the second time interval blank, and complete the form for only the first time interval and the totals. In that case both sections will have the same scores.

Instructions: Ask the child to write a story based on a picture you show them. Give the child an answer sheet with a picture on it, and say, ‘I’ll show you a picture for you to write a story about. You should take your time to look at the picture (about 30 seconds) and then start writing. Try to remember a story like this that has happened to you or someone you know.’ If the child does not know how to do this, you can help by writing the first two words of the story.

Before starting the exercise, it is **IMPORTANT** to propose the task as a game to the student. The game is that at some unexpected point in the task they will be told to make a mark just below the word they are writing. Time from the moment the child starts to write, and tell them to make the mark after the first minute, but not know that they only have ten minutes to complete the task, or that you are timing them. It is

important to distract the child as little as possible from the activity. Do not stop the stopwatch after the first interval, and continue to time the process until they have finished writing the last word. Stop timing if the child indicates they cannot continue or after completion of the full ten-minute period.

IMPORTANT NOTE: Allow children to complete the exercise by providing ten minutes maximum. When children have completed the exercise, review the legibility of writing in order to check whether it includes everything the child wants to express. This will help the process of correcting the narrative. If any word is illegible, this is the time to ask the child what they meant. The examiner can write the correct word above the illegible word.

TAREA 10: Escritura de una historia	TIEMPO INVERTIDO (en segundos): _____		
	1º intervalo (5')	2º intervalo (10')	TOTAL(10')
NÚMERO TOTAL DE PALABRAS ESCRITAS			
NÚMERO TOTAL DE PALABRAS CON ORTOGRAFÍA CORRECTA			
SECUENCIA DE PALABRAS CORRECTAS			

TAREA 10				
CATEGORÍAS	1º intervalo (5')	2º intervalo (10')	TOTAL(10')	
Cuándo sucede la historia: ubica temporalmente las acciones del cuento o narraciones: 'Érase una vez...'; 'después de las vacaciones de verano...'; 'El otro día por la mañana...'.				
Personajes que intervienen en la historia: Nombra a algún sujeto que realiza una acción.				
Suceso inicial o problema: Alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, problema al que se enfrenta al persona principal: 'Le dijeron que tenía que levantarse para ir al colegio...'.				
Ejecución: Cuando el personaje va realizando distintas acciones diferentes a				

las anteriores: 'desayunó mucho, caminó al colegio...'.			
Qué sucede al final de la historia: se valora cuando el alumno/a explica el final o terminación de la historia.			

Correction template Task 10

Examples	Alignment	Reversal	Added stroke	Missing Stroke
<i>o</i>	<i>o o o</i>	<i>o o</i>	<i>o</i>	<i>o</i>
<i>l</i>	<i>l l l</i>	<i>l l</i>	<i>l</i>	<i>l</i>
<i>n</i>	<i>n n n</i>	<i>h n t</i>	<i>n</i>	<i>n</i>

Annex H

Note on Instructions on how to adapt EGWA to other languages

This note on ‘Instructions on how to adapt EGWA to other languages’ is intended for experts to adapt EGWA in other languages with an alphabetic writing system.

As the main report explains, a model instrument of Early Grade Writing Assessment (EGWA) was developed in Spanish to assess the main skills that are known to predict writing success in the early grades of primary school (grades 1 to 3). The assessment tasks used in the EGWA protocol are derived from research that was conducted about 15–20 years ago on writing acquisition and that was determined to be the most reliable. The first draft of this instrument was presented and discussed in the Expert Meeting on Formative Assessment of Writing in Early Grades organized jointly by UNESCO and the University of La Laguna on 19–20 January 2012 in Palacio Lercaro, La Laguna, Autonomous Community of the Canary Islands, Spain. Based on useful comments from the experts, the draft report and a model instrument were revised. Subsequently, as agreed in the Expert Meeting, the revised EGWA model instrument was pilot tested in the Canary Islands with primary school children. As a result of the pilot test, the EGWA protocol has been slightly modified and now includes a smaller number of assessment indicators and tasks. With these modifications, a set of the long version (Annexes A, B and C) and the short version (Annexes D, E and F) of Early Grade Writing Assessment (EGWA) instrument had been completed in Spanish. (Annex G is the English versión of Annex G which is the shorter version of ‘Administrator instructions and protocol’).

While the EGWA instrument in Spanish is potentially useful for development of EGWA in other languages with an alphabetic writing system, mechanic translation of the instrument from Spanish to other languages is not recommended given the diversity in linguistic characters. This note was prepared, therefore, to facilitate the adaption of the EGWA instrument by experts in various linguistic settings. In the following sections, it highlights proposed changes in some tasks which should be taking into account in the adaption of the Spanish language version of the EGWA instrument in another language.

Task 1 (writing the alphabet in order from memory) and Task 2 (alphabet copying and allograph selection)

Both tasks could be used in any language with an alphabetic writing system and without the need to make any adaptation. In addition, the different proposed measures for indicators could also be used across different alphabetic writing systems. For example, handwriting fluency would be measured calculating the number of letters written correctly in order from memory per minute, letters written correctly per minute in alphabet copying, and letters written correctly per minute in allograph selection. We considered letters written correctly when each written letter was well alienated, included all expected parts, was correctly formed, was correctly proportioned, included no additional lines or strokes, and contained no reversals or rotated parts. All of these criteria could be applied in any language with an alphabetical writing system.

Task 3 (word copying) and Task 4 (sentence copying)

Following the pilot study, we suggest that these tasks are not relevant and the information that we collected to assess handwriting legibility and fluency is redundant since it adds

nothing to the information acquired through Tasks 2A and Task 2B (alphabet copying and allograph selection).

Task 5 (writing words from dictation) and Task 6 (writing words that conform to spelling rules from dictation)

Both spelling tasks could be used in various linguistic settings but it is necessary to make a specific adaptation. We know that linguistic differences with respect to phoneme–grapheme consistency are responsible for the ease with which children using shallow orthographies learn to spell, in comparison with those learning opaque orthographies (Wimmer and Landerl, 1997). It is necessary to take these linguistic differences into account when performing assessment and to adjust, as much as possible, the difficulty level to the language in which children are learning to write.

In some languages, there are irregular phoneme–grapheme relationships because a phoneme can be represented by several graphemes but there is no phonological rule that specifies the grapheme that represents the correct spelling. Therefore, an adaptation of Task 5 to another language should take into consideration the following criteria:

- * The words dictated should include irregular letter–sound correspondences;
- * The words should have the pattern CV–CV;
- * The list of twenty words should comprise ten bisyllabic words and ten trisyllabic words as a control on word length. The choice will depend on the syllabic structure of the language. When syllabic structure is not well defined we suggest that the examiner control word length by classifying words as a function of the number of phonemes;
- * The words should not have stress marks to avoid errors regarding the accentuation.

In the Spanish language version, we selected twenty words with irregular phoneme–grapheme relationships such as j/g; c/k/q; b/v; c/s/z; h (included or omitted); gue/gui; y/ll; r/rr, without stress marks. However, the selection should be reviewed even if this task is used in other regions of Spain or other Spanish-speaking countries. For example, we know that when writing words from dictation, children confuse the graphemes /c/s/z/x/ more frequently in the Canary Islands than they do elsewhere (Jiménez, O'Shanahan et al., 2008). This can be attributed to 'seseo', a linguistic phenomenon of the Spanish language in which the phonemes represented by the spelling 'c' (before 'e' or 'i') 'z' and 's' become equivalent, assimilated to the voiceless alveolar fricative consonant [s]. It should be kept in mind that this phenomenon is general throughout the Canary Islands and in many Latin American countries, but not elsewhere in Spain. The selection of pairs of words with irregular phoneme–grapheme relationships, therefore, has to be specific to the linguistic properties of the language in the relevant region.

- * The words chosen should be familiar to the children.

We opted to use words that we knew from normative studies are familiar to children of this age, controlling for length and patterns of consonants and vowels, and taking into account

the possible errors in words with irregular letter–sound correspondences. An alternative would be to take into account the statistical frequency of letter combinations. For example, in the Spanish language there tend to be more common words starting with ‘ge’ than with ‘je’, and that would influence the tendency of the child to spell a word with ‘ge’. It would be interesting to select words according these parameters when this information is available for the language.

In some circumstances, a phoneme can be represented by several graphemes. But there are rules that specify the grapheme that gives the correct spelling. For these regularly spelled words, we considered that the child had used the spelling rule successfully if they wrote correctly the part of the word that concerned the spelling rule, even if they misspelled another part of the word. For example, for the word *cepillo*, a subject who writes ‘sepillo’ or ‘pillo’ has used the correct spelling rule (-illo) even though they have not spelled the entire word correctly. However for the word *cajera*, where the rule to be applied is one concerning ‘-jera’, a subject who writes ‘cajero’ or ‘cajere’ has not followed the rule correctly. Such rules are specific to the Spanish language and do not apply in other languages. Therefore, an adaptation of Task 6 to another language should take into consideration the following criteria:

- * The list of words to be dictated should include words in which spelling rules apply, and the rules to be evaluated will be specific to the language and curriculum;
- * We suggest controlling for syllabic structure but this is not always possible. For example, we could not control for CVCV in this task, because of these Spanish rules (for example, *campo* does not follow the CVCV structure), but we could control the length of the words;
- * The list should still consist of twenty words, in order to be able to compare this task with Task 5.

It should not be assumed that if subjects spell these regular words correctly, it means they have learned the relevant rule. They might have just memorized the spelling of that specific word.

Task 7 (writing pseudowords)

It is considered that a pseudoword – an invented word that is nonexistent in any language – is written correctly when the child has transformed each phoneme into its corresponding grapheme(s). In other words, they should write down a spelling as pronounced in the dictation task, whether or not it follows spelling rules. For example, the examiner might dictate *hife* and the child writes ‘ife’ or ‘yefe’. Although they have not used the spelling in the list, their spelling can be considered correct since it would be pronounced just like the pseudoword. Obviously, these instances too are language-specific. An adaptation of Task 7 to another language should take into consideration the following criteria:

- * The list of pseudowords to be dictated should include pseudowords that follow the same rules as the words identified in Task 6;

- * This task should also consist of twenty pseudowords, so the results can be compared with those for Tasks 5 and 6.

Task 8 (writing sentences from dictation)

In adapting Task 8 to another language, researchers should select sentences to be dictated that include most letters in the alphabet. Those sentences are required to include a similar number of words as the Spanish language version, although specificity of the language used may need to be considered.

Task 9 (writing an independently composed sentence)

This task could be used in any language with no need for any adaptation. We asked the subjects to write about a familiar topic of interest to them, rather than giving specific prompts (word or picture prompts) to get them started. To do this, the examiner should initiate a conversation with the child about their favourite games, hobbies or the like. Once the child has responded, you can ask them to write two sentences essentially repeating what they have said. Instruct to write one sentence and then the second one immediately below it. Explain briefly what a sentence is: that is, a set of meaningful words.

Task 10 (writing a story)

Finally, this task could be used in any language and there is no need to make any adaptation. A picture of a child with a broken leg visiting a doctor is presented to the child. We think this generates rich writing for several reasons. First, experiences of hurt generate strong emotions and prompt writing. Second, the subject has to imagine what could have happened to the child who is in the doctor's surgery. We use the story to analyse the use of narrative elements:

- * when the story took place (does the child use some words that indicate time?)
- * characters in the story
- * the initial problem or cause
- * execution of action
- * what happens at the end of the story (an explicit end to the story is valued).

Annex I

Note on developing instructional approaches for writing in early grades in primary education

Content sequence of orthographic education

The first stage of primary education (Grade 1 and 2):

1. To recognize the value of the full stop (period mark) in relation to spelling.
2. To use capital letters and lower case in a correct way.
3. To identify and use the exclamation and question marks.
4. To know and use the regular correspondences between sound and grapheme: r or rr between vowels, m before p and b.
5. To use some simple spelling rules: m before p and b; b before the consonants r and rr; ce–ze, ci–zi, ge–je, gi–ji.
6. To write correctly commonly used words, from a orthographic point of view.

The second stage of primary education (grade 3 and 4):

1. To sort a list of words into alphabetical order.
2. To apply spelling rules that have been learned correctly to commonly used words (b/v; g/j; br; bl; ll/y; r/rr; h; c/qu/z; cc; ct; d/z; s/z).
3. To distinguish the stressed syllable in words.
4. To classify the words by the number of syllables (monosyllabic, bisyllabic and so on), and by the place of the stressed syllable (last, penultimate, antepenultimate).
5. To place the accent mark on words that need it, applying the rules of accentuation.
6. To know the basic use of punctuation and question marks and incorporate them in texts.

Content sequence of teaching written composition

The first stage of primary education (grades 1 and 2)

1. To compose different texts using models (by copying, from dictation and so on).
2. To compose texts associated with images (advertisements, posters, comics, jokes), with a particular purpose (to inform, to narrate, to describe, to encourage a certain action and so on).
3. To make coherent personal writings, with appropriate vocabulary that expresses thoughts, wishes and feelings.
4. To make posters in groups, combining text and pictures.
5. To compose texts that belong to daily situations close to the experiences of the child, such as invitations, congratulations, notes or announcements, using the usual features of these texts.
6. To produce texts in formats common in the mass media (headlines, captions, short notes) about events related to the student's life in the school context.
7. To draft simple texts related to the school context to obtain, organize and communicate information (definitions, lists, descriptions, questionnaires, elementary explanations, index cards).
8. To learn the conventions of writing (such as who will be the reader, and what is the purpose) and an introduction to text organization (function, generating ideas, writing, revision and rewriting).
9. Introduction to word processing software and educational games.
10. To write short texts (of two or three sentences), which are intended to tell, note, order, act as a reminder and so on.
11. To write texts that follow the temporal sequence of events.

