

María Ángeles Martín del Pozo¹

*Preparing prospective primary teachers to value
and to develop inference in reading comprehension*

ABSTRACT

International assessment of reading comprehension in Spanish primary and secondary education (PIRLS, PISA) indicates weak inferential comprehension. The cause could be a combination of sociological, psychological and pedagogical factors, such as an insufficient training. A first step towards developing inference in children is to raise teachers' awareness about the importance of this skill and to provide them with competences and tools to train the children. The paper reports an experience of tutoring four prospective primary education teachers whose final year projects dealt with reading comprehension. Conclusions suggest the positive effects of this and similar research lines in final year projects and the expectation that the learning may be reflected in their future classroom practice.

KEYWORDS: Teacher education, Reading comprehension, Inference, Reading skills, Higher education

Introduction

The relevance of reading literacy is evident. More than any other skill, the ability to read is a foundation for learning across all subjects. In addition, this skill is necessary in almost every sphere of life.

Spain ranked very low in oral and written language comprehension in the latest cycles of international assessment programs (2011 and 2016). This fact aroused attention to the importance of knowing the psychological and instructional factors on which comprehension depends. The need to train teachers in the different abilities of the reading comprehension process becomes evident. As Moreno² reflects, comprehension questions do not develop any cognitive skill because they are formulated considering the text and not the cognitive

¹ Universidad de Valladolid. E-mail: <mariaangeles.martin@uva.es>.

² V. MORENO, *Sobre lectura y educación*, in «Revista de Educación», núm. Extraordinario, 2005, pp. 9-14.

ability they aim to develop. Semantic, lexis, narrative, stylistics, structures and principal ideas are mingled in comprehension questions. Teachers find it difficult to know what aims are pursued with such activities. Though research on teacher training to teach reading is a young science³, reports and literature reviews by the European Union are delimiting the state of the art to try to move ahead. The identified requirements for teaching how to read and improving a child's reading skills include «a profound understanding of reading development and a sound knowledge of teaching theory and practice including teaching methods, class management and knowledge of appropriate materials»⁴.

This paper reports and reflects on an experience preparing undergraduate students to teach reading. The paper focuses on the comprehension process of inference making and how undergraduates, in the framework of their Final Degree Dissertations, designed activities to observe children's competence and to enhance it. The Spanish results in the most recent international assessments are commented as well as the foundations of these evaluations. The paper concludes relating the prospective teachers' viewpoint with guidelines and conclusions from European studies.

International assessments of reading comprehension: PIRLS and PISA

The International Association for the Evaluation of Educational Achievement (IEA) has been conducting international comparative studies of student educational achievement since 1959. One of them is the regular assessment of children's reading literacy and the factors associated with its acquisition worldwide. The study called Progress in International Reading Literacy Study (PIRLS), inaugurated in 2001, focuses both on the achievement of children in their fourth year of schooling and the experiences they have at home and at school in learning to read. PIRLS is conducted every five years. PIRLS 2021 will be the fifth cycle in this program with more than 50 participant countries. PIRLS 2016 framework, materials and schedules⁵ included a new extension, the assessment of online reading: E-PIRLS. It aimed to assess how successful students are prepared to read, comprehend, and interpret online information. All results were published in December 2017. The top-performing countries

³ L. MOATS, *Science, language and imagination in the professional development of teachers*, in P. McCardle and V. Chabra, (Eds.), *The voice of evidence in reading research*, Paul H Brookes Publishing, Baltimore, 2004, pp. 69-288. Cited in EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, 2011.

⁴ EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, Brussels, 2011, p. 83. The Eurydice Network, co-ordinated and managed by the EU Education, Audiovisual and Culture Executive Agency in Brussels, provides information on and analyses of European education systems and policies.

⁵ I.V.S MULLIS & M.O MARTIN (Eds.), *PIRLS 2016 Assessment Framework*, 2nd Edition, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill, MA, 2015.

in PIRLS 2016 were Russian Federation, Singapore, Ireland, Finland, and Poland.