The second stage of primary education (grades 3 and 4)

1. To relate phonemes to their graphemes in all kinds of word, including frequently used words with inconsistent spelling.
2. To make essays, summaries, copies and write to dictation, to strengthen reading skills.
3. To compose narrative texts (e.g. biographies, comic books, personal diaries, stories) of 100 words approximately. These texts should include personal descriptions (characters, behaviours), descriptions of places (geographic features) and of social and family environments.
4. To compose expository texts that contain objective descriptions of facts and processes.
5. To draft letters and postcards, taking into account the specific properties of each type of text.
6. To write about the news based on facts, highlighting the most significant details.
7. To draft invitations in the sphere of personal relations.
8. To write argumentative texts that incorporate personal opinions.
9. To develop instructions, taking into account the characteristics and purposes of this type of text.
10. To fill in forms, surveys and simple questionnaires commonly used in the school context.
11. To draft a text following the steps indicated below:
 - **Planning:** determine in advance what the text will be like, its length, the presentation and so on.
 - **Redaction:** Write in a style that expresses the intention of the text, taking the writer into account, as well as the subject of the material.
 - **Revision and improvement:** Review the produced text, taking into account the clarity of presentation, the thematic coherence, cohesion and correction.
12. To compose short poems following models. The poems should have rhymes and a definite rhythm.
13. To present clear and clean writing with regard to:
 - presentation
 - handwriting
 - margins
 - organization and distribution of the text on the sheet
 - spelling.
14. To compose texts that could be used in daily social situations (e.g. school correspondence, house rules, announcements, requests), taking into account the characteristics of these formats.
15. To produce writing, providing information and opinions, imitating the media, about significant events, with special emphasis on the news and letters to the editor, in real or simulated situations.
16. To develop texts that fit in the academic formats (e.g. questionnaires, summaries, simple reports, descriptions, explanations), in order to obtain, organize and communicate information.
17. Guided use of word processing software.
18. Interest in the care and presentation of written text (order, cleanliness and handwriting), applying knowledge of spelling conventions.

19. Planning of the text (function, recipient, structure, idea generation), writing, review, improvement of the text and rewriting.
20. Exploration of the possibilities for the use of different connections between sentences (addition, cause, opposition, contradiction and so on), related to comprehension and composition of the text.
21. Introduction to the use of elements that are crucial in formulating coherent texts: discourse markers (structure, connective, reformulation and argument markers).
22. To continue learning strategies to plan a text: ways of generating ideas, how to sort and classify ideas, how to obtain information about the writing topic, and how to take into account the audience.
23. Strategies to make the first draft, to correct it and to write the final text in narrative and descriptive style. Use of guides and graphic organizers to elaborate the text.

Guide for the elaboration of narratives

(Second and third stage of primary education; grades 3, 4, 5 and 6)

A) Sequence of planning a narrative

1. When the topic is given, search for information about it (for instance on the Internet or in books), taking into account the audience (who am I writing for?). If you have to choose a topic by yourself, consider what attracts you, what you have knowledge of, and what topics will be interesting to readers.
2. Decide your position in the story. You can tell a story from your own point of view, in which you are the protagonist, or you can tell what happens to different characters.
3. Briefly describe the characters that will participate (objectively or subjectively), and the place where the events occur, giving the characteristics of the event and the time or period in which the story unfolds.
4. Report the problem or event in relation to the characters, their reaction, their thoughts, solutions, feelings, actions and so on.
5. Report how the problem is solved and write different endings to the story.
6. Think of a title for the story.
7. Make a brief plan of the narrative.
8. Write the story down

B) To order the story

1. Description of the initial situation (characters, places, period and so on).
2. The central conflict or problem.
3. Development of the action (reaction of the characters).
4. Ending.

C) Graphic organizer

Learn to use a graphic as an organizing system: perhaps a human body or the body of an animal whose different limbs represents the different parts of the story.

D) Keywords

Show how keywords or phrases can help readers to identify the type of text structure:

Once upon a time.

It happened on a summer day.

I was sitting in my house.

Guide for the elaboration of descriptive texts

(Second and third stage of primary education: grades 3, 4, 5 and 6)

A) Sequence

1. Observe the object, person or topic to be described, selecting features that will be interesting to emphasize.
2. Decide if you want to make an objective description (describing the thing without valuation or comparison) or a subjective description, drawing on your attitude to it.
3. For the description of the characters, you can start with listing the physical features that you want to emphasize. Then list characteristics that show the nature of the individual.
4. **To describe an object:** 1. How is it or how do I see it (shape, colour, dimensions)? 2. How do I feel it or perceive it (smell, movement, feeling, sound)? 3) Where is it (in the air, water, below ground, and so on)?
5. **To write about a given topic:** Why is this topic important? About what aspects of this topic should I write? What kind of examples can I give? What kind of questions can I ask myself about this topic? And what are the answers? What kind of problems and solutions can be established related to this topic? Can I establish similarities and differences with some of the aspects of this topic?

B) Graphic organizer

The description of the different parts may be written in balloons.

C) Keywords

Keywords or phrases can help readers to identify the type of text structure:

- ... have the following physical features ...*
- ... Striking features of his personality ...*

Guide for reviewing a text that you have just written

1. **Read over your writing** and identify any parts that you dislike or that are unclear to the reader.
2. Make sure that you can recognize the **text structure** of your choice (e.g. narrative, argumentative).
3. Does the **title** conform to the topic?
4. **Check the spelling and expressive aspects of the text:** repeated words, punctuation marks, vulgarisms, spelling, poorly constructed sentences that are not clear.
5. **Check the presentation:** ensure that your handwriting is clear and legible, the paragraphs are properly separated, there are no erasures, you respect the margins, and the beginning of every paragraph is intended.
6. **Check other aspects of the text structure**

Examine the structure of the whole text, analysing the different paragraphs. Is there an introduction, a defended statement, uniformity, components that connect one paragraph to another, a logical order to the paragraphs and a reflection of the thesis in the conclusion?

Examine the structure of the sentences in every paragraph, by observing if there are various types of phrases, in different forms and lengths, using precise and specific words, and appropriate vocabulary in the active voice.

Examine the emphasis, by observing if the main idea is reflected in the opening sentence, if the ideas are supported in the subordinate clauses, if the main ideas appear at the beginning or the end of the phrases, and the secondary ideas or less important ideas in the middle of phrases.

Guide to write a text in logical order

Previous activities

- * Provide sentences to begin or end stories;
- * Training in using tools to accomplish textual coherence;
- * Training in using multi-purpose and microstructure techniques;
- * Descriptions of characters, objects, landscapes and so on;
- * Training in using narrative and expository text structures;

1. **Before starting to generate ideas about a chosen or given topic, answer the following questions:**
 - a) For whom am I writing? For that audience, what aspects do I have to take into account?
 - b) What kind of text structure will I use?
 - c) Why am I writing this text?
 - d) What information do I have, and about what information do I need to search more before starting to write?
2. **Generate ideas:** use a graphic organizer, according to the chosen text structure. Note down various ideas about the topic, without establishing any order.
3. **Organize the ideas:** Use the chosen text structure to organize and sort the ideas, using index cards about the topic and cards with words and discourse markers. Divide the ideas into superordinate and subordinate ones, and establish the order to include them in the text according to the aim of the text and the audience.
4. **Write the first draft.**
5. **Review the draft.**
 - Reread the text and to rethink the unclear parts, thinking out loud about the cause and about the possible solutions for the problem.
6. **Review the grammar and content by yourself and ask another child also to do so following the Guide to write a text in logical order.**
7. **Final writing.**

Annex J

Standardized norms for EGWA's tasks (Grades 1-3)

TASK 1: WRITING THE ALPHABET IN ORDER FROM MEMORY

Table 30. Distribution of scores in writing the alphabet in order from memory into quartiles for first-graders

		Time invested	Letters written correctly in order from memory per minute	60/number of letters written correctly in order from memory
N				
	Valid	435	434	419
	Missing	3	4	19
Percentiles	25	89	6	4
	50	136	10	6
	75	217	15	9

Table 31. Distribution of scores in writing the alphabet in order from memory into quartiles for second-graders

		Time invested	Letters written correctly in order from memory per minute	60/number of letters written correctly in order from memory
N				
	Valid	464	465	449
	Missing	2	1	17
Percentiles	25	78	12	2
	50	103	18	3
	75	135	24	5

Table 32. Distribution of scores in writing the alphabet in order from memory into quartiles for third-graders

		Time invested	Letters written correctly in order from memory per minute	60/number of letters written correctly in order from memory
N				
	Valid	421	428	419
	Missing	8	1	10
Percentiles	25	69	19	2
	50	86	25	2
	75	108	32	3

TASK 2-A: ALPHABET COPYING

Table 33. Distribution of scores in alphabet copying into quartiles for first-graders

		Time invested	Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alphabet copying - Letters written correctly per minute
N	Valid	435	437	433	437	435
	Missing	3	1	5	1	3
Percentiles	25	127	8	4	8	3
	50	162	11	5	15	5
	75	197	14	7	21	7

Table 34. Distribution of scores in alphabet copying into quartiles for second-graders

		Time invested	Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alphabet copying - Letters written correctly per minute
N	Valid	466	466	461	466	466
	Missing	0	0	5	0	0
Percentiles	25	111	9	4	9	4
	50	146	11	5	15	6
	75	184	15	7	20	8

Table 35. Distribution of scores in alphabet copying into quartiles for third-graders

		Time invested	Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alphabet copying - Letters written correctly per minute
N	Valid	427	427	427	427	427
	Missing	2	2	2	2	2
Percentiles	25	104	9	4	8	4
	50	135	12	5	15	6
	75	175	16	7	21	9

TASK 2-B: ALLOGRAPH SELECTION

Table 36. Distribution of scores in allograph selection into quartiles for first-graders

		Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alignment	Missing strokes	Allograph selection - Letters written correctly per minute
N	Time invested						
Valid	436	434	429	437	436	436	436
Missing	2	4	9	1	2	2	2
Percentiles	25	120	10	4	6	4	3
	50	143	12	5	11	9	4
	75	182	15	6	16	14	7

Table 37. Distribution of scores in allograph selection into quartiles for second-graders

		Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alignment	Missing strokes	Allograph selection - Letters written correctly per minute
N	Time invested						
Valid	464	464	460	466	465	466	465
Missing	2	2	6	0	1	0	1
Percentiles	25	94	11	3	6	2	3
	50	117	14	4	10	6	5
	75	144	18	5	15	9	7

Table 38. Distribution of scores in allograph selection into quartiles for third-graders

		Letters written per minute	60/number of letters written	Letters written correctly in time invested	Alignment	Missing strokes	Allograph selection - Letters written correctly per minute
N	Time invested						
Valid	426	427	427	427	427	427	426
Missing	3	2	2	2	2	2	3
Percentiles	25	84	12	3	4	1	2
	50	105	16	4	8	5	4
	75	133	20	5	14	10	8

TASK 3: WORD COPYING

Table 39. Distribution of scores in word copying into quartiles for first-graders

		Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Alignment total	Missing strokes total	Word copying - Letters written correctly per minute
N		Time invested					
Valid	434	436	435	437	437	437	434
Missing	4	2	3	1	1	1	4
Percentiles	25	105	17	2	17	5	0
	50	136	24	3	28	8	2
	75	179	31	4	40	10	5
							16

Table 40. Distribution of scores in word copying into quartiles for second-graders

		Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Alignment total	Missing strokes total	Word copying - Letters written correctly per minute
N		Time invested					
Valid	466	465	460	465	466	466	465
Missing	0	1	6	1	0	0	1
Percentiles	25	90	18	2	12	6	0
	50	121	26	2	22	9	1
	75	158	32	3	37	10	5
							17

Table 41. Distribution of scores in word copying into quartiles for third-graders

		Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Alignment total	Missing strokes total	Word copying - Letters written correctly per minute
N		Time invested					
Valid	427	428	423	427	428	428	426
Missing	2	1	6	2	1	1	3
Percentiles	25	83	20	2	9	6	0
	50	115	26	2	21	9	1
	75	156	38	3	34	10	6
							16

TASK 4: SENTENCE COPYING

Table 42. Distribution of scores in sentence copying into quartiles for first-graders

		Time invested	Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Sentence copying - Letters written correctly per minute
N	Valid	436	437	432	436	435
	Missing	2	1	6	2	3
Percentiles	25	237	14	3	22	5
	50	292	20	3	39	9
	75	300	24	4	59	13

Table 43. Distribution of scores in sentence copying into quartiles for second-graders

		Time invested	Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Sentence copying - Letters written correctly per minute
N	Valid	465	465	464	465	465
	Missing	1	1	2	1	1
Percentiles	25	184	16	2	15	4
	50	233	23	3	32	9
	75	299	29	4	56	14

Table 44. Distribution of scores in sentence copying into quartiles for third-graders

		Time invested	Letters written per minute	60/Number of letters written	Letters written correctly in time invested	Sentence copying - Letters written correctly per minute
N	Valid	428	427	419	428	428
	Missing	1	2	10	1	1
Percentiles	25	152	20	2	12	3
	50	201	25	2	31	9
	75	272	34	3	54	15

TASK 5: WRITING DICTATED WORDS WITH INCONSISTENT SPELLING

Table 45. Distribution of scores in writing dictated words with inconsistent spelling into quartiles for first-graders

		Writing dictated words with inconsistent spelling- Total	
		number of correctly spelled words	Total number of substitutions
N	Valid	436	436
	Missing	2	2
Percentiles	25	9	6
	50	11	8
	75	13	9

Table 46. Distribution of scores in writing dictated words with inconsistent spelling into quartiles for third-graders

		Writing dictated words with inconsistent spelling- Total	
		number of correctly spelled words	Total number of substitutions
N	Valid	428	427
	Missing	1	2
Percentiles	25	13	2
	50	16	4
	75	17	6

Table 47. Distribution of scores in writing dictated words with inconsistent spelling into quartiles for second-graders

		Writing dictated words with inconsistent spelling- Total	
		number of correctly spelled words	Total number of substitutions
N	Valid	466	466
	Missing	0	0
Percentiles	25	12	4
	50	14	5
	75	16	7

TASK 6: WRITING WORDS THAT FIT SPELLING RULES

Table 48. Distribution of scores in writing words that fit spelling rules into quartiles for first-graders
 Writing words that fit spelling rules - Total number of correctly spelled words

N	Valid	435
	Missing	3
Percentiles	25	11
	50	13
	75	15

Table 49. Distribution of scores in writing words that fit spelling rules into quartiles for second-graders
 Writing words that fit spelling rules - Total number of correctly spelled words

N	Valid	466
	Missing	0
Percentiles	25	13
	50	16
	75	17

Table 50. Distribution of scores in writing words that fit spelling rules into quartiles for third-graders
 Writing words that fit spelling rules - Total number of correctly spelled words

N	Valid	428
	Missing	1
Percentiles	25	15
	50	17
	75	19

TASK 7: WRITING PSEUDOWORDS FROM DICTATION

Table 51. Distribution of scores in writing pseudowords from dictation into quartiles for first-graders
 Writing pseudowords - Total number of pseudowords correctly spelled using P-G rules

	N	Valid	432
		Missing	6
Percentiles	25	15	
	50	17	
	75	19	

Table 52. Distribution of scores in writing pseudowords from dictation into quartiles for second-graders
 Writing pseudowords - Total number of pseudowords correctly spelled using P-G rules

	N	Valid	463
		Missing	3
Percentiles	25	16	
	50	18	
	75	19	

Table 53. Distribution of scores in writing pseudowords from dictation into quartiles for third-graders
 Writing pseudowords - Total number of pseudowords correctly spelled using P-G rules