Assessments of reading abilities such as PIRLS or PISA provide information that can contribute to educational reform and policy analysis. These cyclic evaluations make a double comparative analysis possible for participants: synchronic comparison among countries and a diachronic view of each one of the participant countries. This double perspective enables countries to evaluate their own aims⁶. The first PISA results in 2003 aroused alarm in Spain and educational laws were blamed⁷. However, an alarmist approach is erroneous. A rigorous and constructive analysis which may lead to an impartial and realistic appraisal of these assessments is needed.

The purposes for reading and the comprehension processes assessed in PIRLS are summarised in Table 1. Next section of this paper will focus on the comprehension processes. Motivation and processes are like the two pillars where comprehension is sustained⁸. Therefore, teachers should have knowledge of them and a reliable evaluation should consider them.

Why 4th year? Transition point in children's development as readers Reading is not an object of learning but an instrument for learning.	
Purposes for reading	Comprehension processes assessed
reading for literary experience reading to acquire and use information	focus on and retrieve explicitly stated information make straightforward inferences interpret and integrate ideas and information examine and evaluate content, language, and textual elements
Test format (different for ePIRLS) Booklet with literary and informational passages non-continuous text features such as text boxes or diagrams Approximate length: 800 to 1,000 words approximately 12 questions per passage Colourful illustrations to engage student interest	Questionnaires to students' parents, teachers, and school principals (students' home and school experience in developing reading literacy) to participant countries (education systems and reading curricula)
Source: Adapted from Compendium of results and analyses: <i>PIRLS Encyclopedia</i> (Mullis, Martin, Goh, & Prendergast, 2017)	

Table 1. *Framework and core features in PIRLS*

⁶ A. SANZ MORENO, *La lectura en el proyecto PISA*, in «Revista de Educación», núm. extraordinario, 2005, pp. 95-12.

⁷ J. ALONSO TAPIA, *Claves para la enseñanza de la comprensión lectora*, in «Revista de Educación », núm. extraordinario, 2005, pp. 63-93.

⁸ ALONSO, *Claves para la enseñanza de la comprensión lectora*, *op. cit.*, p. 64.

As seen in this table, inference is a key concept in reading processes. This concept has been approached from linguistics and from psychology. A dialogue among them is feasible⁹. Regarding the roles of inference in reading comprehension, some key findings of a literature review by the National Foundation for Educational Research¹⁰ are:

- «that the ability to draw inferences predetermines reading skills: that is, poor inference making causes poor comprehension and not vice versa» (p. 2)
- There are different kinds of inferences. However there is no consensus about the number of types or how they should be named. The next lines consider the relationship of inference and the four levels of reading competency considered in PIRLS (see Table 1):
- Process 1 (Focus on and retrieve explicitly stated information) requires little or no inferring or interpreting. The meaning is evident and stated in the text; therefore there are no 'gaps' in meaning to be filled. The information is usually contained within a sentence or phrase.
- Process 2 (Make Straightforward Inferences). While constructing meaning from text, readers make inferences about ideas or information not explicitly stated. Straightforward inferences imply moving beyond the surface of texts to fill in the 'gaps' in meaning. Most of the information is contained in the text and the reader merely needs to connect two or more ideas or pieces of information. The ideas may be explicitly stated but not the connection between them, which must be inferred.
- Process 3 (Interpret and integrate ideas and information) requires straightforward inference and a further step of integrating personal knowledge and experience with meaning from the text.
- In Process 4 (Examine and evaluate content, language, and textual elements) the focus shifts from meaning construction to a critical consideration of the text itself.

Therefore, inference plays an indispensable role in the three later comprehension processes. The research conclusion stated at the beginning of this section¹¹ regarding the effect of inference in comprehension becomes evident for the comprehension evaluated by PIRLS. Research¹² has pointed at different levels of inference as an important source of individual differences in comprehension. In addition to this, there is agreement in the possibility of improving

⁹ V. MORENO-CAMPOS, *Sobre el concepto de inferencia: un diálogo entre Lingüística y Psicología*, in S. Díaz, A. Goin (coord.), *Territorios en red: prácticas culturales y análisis del discurso*, Biblioteca nueva, Madrid, 2007, pp. 159-178.