	N	Valid	426
		Missing	3
Percentiles	25	17	
	50	19	
	75	20	

TASK 8: WRITING SENTENCE FROM DICTATION

Table 54. Distribution of scores in writing sentence from dictation into quartiles for first-graders

		Writing sentence from dictation - Total number of correctly spelled words	Writing sentence from dictation - Alignment	Writing sentence from dictation - Substitutions	Writing sentence from dictation - Deletions	Writing sentence from dictation - Use of capital letters	Writing sentence from dictation - Spacing word	Writing sentence from dictation - Use of punctuation marks
N	Valid	434	434	432	434	433	434	434
	Missing	4	4	6	4	5	4	4
Percentiles	25	13	7	0	1	1	17	0
	50	15	14	1	3	2	18	1
	75	17	18	2	7	2	18	2

Table 55. Distribution of scores in writing sentence from dictation into quartiles for second-graders

		Writing sentence from dictation - Total number of correctly spelled words	Writing sentence from dictation - Alignment	Writing sentence from dictation - Substitutions	Writing sentence from dictation - Deletions	Writing sentence from dictation - Use of capital letters	Writing sentence from dictation - Use of stress mark	Writing sentence from dictation - Spacing word	Writing sentence from dictation - Use of punctuation marks
N	Valid	463	465	461	465	461	465	465	465
	Missing	3	1	5	1	5	1	1	1
Percentiles	25	15	10	0	0	1	0	18	0
	50	17	16	0	1	2	0	18	1
	75	18	19	1	4	2	2	18	2

Table 56. Distribution of scores in writing sentence from dictation into quartiles for third-graders

		Writing sentence from dictation - Total number of correctly spelled words	Writing sentence from dictation - Alignment	Writing sentence from dictation - Substitutions	Writing sentence from dictation - Deletions	Writing sentence from dictation - Use of capital letters	Writing sentence from dictation - Use of stress mark	Writing sentence from dictation - Spacing word	Writing sentence from dictation - Use of punctuation marks
N	Valid	426	428	427	428	356	427	428	428
	Missing	3	1	2	1	73	2	1	1
Percentiles	25	16	9	0	0	2	0	18	1
	50	18	17	0	1	2	1	18	2
	75	19	19	1	2	2	3	18	2

TASK 9: WRITING AN INDEPENDENTLY COMPOSED SENTENCE

Table 57. Distribution of scores in writing an independently composed sentence into quartiles for first-graders

N	1st minute:		2nd minute:		2nd minute:		2nd minute:	
	Total number of spelled words	Total number of correctly spelled words	Use of punctuation mark	Total number of spelled words	number of correctly spelled words	Use of capital letters	Spacing word	Use of punctuation mark
Valid	422	423	422	423	422	406	408	407
Missing	16	15	16	15	16	32	30	31
Percentiles	25	4	3	0	4	0	2	0
50	6	5	1	5	0	4	3	0
75	7	6	1	6	1	5	5	1

Table 58. Distribution of scores in writing an independently composed sentence into quartiles for second-graders

N	1st minute:		2nd minute:		2nd minute:		2nd minute:	
	Total number of spelled words	number of correctly spelled words	Use of punctuation mark	Total number of spelled words	correctly spelled words	Use of capital letters	Spacing word	Use of punctuation mark
Valid	464	464	461	463	463	437	436	434
Missing	2	2	5	3	3	29	30	32
Percentiles	25	7	6	1	6	0	4	3
50	8	7	1	7	0	6	5	0
75	10	10	2	9	1	8	7	1

Table 59. Distribution of scores in writing an independently composed sentence into quartiles for third-graders

N	1st minute:		2nd minute:		2nd minute:		2nd minute:	
	Total number of spelled words	number of correctly spelled words	Use of capital letters	1st minute:	Total number of spelled words	number of correctly spelled words	Use of capital letters	1st minute:
Valid	422	423	422	423	422	392	395	395
Missing	7	6	7	6	7	37	34	36
Percentiles	25	8	7	1	7	0	4	4
50	10	10	1	9	1	7	6	1
75	13	12	2	12	1	9	9	1

Table 60. Distribution of scores in writing an independently composed sentence into quartiles for first-graders

		Time invested	Total number of spelled words	Total number of correctly spelled words	Total: Use of capital letters	Total: Spacing word	Total: Use of punctuation mark
N	Valid	423	421	420	422	420	422
	Missing	15	17	18	16	18	16
Percentiles	25	120	9	7	0	7	0
	50	152	12	10	1	10	1
	75	200	16	13	2	14	2

Table 61. Distribution of scores in writing an independently composed sentence into quartiles for second-graders

		Time invested	Total number of spelled words	Total number of correctly spelled words	Total: Use of capital letters	Total: Spacing word	Total: Use of punctuation mark
N	Valid	464	464	462	464	464	463
	Missing	2	2	4	2	2	3
Percentiles	25	109	13	11	1	10	0
	50	142	17	15	2	15	2
	75	188	22	19	2	20	2

Table 62. Distribution of scores in writing an independently composed sentence into quartiles for third-graders

		Time invested	Total number of spelled words	Total number of correctly spelled words	Total: Use of capital letters	Total: Spacing word	Total: Use of punctuation mark
N	Valid	424	423	422	422	420	416
	Missing	5	6	7	7	9	13
Percentiles	25	99	15	14	2	13	1
	50	131	20	18	2	18	2
	75	168	26	25	3	23	2

TASK 10: WRITING A STORY

Table 63. Distribution of scores in writing a story into quartiles for first-graders

	Writing a story - 1st interval: Compositional fluency	Writing a story - 1st interval: Compositional spelling	Writing a story - 1st interval; Correct word sequence	Writing a story - 2st interval: Compositional fluency	Writing a story - 2st interval: Compositional spelling	Writing a story - 2st interval; Correct word sequence	Writing a story - 3rd interval: Compositional fluency	Writing a story - 3rd interval: Compositional spelling	Writing a story - 3rd interval; Correct word sequence
N	Valid	419	419	418	222	220	222	418	419
	Missing	19	19	20	216	218	216	20	19
Percentile	25	14	10	9	4	2	2	16	12
e	50	20	15	14	8	6	5	23	18
	75	26	20	22	15	11	10	35	27
									28

Table 64. Distribution of scores in writing a story into quartiles for second graders

	Writing a story - 1st interval: Compositional fluency	Writing a story - 1st interval: Compositional spelling	Writing a story - 1st interval; Correct word sequence	Writing a story - 2st interval: Compositional fluency	Writing a story - 2st interval: Compositional spelling	Writing a story - 2st interval; Correct word sequence	Writing a story - 3rd interval: Compositional fluency	Writing a story - 3rd interval: Compositional spelling	Writing a story - 3rd interval; Correct word sequence
N	Valid	462	461	463	301	299	300	462	463
	Missing	4	5	3	165	167	166	4	3
Percentile	25	25	21	20	4	4	3	30	23
e	50	34	29	29	11	10	9	41	35
	75	42	38	38	21	19	17	55	48
									48

Table 65. Distribution of scores in writing a story into quartiles for third-graders

	Writing a story - 1st interval: Compositional fluency	Writing a story - 1st interval: Compositional spelling	Writing a story - 1st interval; Correct word sequence	Writing a story - 2st interval: Compositional fluency	Writing a story - 2st interval: Compositional spelling	Writing a story - 2st interval; Correct word sequence	Writing a story - 3rd interval: Compositional fluency	Writing a story - 3rd interval: Compositional spelling	Writing a story - 3rd interval; Correct word sequence
N	Valid	423	423	423	266	265	265	423	423
	Missing	6	6	6	163	164	164	6	6
Percentile	25	34	30	30	6	5	4	38	34
e	50	42	39	37	13	12	11	51	46
	75	53	48	48	24	22	21	67	61
									60

Table 66. Distribution of scores of writing a story into quartiles for first-graders

		Global structure 1st	Global structure 2st	Global structure total
N	Valid	414	222	414
	Missing	24	216	24
Percentiles	25	2	0	2
	50	3	1	3
	75	4	2	4

Table 67. Distribution of scores in writing a story into quartiles for second-graders

		Global structure 1st	Global structure 2st	Global structure total
N	Valid	463	300	463
	Missing	3	166	3
Percentiles	25	3	1	3
	50	4	1	4
	75	4	2	5

Table 68. Distribution of scores in writing a story into quartiles for third-graders

		Global structure 1st	Global structure 2st	Global structure total
N	Valid	423	266	423
	Missing	6	163	6
Percentiles	25	3	1	4
	50	4	1	5
	75	4	2	5

Table 69. Distribution of scores of EGWA's main components into quartiles for first-graders

		Transcription - Handwriting	Transcription - Spelling	Text generation - Sentence	Text generation - Text
N	Válidos	436	438	421	419
	Perdidos	2	0	17	19
Percentile	25	6	57	24	41
S	50	10	66	32	63
	75	14	75	44	91

Table 70. Distribution of scores of EGWA's main components into quartiles for second-graders

		Transcription - Handwriting	Transcription - Spelling	Text generation - Sentence	Text generation - Text
N	Válidos	466	466	464	463
	Perdidos	0	0	2	3
Percentile	25	7	72	34	79
S	50	11	81	47	114
	75	15	91	62	154

Table 71. Distribution of scores of EGWA's main components into quartiles for third-graders

		Transcription - Handwriting	Transcription - Spelling	Text generation - Sentence	Text generation - Text
N	Válidos	428	428	423	423
	Perdidos	1	1	6	6
Percentile	25	7	83	42	107
S	50	11	92	56	150
	75	17	102	75	193

Annex K

Early Grade Writing Assessment instrument in Spanish

Tarea 1: Escritura de memoria y en orden de las letras del alfabeto

Objetivo: El propósito de esta tarea es evaluar si el estudiante es capaz de escribir en orden todo el alfabeto de memoria.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma y papel lineado apropiado para su nivel. El examinador utilizará en esta tarea un cronómetro o reloj con segundero.

Puntuación: Indique en su formulario de recogida de datos el tiempo invertido, el número total de letras escritas en tiempo invertido, número de letras escritas correctamente en orden en un minuto y el número de letras omitidas en orden en un minuto.

- *Tiempo invertido:* se anota el tiempo que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrar el tiempo desde el momento en que el estudiante comienza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última. El tiempo máximo que se concede para la realización de esta tarea es de 5 minutos.
- *Número de letras escritas en tiempo invertido:* se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible, de tipo manuscrita o cursiva, esté o no en el orden adecuado; al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- *Número de letras escritas correctamente por orden en un minuto:* se asigna 1 punto por cada letra legible que el alumno haya sido capaz de escribir de forma manuscrita o cursiva, usando mayúsculas o minúsculas. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras escritas correctamente. Se consideran letras escritas correctamente todas aquellas que sean legibles y que se encuentren ubicadas en el orden adecuado (v.gr., en la secuencia ‘a, C, d...’ todas las letras son correctas puesto que se encuentran en el orden adecuado; sin embargo en la secuencia ‘a, c, b...’ no contabilizamos la letra ‘b’ puesto que la letra ‘b’ no ha sido colocada en el orden adecuado). Así mismo, contamos como letras correctas aquellas letras que hayan sido escritas de forma invertida siempre y cuando se encuentren ubicadas en el orden correcto (v. gr., si el niño escribe al revés la letra ‘J’ o la ‘Z’). Los dígrafos (ch, rr, ll) siempre se contabilizarán en positivo y nunca en negativo (v.gr., si el niño escribe ‘ll’ después de ‘l’ será contabilizada como letra correcta). Si el estudiante no escribe alguno de estos dígrafos no será penalizado, es decir, en ningún caso se contabilizará como omisión de letra. Además, se contabilizará como letra correcta tanto si el estudiante escribe ‘q’ como si escribe ‘qu’, siempre y cuando se encuentre en posición correcta dentro del alfabeto.
- *Número de letras omitidas en orden en un minuto:* se asigna 1 punto por cada letra que el alumno haya omitido en orden; al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras que el estudiante ha omitido (v.gr., en la secuencia ‘a, c, d...’ contabilizamos una omisión puesto que falta la letra ‘b’; en la secuencia ‘a, c, d, b, e...’ contabilizamos una omisión puesto que la letra ‘b’ no está en el orden que le corresponde dentro del alfabeto). Toda letra no colocada en su orden correcto dentro del alfabeto será considerada como letra

omitida. (v.gr. si el estudiante escribe ‘a, b, c, z, d, e, f, g...’ todas las letras que se encuentren entre la ‘c’ y la ‘z’ serán consideradas como letras omitidas, por tanto en este caso encontramos 23 letras omitidas y 4 letras escritas correctamente en orden (‘a’, ‘b’, ‘c’ y ‘z’).

Cálculo de la rapidez en la escritura: La rapidez en la escritura es calculada dividiendo un minuto por el número de letras escritas correctamente en orden en un minuto (60/número de letras), tal como se indica en la plantilla de corrección.

Instrucciones: Se solicita al estudiante que escriba todas las letras del alfabeto en orden. Se le explica que puede escribir las letras como mejor sepa hacerlo: con mayúscula, con minúscula... Se le dice que debe escribir lo más rápido que pueda. Se empieza a cronometrar cuando el estudiante comience a escribir la primera letra y se detiene el cronómetro cuando termine de escribir la última o hasta que hayan transcurrido 5 minutos desde el comienzo de la tarea.

Es necesario dar expectativas de éxito al estudiante con frases como ‘Sé que conoces bien el abecedario o las letras del alfabeto, me gustaría que las escribieras...’ o ‘Tu profesor me ha contado que has aprendido a escribir muy bien las letras...’... Dígale: ‘Si no puedes hacer algunas letras, no te preocupes, continúa con las siguientes’.

Empiece a cronometrar cuando el estudiante comience a escribir la primera letra. Si el estudiante no empieza a escribir cuando se le indica, entonces dígale: ‘Mira como lo hago yo’, y muéstrelle como se hacen las dos primeras letras del alfabeto, en las dos líneas superiores colocadas en la parte superior izquierda de la plantilla: ‘a’ ‘b’. No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si cuando hayan transcurridos 5 minutos el estudiante no ha terminado el ejercicio, se pide que se detenga y se retira la tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo, intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe conocer que sólo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique no puede continuar o cuando haya finalizado el periodo de cinco minutos.

NOTA IMPORTANTE: Si un estudiante termina de escribir el alfabeto antes de que finalice el minuto entonces debe volver a comenzar a escribirlo. Para ello es necesario indicarle, rápidamente, que debe comenzar de nuevo en la siguiente lámina. Recuerde que no debe parar el tiempo, por lo que la instrucción para que el niño comience de nuevo debe ser rápida. Una vez transcurrido el minuto se le indica que haga una marca en el papel. Finalmente, una vez que haya finalizado de escribir de nuevo el alfabeto se detiene el cronómetro y se contabiliza el tiempo invertido.

Tarea 2: Copia del alfabeto y selección de alógrafos

Objetivo: El propósito de esta tarea es doble: 1) evaluar si el estudiante ha adquirido los patrones motores para la escritura de letras, y 2) evaluar si el estudiante es capaz de seleccionar el alógrafo correspondiente (es decir, la letra minúscula) para cada letra mayúscula.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. En esta tarea encontramos dos subtareas, la 2A y la 2B. En la subtarea 2A ‘Copia del Alfabeto’ el examinador contará con dos tipos de plantillas: una plantilla con el alfabeto escrito con letra manuscrita y una plantilla con el alfabeto escrita con letra cursiva. Se utilizará el formato que en el momento del pase de esta subtarea seleccione el estudiante, es decir, el estudiante únicamente deberá llenar una de las dos plantillas. En esta subtarea el estudiante deberá realizar una copia exacta de cada una de las letras. En la subtarea 2B ‘Selección de Alógrafos’, se mostrará al estudiante una lámina que contiene todas las letras del alfabeto en mayúscula y este deberá escribir cada letra minúscula correspondiente a cada letra mayúscula presentada.

Puntuación:

Parte 2A:

Indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS en Anexo):

- **Tiempo invertido:** se anota el tiempo que el niño ha invertido en escribir todas las letras, comenzando a cronometrar desde que comienza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última, cuando nos indique que no puede continuar o cuando el tiempo transcurrido desde el comienzo de la subtarea sea de 5 minutos.
- **Letras escritas en un minuto:** se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- **Letras escritas correctamente en tiempo invertido:** se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas no cometiendo ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.

- **Alineación:** El examinador debe considerar la distancia donde una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- **Inversiones:** El examinador debe registrar la ocurrencia de una letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v.gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, no analizándose la alineación, ni la adición u omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurrida en el conjunto de letras escritas.
- **Adición de trazos:** El examinador debe registrar cada ocurrencia de una letra con un trazo añadido. Se considera un trazo añadido todos los trazos que no pertenezcan a la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba 'qu' al copiar 'q' se ignorará la 'u' y no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.
- **Omisión de trazos:** El examinador debe registrar cada ocurrencia de una letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el niño elige un tipo de letra (manuscrita o cursiva) y al realizar la copia escribe la letra contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla a copiar. Por ejemplo, si el niño elige un tipo de formato (manuscrita vs. cursiva) consideramos que el niño debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar cuando el niño utiliza un formato contrario al formato seleccionado. Este criterio sólo se utilizó para esas letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los niños están utilizando el formato de cursiva o manuscrita de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y manuscrita en la copia de la letra 'a' es añadiendo o eliminando dos trazos.

Parte 2B:

Indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También la alineación, inversiones, adición de trazos y omisión de trazos (ver EJEMPLOS en Anexo).

- **Tiempo invertido:** se anota el tiempo que el estudiante ha invertido en escribir todas las letras, comenzando a cronometrarlo cuando comienza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última, cuando nos indique no puede continuar o cuando el tiempo transcurrido desde el comienzo de la prueba sea de 5 minutos.
- **Letras escritas por minuto:** se asigna 1 punto por cada letra que el alumno haya producido, sea legible o ilegible y/o correcta o incorrecta durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- **Letras escritas correctamente en tiempo invertido:** se asigna 1 punto por cada letra que el estudiante haya sido capaz de escribir correctamente durante el tiempo invertido. Se consideran letras escritas correctamente aquellas en la que el estudiante haya escrito adecuadamente el alógrafo (letra minúscula) correspondiente a la letra mayúscula presentada. Además, en estas letras transformadas a minúscula correctamente no podrá existir ningún error de los citados a continuación para que pueda ser considerada como letra correcta: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y, por tanto, no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- **Alineación:** El examinador debe considerar la distancia donde una letra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas letras que no son reconocibles. Si la letra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la letra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la letra sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- **Inversiones:** El examinador debe registrar la ocurrencia de una letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v.gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, no analizándose la alineación, ni la adición u omisión de trazos. El examinador debe indicar en su formulario de recogida de datos el número total de inversiones ocurridas en el conjunto de letras escritas.
- **Adición de trazos:** El examinador debe registrar cada ocurrencia de una letra con un trazo añadido. Se considera un trazo añadido todos los trazos que no pertenezcan a la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Cuando el estudiante escriba 'qu' al copiar 'q' se ignorará la 'u' y

no será contada como adición de trazo. El examinador debe indicar en su formulario de recogida de datos el número total de trazos añadidos en el conjunto de letras escritas.

- **Omisión de trazos:** El examinador debe registrar cada ocurrencia de una letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo, si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. El examinador debe indicar en su formulario de recogida de datos el número total de trazos omitidos en el conjunto de letras escritas.

Nota: en la subtarea 2B, el estudiante puede mezclar ambos tipos de letras (manuscrita y cursiva) por lo que a la hora de la corrección de errores (alineación, inversiones, adición de trazos y omisión de trazos) debe tener en cuenta el tipo de letra elegida por el estudiante en cada letra producida. Para ello podrá comparar cada letra copiada con su letra correspondiente según plantilla (manuscrita o cursiva) en la tarea 2A, con el fin de que pueda apreciar más fácilmente si el estudiante ha realizado omisiones y/o adiciones de trazos. Si una letra es producida de manera que no refleje fácilmente si se trata de una letra cursiva o manuscrita, deberá elegir aquella cuya corrección penalice en menor grado al estudiante.

Cálculo de la rapidez en la escritura: En ambas partes (2A y 2B), la rapidez en la escritura es calculada dividiendo un minuto por el número de letras escritas en un minuto (60/número de letras) tal como se especifica en la plantilla de corrección.

Instrucciones:

Parte 2A:

Se le da a elegir al estudiante entre ambas plantillas (manuscrita o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que podría hacer más rápido. Se solicita al estudiante que copie las letras del alfabeto. Explíquele que debe copiar las letras lo mejor que pueda (deben ser lo más parecidas posibles a las del modelo) sin salirse de las líneas del papel pautado y fijándose en los límites. Coméntele también que debe copiar lo más rápido posible.

Es necesario dar expectativas de éxito al estudiante con frases como ‘Sé que sabes copiar el abecedario muy bien, me gustaría que lo escribieras...’ o ‘Tu profesor me ha contado que has aprendido a copiar muy bien las letras...’ Dígale: ‘Si no puedes hacer alguna, no te preocunes, continúa con la siguiente. Ten en cuenta que debes escribir de izquierda a derecha y no de arriba abajo’. Empiece a cronometrar cuando el niño comience a escribir la primera letra. Si el niño no empieza a escribir cuando se le indica, entonces debe decir: ‘Mira como lo hago yo’, y le muestra como se hace en las dos líneas superiores de ejemplo: ‘a’ ‘b’. No tenga en cuenta los espacios ni penalice a los estudiantes por omitir o escribir letras incorrectamente durante la realización de la prueba. Si cuando haya transcurrido 5 minutos el estudiante no ha finalizado el ejercicio, se le solicita que se detenga y se da por finalizada esta subtarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando deba hacer una marca justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe conocer que sólo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique no puede continuar o cuando haya finalizado el periodo de cinco minutos.

Parte 2B:

Se solicita al estudiante que escriba las letras minúsculas del abecedario. En esta ocasión, el alumno debe visualizar las letras mayúsculas del abecedario y escribir su correspondiente alógrafo en minúscula. Explíquele que debe escribir las letras lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Coméntele que debe escribir lo más rápido posible.

Al igual que en la subtarea 2A, será necesario dar expectativas de éxito así como proponerle el juego de la línea al paso del minuto desde el comienzo de la subtarea.

Tarea 3: Copia de palabras

Objetivo: El objetivo de esta tarea es evaluar si el estudiante ha adquirido los patrones motores necesarios para la copia de palabras.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Se mostrará al estudiante una hoja de respuestas donde las palabras deben ser copiadas dentro de la línea base que se encuentra debajo. Para ello, el examinador debe contar con dos hojas de respuesta que tengan diferentes tipos de letras: manuscrita o cursiva. El estudiante podrá elegir entre ambas plantillas en el inicio de la tarea.

Puntuación: Debe indicar en su formulario de recogida de datos el tiempo invertido, el número de letras escritas en un minuto y el número de letras escritas correctamente en tiempo invertido. También la alineación, inversiones, adición de trazos, omisión de trazos y letras omitidas (ver EJEMPLOS en Anexo):

- **Tiempo invertido:** se anota el tiempo que el estudiante ha invertido en escribir todas las palabras, comenzando a cronometrar desde que comienza a escribir la primera letra y deteniendo el cronómetro cuando termina de escribir la última letra. El tiempo máximo para la escritura de todas las palabras es de 5 minutos.
- **Letras escritas por minuto:** se asigna 1 punto por cada letra que el estudiante haya producido, sea legible o ilegible, correcta o incorrecta; durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- **Letras escritas correctamente en tiempo invertido:** se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras

copiadas correctamente todas aquellas que hayan sido copiadas no cometiéndose ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.

- **Alineación:** El examinador debe considerar la distancia donde una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1. Bastará con que una sola letra de la palabra esté mal alineada para que en la totalidad de la palabra se asigne un 1 en alineación en la plantilla. El hecho de asignar un 1 en la totalidad de la palabra no indicará que todas las letras estén mal alineadas y por tanto sean todas incorrectas. En este apartado únicamente podrá asignar un 1 o un 0 en la totalidad de la palabra, no contabilizándose por tanto un 1 por cada letra mal alineada. Al finalizar el recuento de alineación por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las alineaciones encontradas en la totalidad de la tarea.
- **Inversiones:** El examinador debe registrar la ocurrencia de una letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v.gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, no analizándose la alineación, ni la adición u omisión de trazos de esa letra. Al finalizar el recuento de inversiones por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las inversiones encontradas en la totalidad de la tarea.
- **Adición de trazos:** El examinador debe registrar cada ocurrencia de una letra con un trazo añadido. Se considera un trazo añadido todos los trazos que no pertenezcan a la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Si el estudiante elige la plantilla manuscrita y realiza en la copia de la palabra la letra cursiva, cada unión será considerada como adición de trazo, perteneciendo esta adición a la primera letra a la que se adhiere el trazo. Al finalizar el recuento de adiciones de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las adiciones de trazos encontradas en la totalidad de la tarea.
- **Omisión de trazos:** El examinador debe registrar cada ocurrencia de una letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo, si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. Si el estudiante elige la plantilla cursiva y realiza en la copia de la palabra la letra manuscrita, cada desunión será considerada como omisión de

trazo, perteneciendo esta omisión a la primera letra en la que está ausente el trazo de unión. Al finalizar el recuento de omisión de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las omisiones de trazos encontradas en la totalidad de la tarea.

- **Omisión de letras:** El examinador debe registrar el número de letras omitidas en cada palabra. Se considerará letra omitida, aquella que no haya sido copiada o aquella en la que en su lugar haya sido escrita otra letra totalmente diferente a la que debiera ser copiada, no pudiéndose modificar esta a través de adiciones u omisiones de trazos (v. gr., en la palabra ‘casa’, el estudiante escribe ‘cas’ o ‘case’, en ambos casos existiría una omisión de la letra ‘a’. Por el contrario, si el estudiante escribiese ‘caso’, no existiría una omisión de la ‘a’ sino una omisión de un trazo que hace que la ‘a’ manuscrita pase a convertirse en una ‘o’ manuscrita.) En ningún caso se considerará letra omitida el paso de una letra manuscrita a cursiva o viceversa, aunque esta no pueda ser modificada a través de adiciones u omisiones de trazos; será contabilizada como letra errónea, pero no como letra omitida. Al finalizar el recuento de letras omitidas por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las omisiones de letras encontradas en la totalidad de la tarea.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el niño elige un tipo de letra (manuscrita o cursiva) y al realizar la copia escribe la letra contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla a copiar. Por ejemplo, si el niño elige un tipo de formato (manuscrita vs. cursiva) consideramos que el niño debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar cuando el niño utiliza un formato contrario al formato seleccionado. Este criterio sólo se utilizó para esas letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los niños están utilizando el formato de cursiva o manuscrita de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y manuscrita en la copia de la letra ‘a’ es añadiendo o eliminando dos trazos.

Cálculo de la rapidez en la escritura: La rapidez en la escritura es calculada dividiendo un minuto por el número de letras escritas en un minuto ($60/\text{número de letras}$) tal como se especifica en la plantilla de corrección.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de ‘Omisión de letras’ donde deberá colocar el número de letras que conforman la palabra no copiada y que por tanto han sido omitidas. Este criterio sólo se llevará a cabo en aquellas palabras que no hayan sido copiadas y que están dentro del tiempo invertido por el estudiante en la realización de la tarea. Aquellas palabras que no hayan sido copiadas debido a la finalización del tiempo requerido para la realización de la tarea (5 minutos) deberán ser puntuadas dejando todos sus apartados en blanco, no contabilizando las omisiones de letras, puesto que el estudiante no ha omitido la palabra sino que no ha dispuesto de tiempo para realizarla.

Instrucciones: Se le da a elegir al estudiante entre ambas plantillas (manuscrita o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que podría hacer más rápido. Si el estudiante escoge la plantilla de letra manuscrita indíquele que debe dejar siempre un espacio entre letra y letra tal como figura en la plantilla, de la misma forma explíquele que si escoge la plantilla de letra cursiva debe realizar la unión entre letra y letra tal y como figura en la plantilla a copiar. Explíquele que debe escribir las palabras lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Coméntele que debe escribir lo más rápido que pueda pero su tiempo no es limitado y puede terminar la tarea. Es necesario dar expectativas de éxito al estudiante con frases como ‘Sé que sabes copiar palabras muy bien, me gustaría que lo hicieras...’ o ‘Tu profesor me ha contado que has aprendido muy bien a escribir’. Dígale: ‘Si no puedes hacer alguna, no te preocupes, continua con la siguiente’.