¹⁰ A. KISPAL, *Effective teaching of inference skills for reading: literature review*, Department for Children, Schools and Families (DCSF) National Foundation for Educational Research, corp creators, 2008.

¹¹ *Ibid.*

¹² E. SÁNCHEZ, *Los textos expositivos: estrategias para mejorar su comprensión*, Santillana, Madrid, 1993 y *Comprensión y redacción de textos*, Edebé, Barcelona, 1998.

these abilities with suitable training. Therefore, it seems relevant that teacher training courses consider what inference implies and how to foster this.

Spain in PIRLS

This section presents a cursory analysis of the results obtained in reading by Spanish students in the latest PIRLS assessment in 2016. Research on factors affecting comprehension is also summarized. All comments regarding PIRLS or reading abilities will be about Castilian Spanish, the official language of Spain. The language of instruction is Castilian except in communities with another official language: Catalan, Galician, Valencian, and Basque.

A total of 14,600 students coming from 630 different Spanish centres participated in PIRLS 2016. Reading comprehension level of Spanish students reached 528 points, fifteen more points than in the 2011 edition, but still below European average (540 points) and the OCDE average (539). Table 2 displays the 2016 corresponding data.

Participants	14,600 students	630 centres
Reading comprehension level	528 points (15 more points than in the 2011 edition)	Still below European average (540 points) and the OCDE average (539)

Table 2. *Spain in PIRLS 2016*

Regarding the factors affecting results in PIRLS 2011, six different research groups carried out investigations which attempted to link particular social and family aspects to the results obtained (see studies in the Spanish report¹³). PIRLS 2016 results in Spain still require further interpretation. Some correlations regarding performance and other factors can be found in the Monograph *Revista de Educación* (2019). In any case, these studies on 2011 and 2016 results aimed to lead to conclusions and recommendations that should help the academic authorities to make decisions aimed at improving the results of students. Thus, the pedagogical value of evaluations is to provide information about results which enables decision making to improve education. In the specific context of the experience here reported, a teacher training college, this translates into actions to develop competences to teach reading.

¹³ MEC-INEE, *PIRLS - TIMSS 2011, Estudio Internacional de progreso en comprensión lectora, matemáticas y ciencias*, IEA, Volumen I y Volumen II, Informe español, 2012.

Teacher training for teaching reading in Spain

1. The Spanish Reading Curriculum in the Primary Grades

Curricular policies are shaped in many different ways. In Spain, the highest level is established in some detail by government and jurisdictional requirements. Then, a second level is further affected by regional government regulations, the Statutes of Autonomy of the 17 autonomous communities. Finally, local schools have some freedom for decision making.

Since the beginning of the democracy in Spain in 1977, the country has seen legislative instability regarding education. Eight different laws regulating primary and secondary have been drafted until the current Organic Law on the Improvement of the Quality of Education (LOMCE). LOMCE¹⁴ is not a new Law of Education but an amendment of the existing school reform LOE (Organic Law of Education). With the LOMCE, Primary School is a six-course stage. One of the core subjects in Primary education is 'Spanish language and Literature', which is split into five content blocks:

1. Listening, Speaking and Interacting;
2. Reading;
3. Writing;
4. Knowledge of Language and Linguistic Features;
5. Literary education.

In the previous law, reading and writing were combined in one block. The new division enables the formulation of more specific aims and evaluation criteria of both skills which are expected to provide enhanced attention to the processes comprehended in these skills. Therefore, teachers are required to be capable of it.