Antes de comenzar con la tarea, usted debe realizar la primera palabra de ejemplo situada inmediatamente en el borde superior de la plantilla de copiado de palabras. Indíquele mientras lo hace cómo debe hacer para no salirse de las pautas lineales marcadas en la plantilla, cómo debe dejar o no espacios (dependiendo de si ha elegido letra manuscrita o cursiva) y cómo debe realizar todos los trazos que contiene cada una de las letras que conforman la palabra. Empiece a cronometrar cuando el estudiante empieza a escribir la primera palabra. Si el estudiante no empieza a escribir cuando se le indica o manifiesta que no sabe cómo hacerlo, entonces debe decir: ‘Mira como lo hago yo con otro ejemplo’, y se le muestra como lo hace de nuevo con el segundo ejemplo situado en el borde superior de la lámina. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si cuando hayan transcurrido 5 minutos el estudiante no ha terminado el ejercicio entonces se detiene y se da por finalizada esta tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe conocer que sólo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de esta tarea.

Tarea 4: Copia de frases

Objetivo: El objetivo de esta tarea es evaluar si el estudiante ha adquirido los patrones motores necesarios para la escritura de frases.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Se presenta al estudiante una hoja de respuestas donde las frases deben ser copiadas en la línea base. Para ello, el examinador cuenta con dos hojas de respuesta que tienen diferente tipo de letra:

manuscrita o cursiva. El estudiante podrá elegir entre ambas plantillas en el inicio de la tarea.

Puntuación: Indicar en su formulario de recogida de datos el tiempo invertido, número de letras escritas en un minuto y número de letras escritas correctamente en tiempo invertido. También la alineación, inversiones, adiciones de trazos, omisiones de trazos, letras omitidas, espacios entre palabras y palabras omitidas (ver EJEMPLOS en Anexo):

- **Tiempo invertido:** se anota el tiempo que el estudiante ha invertido en escribir todas las palabras, comenzando a cronometrar desde que comienza a escribir la primera palabra y deteniendo el cronómetro cuando termina de escribir la última palabra. El tiempo máximo para la escritura de las frases es de 5 minutos.
- **Letras escritas por minuto:** se asigna 1 punto por cada letra que el estudiante haya producido, sea legible o ilegible, correcta o incorrecta; durante el primer minuto. Al finalizar la corrección se hace un recuento y se indica en la plantilla de corrección el número total de letras producidas.
- **Letras escritas correctamente en tiempo invertido:** se asigna 1 punto por cada letra que el alumno haya sido capaz de copiar correctamente. Se consideran letras copiadas correctamente todas aquellas que hayan sido copiadas no cometiendo ningún error, es decir, aquellas que no contengan ninguno de los siguientes errores: mala alineación, adición de trazo, omisión de trazo y/o inversión. La manifestación de alguno de estos errores en una letra indicará directamente que esta letra debe ser considerada como letra incorrecta y por tanto no debe contabilizarse en este apartado. Al finalizar la corrección se hace un recuento y se indica el número total de letras escritas correctamente.
- **Alineación:** El examinador debe considerar la distancia donde una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1. Bastará con que una sola letra de la palabra esté mal alineada para que en la totalidad de la palabra se asigne un 1 en alineación en la plantilla. El hecho de asignar un 1 en la totalidad de la palabra no indicará que todas las letras estén mal alineadas y por tanto sean todas incorrectas. En este apartado únicamente podrá asignar un 1 o un 0 en la totalidad de la palabra, no contabilizándose por tanto un 1 por cada letra mal alineada. Al finalizar el recuento de alineación por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las alineaciones encontradas en la totalidad de la tarea.
- **Inversiones:** El examinador debe registrar la ocurrencia de una letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v.gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, no analizándose la alineación, ni la adición u omisión de trazos. Al finalizar el recuento de inversiones por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las inversiones encontradas en la totalidad de la tarea.

- **Adición de trazos:** El examinador debe registrar cada ocurrencia de una letra con un trazo añadido. Se considera un trazo añadido todos los trazos que no pertenezcan a la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo añadido y no la longitud del trazo característico de la letra a analizar, es decir no será una adición de trazo, si el trazo propio de la letra a analizar es más largo, si está inclinado o no, etc. Si el estudiante elige la plantilla manuscrita y realiza en la copia de la palabra la letra cursiva, cada unión será considerada como adición de trazo, perteneciendo esta adición a la primera letra a la que se adhiere el trazo. Al finalizar el recuento de adiciones de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las adiciones de trazos encontradas en la totalidad de la tarea.
- **Omisión de trazos:** El examinador debe registrar cada ocurrencia de una letra con trazos omitidos. Se considera trazo omitido la ausencia de cualquier trazo que contenga la letra original de la plantilla a copiar. Sólo se tendrá en cuenta si existe un trazo omitido y no la longitud del trazo característico de la letra a analizar, es decir, no será una omisión de trazo, si el trazo propio de la letra a analizar es más corto, si está inclinado o no, etc. Si el estudiante elige la plantilla cursiva y realiza en la copia de la palabra la letra manuscrita, cada desunión será considerada como omisión de trazo, perteneciendo esta omisión a la primera letra en la que está ausente el trazo de unión. Al finalizar el recuento de omisión de trazos por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las omisiones de trazos encontradas en la totalidad de la tarea.
- **Espacio entre palabras:** Por cada espacio entre palabras que el alumno respete la puntuación es 1. No se contabilizará el espacio existente entre la palabra ‘perro’ y ‘Bajo’.
- **Palabras omitidas:** El examinador debe registrar el número de palabras omitidas. Debe indicar en su formulario de recogida de datos el número total de palabras omitidas en la frase.
- **Letras omitidas:** El examinador debe registrar el número de letras omitidas en cada palabra. Se considerará letra omitida, aquella que no haya sido copiada o aquella que en la que en su lugar haya sido escrita otra letra totalmente diferente a la que debiera ser copiada, no pudiéndose modificar esta a través de adiciones u omisiones de trazos. (v. gr., en la palabra ‘niño’, el estudiante escribe ‘niñ’ o ‘niñe’, en ambos caso existiría una omisión de la letra ‘o’. En el caso de que el estudiante escribiese ‘niña’, no existiría una omisión de la ‘o’ sino una adición de un trazo que hace que la ‘o’ manuscrita pase a convertirse en una ‘a’ manuscrita.) En ningún caso se considerará letra omitida el paso de una letra manuscrita a cursiva o viceversa, aunque esta no pueda ser modificada a través de adiciones u omisiones de trazos; será contabilizada como letra errónea, pero no como letra omitida. Al finalizar el recuento de letras omitidas por palabras, el mismo cuadro de la plantilla le permitirá realizar un sumatoria de todas las omisiones de letras encontradas en la totalidad de la tarea.

Nota: cada letra podrá contener uno o más de los errores citados anteriormente. Es necesario tener en cuenta que cuando el niño elige un tipo de letra (manuscrita o cursiva) y al realizar la copia escribe la letra contraria a la elegida, no podrán modificarse a través de adiciones u omisiones de trazos las siguientes letras: f, b, k, p, q, r, s, v, w, x, y. Todas las

demás podrán ser modificadas a través de adiciones u omisiones de trazos hasta que la letra sea exactamente igual a la letra modelo de la plantilla a copiar. Por ejemplo, si el niño elige un tipo de formato (manuscrita vs. cursiva) consideramos que el niño debe reproducir exactamente el mismo formato de la letra seleccionada. Por lo tanto, hemos decidido penalizar cuando el niño utiliza un formato contrario al formato seleccionado. Este criterio sólo se utilizó para esas letras que podrían modificarse agregando o eliminando trazos. La razón principal es que no estamos seguros de si los niños están utilizando el formato de cursiva o manuscrita de las letras. Por ejemplo, la única diferencia entre el formato de cursiva y manuscrita en la copia de la letra ‘a’ es añadiendo o eliminando dos trazos.

Nota: en esta tarea ‘qu’, ‘rr’, ‘ll’ y ‘ch’ serán contabilizadas como una única letra.

Nota: si no se reproduce el punto o coma no se contabilizará como error. En cambio, si se reproduce la letra en mayúscula cuando debería ir en minúscula o viceversa si se contabilizará como letra errónea.

Cálculo de la rapidez en la escritura: La rapidez en la escritura es calculada dividiendo un minuto por el número de letras escritas en un minuto ($60/\text{número de letras}$) tal como se especifica en la plantilla de corrección.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de ‘Palabras omitidas’ donde deberá colocar un 1 puesto que la palabra ha sido omitida. Este criterio sólo se llevará a cabo en aquellas palabras que no hayan sido copiadas y que están dentro del tiempo invertido por el estudiante en la realización de la tarea. Aquellas palabras que no hayan sido copiadas debido a la finalización del tiempo requerido para la realización de la tarea (5 minutos) deberán ser puntuadas dejando todos sus apartados en blanco, no contabilizándolas como palabras omitidas, puesto que el estudiante no ha omitido la palabra sino que no ha dispuesto de tiempo para realizarla.

Si el tiempo finaliza interrumpiendo la escritura de una palabra en su totalidad, esta podrá ser considerada de dos maneras: se analizará como una palabra escrita siempre y cuando al estudiante le haya dado tiempo de escribir al menos la mitad de las letras que conforman la palabra (v. gr., si el estudiante escribe ‘Bajo la lluvia escucha el saxof’ y se cumplen los 5 minutos, ‘saxofón’ será valorada en todos los apartados como si hubiera sido escrita en su totalidad, exceptuando en el apartado ‘letras omitidas’ donde deberá colocar el número de letras omitidas). En caso contrario la palabra no será valorada en ningún apartado (v. gr., si el estudiante escribe ‘Bajo la lluvia escucha el sa’ y se cumplen los 5 minutos, ‘saxofón’ no será valorado en ninguno de los apartados, será como si la palabra no hubiera sido escrita, encontrándose ésta fuera del tiempo utilizado para la realización de la tarea).

Instrucciones: Se le da a elegir al estudiante entre ambas plantillas (manuscrita o cursiva), se le explica que debe elegir la que prefiera, la que sea más fácil para él y la que podría hacer más rápido. Si el estudiante escoge la plantilla de letra manuscrita indíquele que debe dejar siempre un espacio entre letra y letra tal como figura en la plantilla, de la misma forma

Explíquele que si escoge la plantilla de letra cursiva debe realizar la unión entre letra y letra tal y como figura en la plantilla a copiar. Se solicita al estudiante que copie la frase. Explíquele que debe escribir la frase lo mejor que pueda sin salirse de las líneas del papel pautado y fijándose en los límites (señalar si fuese necesario). Decirle que escriba la frase tan rápido como pueda y que no tiene tiempo para completar la tarea. Es necesario dar expectativas de éxito al niño con frases como ‘Sé que sabes copiar frases muy bien, me gustaría que lo hicieras...’ o ‘Tu profesor me ha contado que has aprendido muy bien a escribir’. Dígale: ‘Si no puedes copiar alguna palabra o alguna letra, no te preocupes, continua con la siguiente’.

Antes de comenzar con la tarea, usted debe realizar la frase de ejemplo situada en la hoja inmediatamente anterior a la plantilla de copiado de frases. Indíquele mientras lo hace cómo debe hacer para no salirse de las pautas lineales marcadas en la plantilla, cómo debe dejar o no espacios (dependiendo de si ha elegido letra manuscrita o cursiva) y cómo debe realizar todos los trazos que contiene cada una de las letras que conforman la palabra. Empiece a cronometrar cuando el estudiante empieza a escribir la primera palabra. Si el estudiante no empieza a escribir cuando se le indica o manifiesta que no sabe cómo hacerlo, entonces debe decir: ‘Mira como lo hago yo con otro ejemplo’, y se le muestra como lo hace de nuevo con las siguientes palabras que conforman la frase de ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante el proceso. Tenga en cuenta que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo. Si cuando hayan transcurrido 5 minutos el estudiante no ha terminado el ejercicio entonces se detiene y se da por finalizada esta tarea.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar el primer minuto e indicarle que haga la marca en ese momento (pero el estudiante NO debe conocer que sólo tiene 5 minutos para el desarrollo de la tarea y que estamos contabilizando el tiempo). NO detenga el cronómetro: deje que termine de escribir todas las letras y siga cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de esta tarea.

Tarea 5: Dictado de palabras de ortografía arbitraria no reglada (con inconsistencias en las correspondencias fonema-grafema)

Objetivo: El objetivo es evaluar si el estudiante es capaz de escribir palabras que se escriben de forma diferente a cómo se pronuncian no existiendo una regla ortográfica, ello indica que ha memorizado su representación léxica. Se trata de palabras que presentan una ortografía arbitraria no reglada. El estudiante debe tener memorizada la representación ortográfica de las palabras de ortografía arbitraria para escribirlas bien. Este conocimiento implica la activación directa de la representación de la palabra sin necesidad de realizar la conversión fonema-grafema. Con esta tarea se pretende averiguar si el estudiante utiliza la ruta léxica u ortográfica.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. Presentamos al estudiante una hoja de respuestas donde las palabras deben ser escritas en la línea base.

Puntuación: Indicar en su formulario de recogida de datos el número de palabras con ortografía correcta. También la sustitución en cada palabra, omisiones, letras añadidas, traslaciones, y pronunciación si la hubiere:

- **Número de palabras con ortografía correcta:** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera que una palabra está escrita correctamente cuando su representación ortográfica es correcta, es decir, cuando la palabra es escrita tal y como figura en la plantilla de corrección.
- **Sustitución:** El examinador debe registrar si existe o no sustitución en cada palabra. Se entiende por sustitución cuando el niño sustituye la letra crítica (letra marcada en negrita en la plantilla de corrección) por otra alternativa que también representa a ese fonema. Cada palabra posee una o varias letras alternativas. Estas son: Veneno: B. Papaya: LL. Noveno: B. Cometa: K/Q/QU. Boda: V. Lleno: LL. Cuna: K/Q/QU. Harina: -. Paje: J. Quita: Q/K/KU. Gitana: J. Llama: Y. Hada: -. Guerra: GU. Cena: S/Z. Guitarra: G. Sapo: S. Jirafa: G. Zapato: S. Cohete: -. La ausencia de la letra 'h' indicará la existencia de una sustitución.
- **Omisiones:** El examinador debe registrar el número de letras omitidas en cada palabra. Se considera omisión cuando el estudiante no escribe una o más letras de la palabra, o cuando alguna de las letras es sustituida por otra, siempre y cuando no se trate de la sustitución de la letra crítica por su alternativa (v. gr., si el estudiante debe escribir 'veneno' y escribe 'veneo' o 'venemo', en ambas palabras existe una omisión de la 'n'; si el estudiante debe escribir 'boda' y escribe 'poda', existe una omisión de la 'b', es una omisión y no una sustitución puesto que la 'b' ha sido cambiada por 'p' y no por su letra alternativa 'v').
- **Adición de letras:** El examinador debe registrar el número de letras añadidas en cada palabra. Este tipo de error consiste en la incorporación, por parte del estudiante, de letras que no forman parte de la palabra (v. gr., harina/harinias).
- **Traslaciones:** El examinador debe registrar si existe o no una o varias traslaciones en cada palabra. Este tipo de error ocurre cuando el estudiante cambia el orden de las letras que componen la palabra (v. gr., trece/terce). Se contará únicamente un punto por cada palabra que contenga traslaciones (no se sumará el número de traslaciones existentes dentro de la misma palabra si hay más de una). Si el número de letras de la palabra es superior o inferior a lo que corresponde, NO existirá una traslación, sino que se identificará como adiciones u omisiones de letras (v. gr., si el niño debe escribir 'cuna' y escribe 'ucnan' no existirá una traslación de la 'u', puesto que el número de letras en la palabra es superior a la original. En este caso encontramos 2 omisiones ('c' y 'u') y una adición ('n')).
- **Pronunciación:** Es necesario anotar si el estudiante pronuncia la palabra o parte de la palabra mientras la escribe. Escriba en la casilla de la columna correspondiente un 1 si la pronuncia y en caso contrario un 0.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el tránsito de la tarea, deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no escrita, excepto el apartado de 'Letras omitidas' donde deberá colocar el número de letras omitidas y en el apartado de 'Ortografía correcta' donde deberá puntuizar un 0.

Instrucciones: Se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como 'Sé que sabes escribir muy bien, me gustaría que lo hicieras...' o 'Tu profesor me ha contado que has aprendido muy bien a escribir...' Dígale: 'Si no puedes escribir alguna palabra, no te preocupes, continua con la siguiente'. Empiece dictando las primeras dos palabras de ensayo (yate, gusano). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra sólo podrá repetírsela una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: 'Mira como lo hago yo', y mostrarle como se hace el primer ejemplo. Recuerde que no debe repetir en voz alta la palabra mientras que la escribe, pues el estudiante puede tomarla como ejemplo y utilizar esta estrategia a la hora de reproducir las siguientes palabras. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Tarea 6: Dictado de palabras que contienen alguna regla ortográfica

Objetivo: El objetivo es evaluar si el estudiante es capaz de escribir palabras que se ajustan a alguna regla ortográfica lo que indicaría que las ha memorizado, por tanto, el objetivo de esta tarea es evaluar el uso de la ruta léxica. Las reglas valoradas son las siguientes:

- Escribimos 'm' antes de 'p' y 'b' (v.gr., sombrero, ombligo).
- Al comienzo de las palabras el uso de 'r' (v.gr., radio) y después de las letras 'l', 'n', 's' (v.gr., sonreír) y el uso de 'rr' cuando se encuentra entre 2 vocales (v.gr., perro) y el sonido es de 'r' fuerte.
- La letra 'h' se utiliza cuando las palabras empiezan por 'hue', 'hie' (v.gr., hueso, hielo).
- Se escriben con 'y' las palabras que terminan con este fonema, siempre y cuando el acento no recaiga sobre la última sílaba (v.gr., rey).
- Todos los verbos que terminan con 'aba' se escriben con 'b' (v.gr., caminaba).
- Todos los verbos que terminan en 'bir' (v.gr., subir) se escriben con 'b', menos hervir, servir, y vivir.
- Las palabras que terminan en -evo, -ave (v.gr., nuevo, suave), se escriben con la letra 'v' excepto mancebo, placebo, recebo, sebo, árabe, jarabe.
- Las palabras que terminan en 'bilidad' se escriben con la letra 'b' (v.gr., debilidad) excepto civilidad y movilidad.
- Las palabras que terminan en -jero, -jera, -jería (v.gr., pasajero, cajera, relojería) se escriben con 'j'.

- Las palabras que terminan en -ología (v.gr., tecnología) se escriben con ‘g’.
- Las palabras que terminan en -illo,-illa (v.gr., pestillo, taquilla) se escriben con ‘ll’.
- Las palabras que terminan en –iva se escriben con ‘v’ excepto criba, jiba, piba.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. Presentamos al estudiante una hoja de respuestas donde las palabras deben ser escritas en la línea base.

Puntuación: Indicar en el formulario de recogida de datos el número de palabras en las que el estudiante utiliza correctamente la regla ortográfica.

Uso correcto vs. incorrecto de la regla ortográfica: Se asigna 1 punto si el estudiante ha sido capaz de transcribir correctamente la regla ortográfica. Se considera que el estudiante ha utilizado correctamente la regla ortográfica cuando este escribe correctamente la parte de la palabra que contiene toda la regla ortográfica (todas las letras que se encuentran en negrita en la plantilla de corrección). Es necesario que el estudiante escriba todas las letras que conforman la regla de forma adecuada (v. gr., si el estudiante debe escribir ‘cepillo’ y escribe ‘sepillo’ o ‘pillo’, en ambos casos le será asignado un 1, puesto que ha utilizado correctamente la regla ortográfica: -illo. Si el estudiante debe escribir ‘cajera’ y escribe ‘cajero’ o ‘cajere’, en ambos casos le será asignado un 0, puesto que no ha utilizado correctamente la regla ortográfica en su totalidad: -jera. No se penalizará si el niño no utiliza la tilde.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el trámite de la tarea, deberá, en la plantilla de corrección, dejar la casilla en blanco.

Instrucciones: Se solicita al estudiante que escriba las palabras que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como ‘Sé que sabes escribir muy bien, me gustaría que lo hicieras...’ o ‘Tu profesor me ha contado que has aprendido muy bien a escribir...’ Dígale: ‘Si no puedes escribir alguna palabra, no te preocupes, continua con la siguiente’. Empiece dictando las primeras dos palabras de ensayo (limpio, hierba). Repita dos veces cada palabra lentamente y pronunciando correctamente. Si el estudiante pide la repetición de una palabra sólo podrá repetírsela una vez más.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: ‘Mira como lo hago yo’, y mostrarle como se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Tarea 7: Dictado de pseudopalabras

Objetivo: Averiguar si el estudiante es capaz de escribir grafemas que se corresponden con determinados fonemas en palabras inventadas. Una correcta ortografía de las pseudopalabras indica el conocimiento de las reglas de conversión fonema-grafema. Si el estudiante comete muchos errores en la escritura de pseudopalabras indica dificultades en

el uso de la ruta fonológica. Además estas palabras contienen determinadas reglas ortográficas: si el estudiante aplica la regla ortográfica indicará que la ha memorizado.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. Presentamos al estudiante una hoja de respuestas donde las pseudopalabras deben ser escritas en la línea base.

Puntuación: Indicar en su formulario de recogida de datos el número de pseudopalabras escritas correctamente. También el uso correcto o incorrecto de las reglas ortográficas:

- *Número de pseudopalabras con correcta representación gráfica de los sonidos:* Si el estudiante ha escrito la pseudopalabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la pseudopalabra incorrectamente la puntuación es 0. Se considera que una pseudopalabra, palabra inventada no existente en nuestra lengua, está escrita correctamente cuando el estudiante ha sido capaz de transformar cada fonema en su correspondiente grafema. Se consideran válidas todas las palabras que suenan igual, tanto si se ajustan como si no a las reglas ortográficas (v.gr., si el estudiante debe escribir ‘hiefe’ y escribe ‘ife’ o ‘yefe’, ambas serán consideradas como correctas puesto que su lectura suena igual que la pseudopalabra dictada)
- *Uso correcto vs. incorrecto de la regla ortográfica:* Se asigna 1 punto por cada regla ortográfica que el alumno haya sido capaz de transcribir correctamente, ubicada en una palabra concreta. La palabra será puntuada positivamente en este apartado siempre y cuando cumpla la regla (v. gr., si el niño debe escribir ‘lambo’ y escribe ‘tambo’ o ‘pambo’, ambas serán consideradas como correctas puesto que en ambas se respeta la regla ortográfica ‘m’ antes de ‘b’). Cada pseudopalabra contiene en negrita la regla ortográfica que debe ser escrita en su totalidad para que pueda ser asignado 1 punto en este apartado.

Nota: las pseudopalabras ‘nempu’ y ‘lambo’ aunque estén escritas con ‘n’ (‘nenpu’ y ‘lanbo’) tendrán una representación gráfica de los sonidos correcta porque suenan igual.

Nota: es necesario tener en cuenta que una pseudopalabra puede contener una mala representación gráfica de alguno de sus sonidos y, sin embargo, contener un buen uso de la regla ortográfica y viceversa (v. gr., si el niño debe escribir ‘rumu’ y escribe ‘romo’, su puntuación en el primer apartado ‘escritura con representación gráfica de todos los sonidos’ será 0, mientras que en el segundo, ‘uso de la regla ortográfica’ será 1, puesto que la ha escrito respetando la regla ‘r’ al comienzo de la pseudopalabra; si el niño debe escribir ‘hiefe’ y escribe ‘yefe’, su puntuación en el primer apartado ‘escritura con representación gráfica de todos los sonidos’ será 1, mientras que en el segundo, ‘uso de la regla ortográfica’, será 0, puesto que la ha escrito no respetando la regla ‘hie’ al comienzo de la pseudopalabra). No se penalizará si el niño no utiliza la tilde.

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el tránsito de la tarea, deberá, en la plantilla de corrección, asignar un o en el apartado ‘Escritura con representación gráfica de todos los sonidos’ y dejar la casilla en blanco en el apartado de ‘Uso de regla ortográfica’.

Instrucciones: Solicite al estudiante que escriba las palabras inventadas que se le dictan. Es necesario dar expectativas de éxito al niño con frases como ‘Sé que sabes escribir muy bien, me gustaría que lo hicieras...’ o ‘Tu profesor me ha contado que has aprendido muy bien a escribir’. Dígale: ‘Si no puedes escribir alguna de las palabras inventadas, no te preocunes, continua con la siguiente’. Empiece dictando las primeras dos palabras inventadas que sirven de ejemplo (pambu, vetenaje). Repita dos veces cada pseudopalabra lentamente y pronunciando correctamente. Si el estudiante solicita que sea repetida la palabra inventada, sólo se permitirá repetirla una vez más

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: ‘Mira como lo hago yo’, y mostrarle como se hace el primer ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Tarea 8: Dictado de frases

Objetivo: Evaluar si el estudiante es capaz de escribir frases que le son dictadas.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. Presentamos al estudiante una hoja de respuestas donde la frase debe ser escrita en la línea base.

Puntuación: Indicar en su formulario de recogida de datos el número de palabras con ortografía correcta, uso de letras mayúsculas, uso de acentos, número de espacios entre palabras y uso de signos de puntuación. También la alineación, inversiones, sustituciones, adición de letras y omisión de letras:

- **Número de palabras con ortografía correcta:** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se considera palabra correcta aquella palabra que no contenga ninguna falta de ortografía y que haya sido reproducida exactamente igual que la palabra dictada de la plantilla de corrección. En este caso NO se penalizará el uso de la minúscula al comienzo de la frase y el no uso de la tilde (v. gr., si el niño debe escribir ‘El’ y escribe ‘el’ no será penalizada la ausencia de la mayúscula por lo que ‘el’ será considerada palabra correcta; si el niño debe escribir ‘elefante’ y escribe ‘Elefante’ la palabra será considerada como incorrecta, pues utiliza una letra mayúscula dónde no debe; si el niño debe escribir ‘más’ y escribe ‘mas’, será considerada como palabra correcta). Además aquellas palabras que hayan sido escritas separadas o adheridas a otras serán penalizadas en este apartado con un 0 (v. gr., si el estudiante escribe ‘delos’, tanto ‘de’ como ‘los’ obtendrán en este apartado un 0; lo mismo ocurre si el estudiante escribe ‘mun do’).
- **Uso de las letras mayúsculas:** Por cada letra mayúscula que el estudiante escriba correctamente la puntuación es 1.
- **Acentos:** Por cada acento (o tilde) que el estudiante escriba correctamente la puntuación es 1.

- **Espacio entre palabras:** Por cada espacio entre palabras que el estudiante respete la puntuación es 1.
- **Uso de los signos de puntuación:** Por cada signo de puntuación que el estudiante utilice correctamente la puntuación es 1.
- **Alineación:** El examinador debe considerar la distancia donde una palabra debe normalmente asentarse en la línea base y dónde se encuentra realmente asentada, excepto en aquellas palabras que no son reconocibles. Si la palabra se asienta exactamente donde debería estar dentro de la línea base, la puntuación es 0. Si la palabra se asienta por encima o por debajo de la línea base la puntuación es 1. Es decir, si la palabra, o alguna parte de la misma, sale de las líneas entre las cuales debería estar ubicada, por encima o por debajo, se contabilizará como un error de alineación y la puntuación será 1.
- **Inversiones:** El examinador debe registrar la ocurrencia de una letra invertida (es decir, si la letra o alguna parte de la letra, ha sido invertida o rotada incorrectamente) (v.gr., p/b/d/q/ y u/n). Cuando una letra sea invertida, se contabilizará únicamente la inversión, no analizándose la alineación, ni la adición u omisión de trazos.
- **Sustituciones:** Este tipo de error consiste en el reemplazo una letra por otra, siempre y cuando ambas letras no suenen de la misma forma dentro de la palabra (v. gr., si el niño debe escribir ‘más’ y escribe ‘tas’, será considerado como una sustitución de la ‘m’ por la ‘t’)
- **Adición de letras:** El examinador debe registrar el número de letras añadidas en cada palabra. Este tipo de error consiste en la incorporación, por parte del estudiante, de letras que no forman parte de la palabra (v. gr., uno/unos).
- **Omisiones:** El examinador debe registrar el número de letras omitidas en cada palabra. Se considera omisión cuando el estudiante no escribe una o más letras de la palabra, o cuando alguna de las letras es sustituida por otra, siempre y cuando la letra sustituida tenga el mismo sonido que la letra que la sustituye (v. gr., si el estudiante debe escribir ‘mundo’ y escribe ‘mumdo’ o debe escribir ‘distintiva’ y escribe ‘distintia’, en ambas palabras existe una omisión (de la ‘n’ en ‘mundo’ y de la ‘v’ en ‘distintiva’).

¿Qué puntuación le debe ser asignada al estudiante si no escribe una o más palabras?

Cuando el estudiante no escriba una o más palabras en el transcurso de la tarea, deberá, en la plantilla de corrección, dejar la casilla en blanco en todos los apartados correspondientes a la palabra no copiada, exceptuando el apartado de ‘Ortografía correcta’ donde deberá puntuizar un 0 y el apartado de ‘Omisiones’ donde deberá registrar el número de letras omitidas.