2. Teacher training for teaching reading literacy

The delivering of a coherent and rigorous curriculum depends on well-qualified teachers. The importance of teacher's preparation in the subject matter they teach and of their qualification status is certified by research¹⁵. In any subject, teacher preparation is a powerful predictor of students' achievement, perhaps even overcoming socioeconomic and language background factors, as growing evidence shows¹⁶. Perhaps attention should focus on the need to train teachers to teach reading comprehension

Since 2010, following the European process of convergence, the educa-

¹⁴ In January 2021 Spain's eighth educational law in just over four decades of democracy came into force, the LOMLOE ('Organic Law of Modification of the Organic Law of Education'). Modifications to the language curriculum will be implemented in 2022-2023 and 2023-2024.

¹⁵ A.J. WAYNE & P. YOUNGS, *Teacher characteristics and student achievement gains: a Review*, in «Review of Educational Research», 73 (1), 2003, pp. 89-122.

¹⁶ L. DARLING-HAMMOND, *Teacher quality and student achievement: A review of state policy evidence*, «Education Policy Analysis Archives», 8(1), 2000. Cited in PIRLS 2011, p. 186.

tional route to primary teacher certification in Spain is a four year degree, the *Grado de Maestro en Educación Primaria* or the *Grado de Maestro en Educación Infantil*. These are generalist education programs. The core subjects in the curriculum include language and literature fundamentals and their pedagogy. Universities may as well offer other optional courses related to these disciplines. Spain lacks reading specialists among the professional profiles. Only eight countries in the European Union provide reading specialists at school to support teachers and pupils, as stated in the cross-national report on teaching reading practices in Europe *Eurydice*¹⁷. The language and literature teacher, usually the classroom teacher, is responsible for reading instruction. The only reading specialist in primary education is the special needs teacher, committed mainly to children with difficulties. However, there is an increasing emphasis on reading comprehension in all curricula subjects, encouraged by the Reading Promotion Plan by the Spanish Education Ministry (2003). Initial teacher education in Spain lacks central guidelines but covers aspects of reading instruction in the programmes. Given the variation in the level of autonomy granted to initial teacher education institutions in Europe, these aspects are difficult to assemble. In Spain this teaching is under the responsibility of Departments or areas of *Didáctica de la Lengua* (Language teaching). This is an emergent area of knowledge («disciplina en proceso de construcción»¹⁸) coming out from Linguistics and Education, but very recurrently orientated exclusively towards the former. For this reason, though to our knowledge there is no study evidencing this, a very frequent tendency is to use this space for teaching language to undergraduates instead of teaching them how to teach language. This trend is depriving prospective teachers of the knowledge to teach an instrumental skill, which is a severe deficiency. Those Faculties of Education whose Departments of *Didáctica de la Lengua* are willing to teach teaching reading can find a compendium of the crucial elements to include in initial teacher education in *Eurydice*¹⁹. These are grounded in a synthesis of various types of research enabled by the International Reading Association: «a foundation in research and theory, preparation to use a range of teaching strategies and a variety of material, preparation to use appropriate assessment techniques, balance and consistency between a theoretical knowledge base and field experiences»²⁰. Next sections center on an experience pursuing the development of these crucial aspects in prospective teachers.

¹⁷ EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, op. cit.

¹⁸ J. DOLZ, R. GAGNON, & S. MOSQUERA, *La didáctica de las lenguas: una disciplina en proceso de construcción*, in «Didáctica. Lengua y Literatura», n. 21, 2009, pp. 117-141.

¹⁹ EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, op. cit., p. 86.

²⁰ *Ibid.*

Final degree dissertations on reading comprehension

The European Higher Education Area (EHEA) implies a shift from knowledge transmission to competences acquisition. The Spanish regulation of degrees and masters (RD 1393/2007) establishes a compulsory final degree dissertation (FDD) and final master dissertation (FMD)²¹. One of the aims of both will be the evaluation of competences acquired during the degree or master (art. 12.7). Hitherto, in Spain this type of dissertations were related to engineering degrees²². The current regulations in the EHEA make them compulsory in all degrees.

As the title suggests, the focal point of this paper is the experience of four prospective primary education teachers whose FDDs dealt with reading comprehension in Spanish schools. The four projects are summarized in Table 3 and their respective empirical contributions are then described. The following section will comment on the students' responses to a brief open questionnaire dealing with inference in reading comprehension before, during and after their work in the FDD.