Instrucciones: Se solicita al estudiante que escriba las frases que se le van a dictar. Es necesario dar expectativas de éxito al niño con frases como ‘Sé que sabes escribir muy bien, me gustaría que lo hicieras...’ o ‘Tu profesor me ha contado que has aprendido muy bien a escribir...’ Dígale: ‘Si no puedes escribir alguna palabra, no te preocupes, continua con la siguiente’. Empiece dictando la frase de ensayo (El juguete está roto). Primero diga la frase y a continuación cada palabra lentamente y pronunciando correctamente, dando tiempo para que el estudiante pueda escribirla. No proporcione un modelo visual de la frase. Cuando

haya completado cada palabra de la frase rápidamente diga la siguiente palabra. Si el estudiante pide la repetición de una palabra sólo podrá repetírsela una vez más. Debe recordar que primero se dictará la primera oración y una vez que el niño la haya escrito se procederá a dictar la segunda. Recuerde que no debe verbalizar los puntos finales de cada frase.

Si el estudiante no empieza a escribir el primer ejemplo cuando se le dicta, entonces debe decir: 'Mira como lo hago yo', y mostrarle como se hace las dos primeras palabras del ejemplo. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo, así como que en esta tarea debe tener en cuenta que debe realizar correctamente la alineación de las palabras dentro de la pauta marcada para escribir.

Tarea 9: Composición y escritura de frases independiente

Objetivo: Evaluar si el estudiante es capaz de escribir dos frases de forma independiente. Con esta tarea valoramos la habilidad del estudiante para traducir ideas a proposiciones lingüísticas a través de la escritura.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas donde las frases deben ser escritas en la línea base.

Puntuación: Indicar en su formulario de recogida de datos el tiempo invertido, número de palabras escritas en cada periodo de tiempo: en 1 minuto, en 2 minutos, en el total de la tarea (hasta 5 minutos), número de palabras con ortografía correcta en cada periodo de tiempo, uso de letras mayúsculas, uso de acentos, espacios entre palabras y uso de signos de puntuación.

- **Tiempo invertido:** anote el tiempo total que el estudiante ha empleado en escribir las frases. Este tiempo no debe ser superior a 5 minutos.
 - **Número de palabras escritas durante el primer intervalo de tiempo (primer minuto):** se asigna 1 punto por cada palabra que el alumno ha escrito, esté escrita de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentre separadas o que se adhieran a otras (v. gr., si escribe 'mellamo' o 'gusta', ambas palabras serán directamente eliminadas no contándose en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., 'feh') siempre y cuando estas no se refieran a onomatopeyas (v. gr., 'pam', 'bum',...).
 - **Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.
- Se considera que una palabra está escrita correctamente cuando:
- No contiene faltas de ortografía.
 - En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.

- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra se escriba ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación será contabilizada en el apartado ‘Uso de acentos’.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...)

-Se considera que una palabra es incorrecta cuando:

- Aquellas palabras que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Aquellas palabras que sean escritas en mayúscula cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando exista falta de concordancia de género, número o verbo; o una de las palabras implicadas en la construcción sintáctica será incorrecta (v. gr., ‘el niña’ una de las dos palabras deberá ser contabilizada como palabra incorrecta).
- **Número de palabras escritas durante el segundo intervalo (segundo minuto):** se asigna 1 punto por cada palabra que el estudiante ha escrito, esté escrita de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en ‘Número de palabras escritas en el primer intervalo de tiempo (primer minuto)’.
- **Número de palabras con ortografía correcta escritas durante el segundo intervalo (segundo minuto):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en ‘Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (primer minuto)’.
- **Número total de palabras escritas (Total en todo el tiempo invertido):** se asigna 1 punto por cada palabra que el alumno ha escrito, esté escrita de manera correcta o incorrecta en todo el tiempo invertido en la tarea. Recuerde que no se trata de hacer un sumatorio entre el intervalo 1 y el intervalo 2, puesto que el tiempo en la realización de la tarea puede ser como máximo de 5 minutos.
- **Número total de palabras con ortografía correcta (Total en todo el tiempo invertido):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Recuerde que no se trata de hacer un sumatorio entre el intervalo 1 y el intervalo 2, puesto que el tiempo en la realización de la tarea puede ser como máximo de 5 minutos.
- **Uso de las letras mayúsculas:** Por cada letra mayúscula que escriba el alumno correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.
- **Acentos:** Por cada acento (o tilde) que el alumno haya escrito correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.
- **Espacio entre palabras:** Por cada espacio entre palabras que el alumno respete la puntuación es 1. Se contabilizarán los espacios existentes entre dos palabras, exceptuando cuando varias palabras hayan sido categorizadas como ‘palabras eliminadas’ en cuyo caso sólo se contabilizarán los espacios que se encuentran en

ambos extremos (v. gr., si el estudiante escribe ‘yo me llamo adrian yme gusta el futbol’, serán contabilizados 5 espacios, por lo que el espacio que se encuentra entre ‘llamo adrian yme’ no se contabilizará) y cuando se produzca el espacio de separación entre ambas frases. Por otra parte el espacio existente entre una palabra y la línea realizada por el estudiante (cuando transcurre 1 minuto y cuando transcurren 2 minutos) será contabilizado (v. gr., si el estudiante escribe ‘Yo me llamo / Adrián’ en el primer intervalo se contabilizarán 3 espacios y en el segundo 0), exceptuando cuando esta línea se encuentre al finalizar una frase, en cuyo caso no será contabilizado. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.

- **Uso de los signos de puntuación:** Por cada signo de puntuación que el alumno utilice correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.

NOTA IMPORTANTE: se considera que el estudiante ha escrito una frase cuando ha escrito varias palabras y al combinarlas entre sí se puede derivar un significado que tiene sentido.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa el minuto?

Si el estudiante no sobrepasa el minuto en la realización de la tarea deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente rellenará las del primer intervalo y las del total, que en cuyo caso ambas tendrán las mismas puntuaciones.

Instrucciones: El examinador debe propiciar una conversación con el estudiante acerca de sus intereses. Debe pedir al estudiante que le cuente cuáles son sus juegos favoritos, sus hobbies, etc. Después de que el estudiante describa una o dos situaciones, se le pide que escriba dos frases acerca de lo que han hablado en la conversación. Indíquele que primero debe escribir una frase y a continuación una segunda inmediatamente debajo de la primera. Explíquele brevemente lo que es una frase: un conjunto de palabras con sentido. Comience a cronometrar el proceso una vez que el estudiante ha comenzado a escribir.

Si el estudiante no empieza a escribir cuando se le indica, entonces debe decir: ‘Mira como lo hago yo’, y mostrarle como se hace la primera frase de ejemplo (Yo monto a caballo por las tardes con mi madre.). La segunda frase de ejemplo es: ‘Mi caballo preferido se llama Pegaso’. No tenga en cuenta los espacios ni penalice al estudiante por omitir o escribir incorrectamente durante la realización del ejercicio. Tenga en cuenta que debe recordar al estudiante que el proceso de escritura siempre debe realizarse de izquierda a derecha y no de arriba abajo.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando deba hacer una marca en el papel justo a continuación de la letra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello se debe cronometrar el primer minuto e indicarle que haga la marca en ese momento, lo mismo después de 2 minutos (pero el estudiante NO debe conocer que sólo tiene 5 minutos). NO detenga el cronómetro: deje que el estudiante termine de escribir todas las palabras y siga

cronometrando el proceso hasta que haya terminado de escribir la última letra, cuando nos indique que no puede continuar o hasta que hayan transcurrido 5 minutos desde el comienzo de la tarea.

Tarea 10: Escritura de una historia

Objetivo: Los estudiantes necesitan ir más allá de las palabras y aprender cómo lidiar con el texto. Asimismo, el objetivo de esta prueba es evaluar si el estudiante ha adquirido las habilidades necesarias para la escritura narrativa. La escritura narrativa y expositiva son estructuras diferentes que poseen diferente gramática. Las estructuras narrativas son más fáciles porque tienen bien definidos los componentes que los niños utilizan a la hora de escribir y se aprenden a edades tempranas (introducción, nudo, desenlace...). En contraste, la escritura expositiva es más difícil porque requiere otro tipo de organización de conocimientos y se adquiere más tarde.

Materiales: Cada estudiante necesita un lápiz similar al que normalmente utiliza sin goma. El examinador utilizará en esta tarea un cronómetro o reloj con segundero. Presentamos al estudiante una hoja de respuestas donde el texto debe ser escrito en la línea base.

Puntuación: Indicar en su formulario de recogida de datos el tiempo invertido, así como los siguientes apartados en cada intervalo de tiempo (primeros cinco minutos, en los siguientes cinco minutos, en tiempo total): número de palabras escritas, número de palabras con ortografía correcta, uso de letras mayúsculas, uso de acentos, secuencia de palabras correctas, uso de signos de puntuación y procesos de planificación utilizados en el texto escrito. No contabilice ninguno de estos apartados si el estudiante no cumple con el objetivo principal de esta tarea: narrar una historia.

- **Tiempo invertido:** anote el tiempo total que el estudiante ha invertido en escribir la narración. Este tiempo no debe ser superior a 10 minutos.
- **Número de palabras escritas durante el primer intervalo de tiempo (los 5 primeros minutos):** se asigna 1 punto por cada palabra que el estudiante ha escrito, esté escrita de manera correcta o incorrecta. En este apartado no se contabilizarán las palabras que se encuentre separadas o que se adhieran a otras (v. gr., si escribe ‘mellamo’ o ‘gus ta’, ambas palabras serán directamente eliminadas no contándose en ninguno de los apartados de esta tarea). De la misma forma no se contabilizarán palabras que no existan en nuestra lengua (v. gr., ‘feh’) siempre y cuando estas no se refieran a onomatopeyas (v. gr., ‘pam’, ‘bum’,...).
- **Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.

-Se considera que una palabra está escrita correctamente cuando:

- No contiene faltas de ortografía.
- En el caso de palabras escritas en lengua extranjera (v. gr., en inglés), se contabilizarán como correctas únicamente si están escritas correctamente en su lengua de origen.

- Las palabras que dan inicio a la frase aunque no contengan su primera letra en mayúscula, siempre y cuando la palabra sea ortográficamente correcta.
- Aquellas palabras que no contengan tilde y que deban llevarla, pues la falta de acentuación será contabilizada en el apartado ‘Uso de acentos’.
- Aquellas cantidades numéricas que sean expresadas gráficamente con números (v. gr., 1, 2, 3...)

-Se considera que una palabra es incorrecta cuando:

- Aquellas palabras que precisan ser escritas con una mayúscula inicial (v. gr., nombres propios).
- Aquellas palabras que sean escritas en mayúscula cuando no sean nombres propios (v. gr., Gato) o que contengan una letra mayúscula intermedia a la palabra (v. gr., gaTo).
- Cuando existan inconcordancias de género, número o verbo, una de las palabras implicadas en la construcción gráfica será incorrecta (v. gr., ‘el niña’ una de las dos palabras deberá ser contabilizada como palabra incorrecta).
- **Número de palabras escritas durante el segundo intervalo (los 5 siguientes minutos):** se asigna 1 punto por cada palabra que el alumno ha escrito, esté escrita de manera correcta o incorrecta. Se utilizarán los mismos criterios especificados en ‘Número de palabras escritas en el primer intervalo de tiempo (los 5 primeros minutos)’.
- **Número de palabras con ortografía correcta escritas durante el segundo intervalo (los 5 siguientes minutos):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0. Se utilizarán los mismos criterios especificados en ‘Número de palabras con ortografía correcta escritas durante el primer intervalo de tiempo (los 5 primeros minutos)’.
- **Número total de palabras escritas (los 10 minutos totales):** se asigna 1 punto por cada palabra que el alumno ha escrito, esté escrita de manera correcta o incorrecta.
- **Número total de palabras con ortografía correcta (los 10 minutos totales):** Si el estudiante ha escrito la palabra correctamente la puntuación es 1. Por el contrario, si el estudiante ha escrito la palabra incorrectamente la puntuación es 0.
- **Uso de las letras mayúsculas:** Por cada letra mayúscula que escriba el alumno correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.
- **Acentos:** Por cada acento (o tilde) que el alumno haya escrito correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el intervalo 1 y 2, como en el tiempo total invertido en la tarea.
- **Secuencia de palabras correctas:** las secuencias de palabras se componen de grupos de dos palabras únicamente. Se asigna 1 punto a cada secuencia de dos palabras que sea plausible en nuestro idioma, es decir, por cada secuencia coherente de dos palabras.

Esta secuencia sólo se verá interrumpida cuando exista:

- Un punto que finalice una frase.
- Una inconcordancia de verbo, género o número.
- Una palabra categorizada como ‘eliminada’ (v. gr., ‘mellamo’ o ‘lla mo’).

Nota: La existencia de una coma (,) o de una palabra categorizada como ‘incorrecta’ (v. gr., ‘sapato’) no hará que la secuencia se rompa. Un ejemplo en el conteo de la secuencia de palabras correctas es: ‘yo me caí con la bicleta. Nunca me caído con ella.’ En este caso encontramos 8 secuencias correctas de palabras (yo-me, me-caí, caí-con, con-la, la-bicleta, Nunca-me, caído-con, con-ella).

Además debe tener en cuenta que la secuencia existente entre la última palabra de un intervalo y la primera del siguiente será siempre contabilizada hacia el intervalo que se encuentre primero (v. gr., si el estudiante escribe ‘yo me / llamo Pedro’, en el primer intervalo existen 2 secuencias (‘yo-me’ y ‘me llamo’) y en el segundo intervalo 1 (‘llamo-Pedro’).

- **Uso de los signos de puntuación:** Por cada signo de puntuación que el estudiante utilice correctamente la puntuación es 1. Este apartado será calculado individualmente tanto en el Procesos de planificación: se anotará 1 punto cuando la categoría esté presente en el texto y un 0 si no lo está. Las categorías son las siguientes:

Cuándo sucede la historia: ubica temporalmente las acciones del cuento o narraciones: ‘Erase una vez...’; después de las vacaciones de verano...’; ‘El otro día por la mañana...’.

Personajes que intervienen en la historia: Nombra a algún sujeto que realiza una acción.

Suceso inicial o problema: Alguna frase o expresión que indique la causa o razones por las que ocurren cosas posteriormente, problema al que se enfrenta el personaje principal: ‘Le dijeron que tenía que levantarse para ir al colegio...’.

Ejecución: Cuando el personaje va realizando distintas acciones diferentes a las anteriores... desayunó mucho, camino al colegio...

Qué sucede al final de la historia: se valora cuando el estudiante explicita el final o terminación de la historia.