Dissertation Title	School year in which it was implemented	Number of children	Contribution
Observation of inferences in reading comprehension in year 2	2nd	15	Though inference is not explicitly stated in the curriculum at this age, children showed to be able to infer explicit information
Reading comprehension in non-linguistic discipline: its relationship with the moment of initial instruction	2nd	20	Shows a correlation between moment of initial reading instruction and reading competence for Science and Math
Reading comprehension in a rural school	4th, 5th, 6th	9	Possibilities of working the same type of texts with children of three different academic years
Reading comprehension: a didactic proposal	6th	22	Activities which demand inference (guessing game, conundrums) have a positive impact in reading comprehension.

Table 3. *Final degree dissertations reported*

²¹ In the Spanish original Trabajo de Fin de Grado (TFG) and Trabajo de Fin de máster (TFM).

²² S. ROMÁN-SUERO, J. SÁNCHEZ-MARTÍN, F. ZAMORA-POLO, *Opportunities given by final degree dissertations inside the EHEA to enhance ethical learning in technical education*, in «European Journal of Engineering Education», n. 38(2), 2013, pp. 149-158.

Before considering each one of the 4 FDDs, the context and the circumstances are described. These FDDs were carried out at the Faculty of Education in a large university in central Spain. During the four year degree, students had three 6 ECTS subjects related to language: Spanish language content, Children's literature and Castilian Language teaching. The specific didactics of mother tongue are presented in the latter. The time slot available for teaching reading is fairly reduced as there are other 3 content blocks which should be dealt with (oral language, writing and knowledge about language). Therefore, a FDD on teaching reading is a bonus for the education of the prospective teacher, as the core subjects can only provide a preliminary introduction. The empirical contents of the FDDs are summarized below.

Final Degree Dissertation

Children (7-8 year old) were given a reading comprehension task which required basic straightforward inferences. Inference is not considered in the curricula at this age, but children proved capable of it by using previous knowledge and schemata.

The author of the FDD (an already in-service Primary teacher who wanted another qualification) shared the thought that teachers were not giving inference the significance it should have. One of the conclusions of her FDD is the need to encourage inference development from Infant education by the use of riddles and simple mystery solving games and enigmas.

Final Degree Dissertation 2

A seven-session program was implemented to find out its impact on 6th grade learners' reading comprehension skills. Sessions lasted only 20-30 minutes and were focused on the reading of texts from PIRLS released questions and other texts with an entertaining dimension such as guessing games, riddles and conundrums. The reading comprehension tasks included the four types of comprehension processes assessed in PIRLS: focus on and retrieve explicitly stated information; make straightforward inferences; interpret and integrate ideas and information; examine and evaluate content, language, and textual elements.

Pre-test and post-test procedure was used to measure the impact of the program on students' achievement. Of the four processes investigated (see above) making straightforward inferences provided the most striking results with a considerable increase in achievements.

The prospective teacher who designed the pedagogical intervention and carried out the tests concluded with some reflections on relevance of awareness about the skills related to comprehension. He made explicit the expectation

of having modestly contributed to fill the lacunae about information and proposals to teach reading. In his conclusions he warned other teachers about the necessity of systematic and theory grounded proposals.

Final Degree Dissertation 3

The author of this FDD observed the relationship between moment of initial reading instruction (whether at the age of 3 or 4 or 5) and reading comprehension of Science and Math texts. The aim was to see if an earlier exposure to the code could have an influence on the stage where the written language is not learnt itself but is used to learn. Results seem to indicate that those children who had started earlier performed better.

These results coincide with those by the Spanish institute of educational evaluation (INNE)²³ (MECD-INEE, 2013) which showed that the beginning of schooling at Infant Education led to better reading comprehension results. In the same line, PISA 2014 showed that 15 year olds who had attended Infant Education performed better than those who had not. The author of the FDD remarked the importance of an early start in teaching reading and of reading comprehension in non-linguistic disciplines.