Nota: sólo podrá contabilizarse un 1 o un 0 en cada apartado, independientemente de que existan por intervalo más de un personaje. El intervalo total será un sumatorio del intervalo 1 y 2 por lo que podrá contener los siguientes valores: 0, 1 ó 2. Los personajes, así como la ejecución de acciones asignados a estos no podrán ser asignados al segundo intervalo si ya han sido puntuados en el primero. Para que puedan ser puntuados en el segundo apartado deberán tratarse de personajes aún no nombrados en el primer intervalo. Además, tanto el apartado de ‘Suceso inicial o problema’ como ‘Qué sucede al final de la historia’ sólo podrán ser contabilizados en uno de los dos apartados, puesto que estos hechos sólo pueden ocurrir una vez en la historia.

¿Qué puntuación le debe ser asignada al estudiante si en la realización de la tarea no sobrepasa los 5 primeros minutos?

Si el estudiante no sobrepasa los primeros 5 minutos en la realización de la tarea deberá dejar, en el segundo intervalo, todas las casillas en blanco y únicamente rellenará las del primer intervalo y las del total, que en cuyo caso ambas tendrán las mismas puntuaciones.

Instrucciones: Se solicita al estudiante que escriba un cuento o historia basándose en una imagen que le presentamos. Presentamos al estudiante una hoja de respuestas con una imagen y le decimos, ‘Voy a mostrarte una imagen para que escribas una historia. Debes tomarte un tiempo para ver bien la imagen (déjale 30 segundos) y luego debes empezar a

escribir'. 'Intenta recordar alguna historia parecida que te haya ocurrido a ti o a alguien que tú conozcas'. Si el estudiante nos indica que no sabe realizar la tarea podremos ayudarle escribiéndole las dos primeras palabras de la historia.

Antes de comenzar el ejercicio es **IMPORTANTE** proponer al estudiante un juego. El juego consiste en que cuando esté realizando la tarea le avisaremos cuando debe hacer una marca justo a continuación de la palabra que está escribiendo intentando distraerse lo menos posible de la actividad que está desarrollando. Para ello debe cronometrar los 5 primeros minutos e indicarle que haga la marca en ese momento (pero el estudiante NO debe conocer que sólo tiene 10 minutos). NO detenga el cronómetro: deje que termine de escribir y siga cronometrando el proceso hasta que haya terminado de escribir la última letra o hayan transcurridos los diez minutos.

NOTA IMPORTANTE: Deje que el estudiante realice el ejercicio proporcionándole un máximo de 10 minutos. Cuando el estudiante haya terminado el ejercicio, debe revisar la legibilidad de la escritura para comprobar que comprende todo lo que el estudiante ha querido expresar. Esto le ayudará luego al proceso de corrección de la narración. Si hay alguna palabra ilegible es el momento de preguntar al estudiante qué quiso decir y anotarlo encima de la palabra ilegible.

Annex L

Study on ‘Teaching of writing skills in the Canary Islands’

1. Introduction

This study was designed (Jiménez and O'Shanahan, in preparation) based on the recommendations made at the Expert Meeting on Formative Assessment of Writing in Early Grades of Primary Education (La Laguna, Spain, 10–12 January 2012) as part of the research project 'Learning to Write: teaching practices, development and evaluation in the Canary Islands' (for a full description of this study see Jiménez, 2013c). Accordingly, this study was conducted by the University of La Laguna with the support of the Canarian Agency for Research, Innovation and Information Society of the Ministry of Education, Universities and Sustainability of the Canary Islands.

Main objectives of the study was to investigate issues related to teaching of writing skills so that key findings, together with the EGWA, could be used for enhancing teaching and learning of writing skills. More concretely, issues explored included the following: how teachers in the first years of primary education are teaching transcription skills (handwriting and spelling); which handwriting style is taught (script or cursive); the type of line used; how much importance is assigned to fluency or automaticity, precision or accuracy of the grapheme; what teaching approaches are used; how much time per week is devoted to teaching handwriting, spelling, essay writing and related topics; what proportion of children present learning difficulties; and whether teachers are trained to deal with learning difficulties in writing in the classroom.

A literature review indicates that overall, we know very little about how to teach writing in the early levels of schooling. In fact, there have been few attempts to catalogue the teaching practices in writing that take place in the context of the classroom (e.g., Bridge et al., 1997; Bridge and Hiebert, 1985; Christenson et al., 1989; Fisher and Hiebert, 1990). In a recent study (Graham, Harris et al., 2003), which focused on analysing the type of curricular adaptation carried out by teachers who were selected randomly in various states of the United States, subjects were also asked how and when they taught transcription skills (handwriting and spelling). Almost half of the teachers said they taught these skills on a daily basis, a quarter gave instruction a few times a week, and 14 per cent did so weekly. Only 2 per cent indicated they did not give specific instruction in these skills. Although these results suggest that teachers appreciate the need to teach these skills, research is needed on how these skills are being taught today in schools. There has been some further recent research in the United States (e.g. Cutler and Graham, 2008; Fresch, 2007; Graham, Harris et al., 2003, Graham, Harris et al., 2008; Kaplan, 2008). To our knowledge, no similar studies have been done in Spanish-speaking countries, and this research is the first in the Canary Islands.

2. Method of Study

Sampling strategy

Based upon the entire population of primary school teachers across the Canary Island school centres ($N = 2,373$), a random sampling procedure, stratified by level, was used to identify 1st, 2nd and 3rd grade teachers. The maximum errors in estimations of the parameters were calculated with an alpha error of 5%. For a population of 2373, with a confidence level of 95%, a sample of 331 teachers was obtained. To guarantee the random selection of the

teachers, precise and detailed instructions were sent to the centres. Of the 331 identified teachers, 90.6% ($n = 300$) agreed to participate. They were roughly equally distributed between the three initial grades of primary school, and were 79.7 per cent female and 20.3 per cent male, with 10 per cent reporting that they had 'struggling writers' in their classrooms.

Method of data collection

The teachers were asked to complete an online survey with questions about themselves, the composition of their classrooms, their attitudes and perceptions about writing and writing instruction, and their writing practices.

Procedure

We sent the following letter to school directors, after vetting by the General Directorate, Innovation and Educational Development of the Department of Education, Universities and Sustainability of the Canary Islands:

Dear director,

The General Directorate of Innovation and Educational Development is working on a project on teaching of writing in the Canary Islands, encouraged by UNESCO, in coordination with the Universidad de La Laguna. On this occasion, we are proceeding to obtain information about the ideas that Canary Island teachers have on how to teach writing. The results obtained will allow us to develop and establish educational advice centres in order to improve this important learning goal in the school curriculum. To this end we have selected a representative sample of teachers from the Canary Islands through a statistical procedure, and your school has been selected. The statistical sampling validity and the validity of the results that are obtained from the questionnaire to be completed by the selected teachers depend on strictly following the accompanying instructions. We have assumed that in each class (at each level) there are as many teachers as there are classes. Each teacher that will participate is selected randomly from the population of teachers. Each is determined to belong to a specific centre, within that centre to be teaching at a particular level (which may be first, second or third grade), and within a level to be in charge of a particular class. There are two possibilities:

- 1 That at the grade (1st, 2nd or 3rd) there is only one class, then the selected teacher will be responsible for that class (letter A);
2. There is more than one class at that grade. In this case we are giving the letter of the class. The teacher selected will be the one in charge of that class.

If, for any reason, the selected teacher does not complete the questionnaire, or if it is not possible for this teacher to participate because of sickness, leave, etc., they should NOT be replaced by any other teacher.

Thank you for your cooperation. Yours faithfully ...

3. Preliminary results

This study was the first to be carried out in the Canary Islands and in the Spanish language, and offers an initial analysis of the practices of teachers teaching writing in the first grades of primary education. These are some important findings of this study with educational implications.

- * It is noteworthy that there was a high rate of participation: 90.6 per cent agreed to participate in the study;
- * 10 per cent of teachers surveyed reported having a child in their classroom ‘who is struggling with learning to write’. In other words, these children were at risk of experiencing learning difficulties in writing;
- * 86 per cent of the teachers used published books or booklets that include activities for teaching writing. The use of these materials is more common in grades 1 and 2 of primary school than in grade 3;
- * We observed that teachers give most emphasis to teaching transcription skills in writing, such as handwriting legibility and spelling of words. For grammatical aspects such as punctuation, capitalization and the correct use of singular and plural, and for requiring children to write material, the time commitment increases from the second year of primary school;
- * 70.3 per cent of the teachers had developed their own worksheets for teaching writing. This was most common in grades 1 and 2, becoming less frequent from the third year of primary school;
- * 81 per cent of teachers said they taught children to write on some type of ruled baseline;
- * 82% of teachers said they taught a cursive style, and it was much less common to teach the manuscript style. Moreover, the use of cursive does not vary by grade level;
- * In general, teachers assigned a lower level of importance to writing rapidly and fluently, although the letters are not perfectly written, and they did not think that having children focus on writing letters quickly could promote the learning of spelling. Instead, teachers gave a higher level of importance to teaching children to write the strokes of the letters accurately. They felt that precision in writing favours the correct spelling of words and the composition of phrases and text. They thought it important that the letters be legible and that the writing be neat. Especially, teachers of the first year of primary school assigned great importance to the correct writing of the strokes of the letters, even if this meant children writing slowly. They encouraged children to avoid different vertical inclination of the letters, and to ensure that cursive letters were appropriately attached to the preceding and following letters;

- * We observed that a high percentage of the teachers surveyed had not received even initial training on writing learning disabilities (WLD), and had no expertise in this field. It was also noteworthy that in most establishments, the faculty appeared to lack knowledge of the regulations governing educational services to detect WLD, and the relevant orders and resolutions of the Autonomous Community of the Canary Islands.

4. Conclusions

As noted above, a significant percentage of teachers (10 per cent) reported that there were 'struggling writers' in their classroom. This justifies the need for specific attention to those at-risk children who, by virtue of their circumstances, are statically more likely than others to fail academically. It has been demonstrated that the 'Model of Response to Intervention' (RtI model) provides the best opportunity for these children to overcome their initial difficulties (Jiménez, Rodriguez et al., 2010). This model takes a preventive approach that includes explicit and intensive instruction, provided by remedial teachers in collaboration with the class teacher. Early detection of children needing this support is important, and once the intervention has been started by the remedial teachers, the learning progress is assessed to determine the response to the intervention. Depending on the learning progress that the child shows, decisions are made about the level of continuing intervention required (this can vary in time, intensity and grouping modality). In addition, instruction focuses primarily on processes that form the basis of learning to write following scientific research results.

A high percentage of teachers (86 per cent) use published books or booklets that include activities for teaching writing, especially in the first year of primary education. The time that teachers dedicate weekly to writing activities is particularly focused on instruction in punctuation, capitalization, use of the singular, plural and other grammatical issues, as well as spelling and handwriting. We should keep in mind that writing includes not only transcription skills (handwriting and spelling) but also text-generation skills (production of sentences, paragraphs and texts). Our research suggested that the emphasis in teaching is aimed more at handwriting legibility and spelling of words, which in turn clearly reflects the curricular standards. Teachers also usually use structured materials or worksheets, which could act to restrict the creative and productive dimension of writing. This creativity should be encouraged from the first moment children start learning to write. It is therefore advisable to stimulate the production of sentences, paragraphs and texts when children are learning to write, since the communicative function of writing is inherent in this learning process.

Overall, taking into account different approaches to the teaching of writing, the teachers in the Canary Islands can best be identified as favouring formal explicit instruction: that is, more structured instruction with particular emphasis on the mastery of form. This is followed by a more corrective orientation and to a lesser extent, with writing instruction using more informal or less structured methods, focusing more on the process than on the form. At this point it should be emphasized that although transcription skills (handwriting and spelling) are recommended to be taught through structured methods including activities that allow the child to acquire certain automatism in the generation of graphemes as well as the spelling of specific words, we must not forget that text generation involves other

processes that are more dynamic, as children have to use their experience and prior knowledge. In this sense, the essay-writing process has a much more dynamic character, since the child has to use known information to plan, organize and supervise their work at all times, depending on their purpose and intent in communicating. Therefore, research has demonstrated that certain teaching methods or approaches can be combined depending on which writing skills being taught (such as mastery of graphemes, spelling, sentence construction or text generation).

A high percentage of teachers in our sample (82 per cent) taught the cursive handwriting style instead of script handwriting. This trend is frequently observed in the European continent, but not in North American countries. For example, in studies conducted by Graham, Morphy et al (2008), in American schools most teachers (87 per cent) believe they should first teach script handwriting in kindergarten, and 10 per cent favour starting it in the first grade. In contrast, most of the teachers think cursive handwriting should be taught from grade 2 (48 per cent) or 3 (45 per cent). There are no conclusive studies that demonstrate the benefits of one handwriting style over the other; those studies conducted have shown no clear superiority. One of our research interests was in whether children achieve greater fluency and automaticity in handwriting performance when they learn a cursive or script style. Although as yet there are no conclusive results, if in future software is used to measure real-time writing and digitized answers, this might lead to some clearer outcomes. In general, teachers in the Autonomous Community of the Canary Islands assign much more importance to precision and accuracy in handwriting – in other words, to legibility – than to fluency or automaticity. Teachers consider that writing letters with fluency does not lead to learning to spell correctly. However, scientific research in this field has demonstrated that children who acquire fluency and automaticity in handwriting do better not only in the development of spelling skills, but also in text-generation skills. We are not, of course, advising teachers to put all their emphasis on fluency and automaticity at the expense of the legibility of the letters, or vice versa. But teachers should be aware that if there is too much emphasis on the accuracy or precision of the letter strokes at the expense of fluidity and/or automaticity, this can impair the attention children can give to planning and monitoring their writing.

Finally, the results of the study reveal that a high percentage of teachers are not trained in the field of WLD. We believe this type of training is necessary, and should take essentially a preventive rather than corrective approach. Scientific research in this area has identified a number of indicators that children learning to write are at risk of developing WLD. Contemporary models of intervention that have been proved most effective in preventing future difficulties should be available to teachers, and in particular they should be trained in using the Rti model. An example is the Letra Program (www.programaletra.ull.es; [letras.ull.es;](http://letras.ull.es/) letras.ull.es) (Jiménez, 2015a, 2015b).



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Early Grade Writing Assessment

This report presents main outcomes of a project on assessment of writing skills in early grades of primary school (EGWA), implemented by UNESCO in collaboration with Professor Juan E. Jiménez and his team from the Universidad de La Laguna in the Canary Islands, Spain, with the support of the Russian Federation. Findings of a literature review and a model EGWA instrument developed in the Spanish language, as well as an account of how this instrument had been developed and possible ways forward indicated, will be valuable for those who are concerned with a global learning crisis. While EGWA has the potential to enrich policy dialogue, this report is essentially intended for teachers, curriculum developers, assessment experts, and other types of practitioners, who are keen to improve their understandings of children's writing skills and teaching and learning practice in early grades of primary education.

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