Final Degree Dissertation 4

The context for this FDD was a rural school with 9 children ranging from 9 to 11 in the same class and with the same teacher. The aim was to observe if comprehension of scientific texts and argumentative texts was dependent on age or more on individual factors. Regarding inferences in both types of texts, results indicated that academic year (and therefore age) was not the determining factor. In some occasions younger students performed better than those in a higher course. The author of the FDD concludes that, in the context of this heterogeneous class age, there seems to be no reason not to work the same texts to the different ages, as they have proven themselves capable.

It is evident that the contributions of these four small scale research pieces are only valuable for the own investigated contexts and for very similar ones. However, the major gain is for the prospective teachers who performed the observations and investigations. This is presented in the next section.

Insights from final degree dissertations

FDDs have the potential to be a proper educative space for developing

²³ MECD-INEE, *Panorama de la Educación. Indicadores de la OCDE 2013*, Informe español, 2013.

transversal competences within the university higher education²⁴. The present paper leaves aside the indicators of competences developed, which could be the content of another paper, and centers on students' awareness about the relevance of inference and the didactic approach to it. Nonetheless, a brief reflection on competence development will be included in the conclusions section.

The tutoring process during the planning, the implementation and the writing of these projects allowed the tutor and author of this paper to perceive the emergent interest of the prospective teachers in inferential comprehension and their increasing attentiveness of the relevance of such skill. A seven questions open questionnaire (see Table 4) was administered to the four graduates who had authored the four FDDs described above. Their responses indicate how the contact with real data (children's performance in the comprehension tasks, the reading materials for the task and the materials for the reading practice) triggered their awareness of inference and the convenience and possibility to develop it.

<ol style="list-style-type: none"> 1. What did you think/ know about reading comprehension before your FDD/taking the subject on Language Didactics? 2. What did your FDD/Language Didactics subject bring you with regard to reading comprehension? 3. Assess the importance you gave to INFERENCE <ul style="list-style-type: none"> • before your FDD / Language Didactics • after your FDD / Language Didactics 4. What learning about INFERENCE (relevance, way of work, difficulty, etc.) did your FDD bring you? 5. Do you think INFERENCE is valued in the day-to-day life of the classroom? And in the teaching materials, activities and resources? 6. Why should every teacher know the concept of INFERENCE and how to work this skill? 7. Any other COMMENTS, EXAMPLE, ANECDOTE RELATED to inference derived from your TFG?
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Table 4. *Questionnaire administered to graduates after their FDD*

Their responses provide an insight of several aspects summarized as follows. Firstly, as regards knowledge of the skill of inference as a constituent of reading comprehension, only the student who was already an in-service teacher was aware of it. This knowledge was probably due to her undergraduate studies or to other in-service training. The other three students reported to have considered reading comprehension as a whole and not being aware of the different components of the reading process.

Secondly, concerning how their FDDs had contributed to their knowledge about reading comprehension and about inference, the four agreed about the deeper understanding of the topic provided by the FDD. Each one of them indicated some acquired knowledge related to their specific

²⁴ F. ZAMORA POLO, J. SÁNCHEZ MARTÍN, *Los Trabajos Fin de Grado: una herramienta de desarrollo de competencias transversales en la Educación Superior*, in «REDU - Revista de Docencia Universitaria», n. 13(3), 2014, pp. 197-211.

topic. For example, the author of FDD 3 emphasized her awareness of the essentiality of inference when reading math problems or scientific texts. The author of FDD 4 highlighted she had also learnt to observe when a child is making inferences or when there might be difficulties. The in-service teacher reported the FDD had widened her prior knowledge and changed her approach to teaching reading.

A third issue presented in the questionnaires was the evaluation of the relevance given to inference in everyday classroom practice. The in-service teacher admitted that many teachers were completely unaware of this concept, and one of the students reported the same by intuition based on her brief experience. In consequence, both pointed that these professionals could not make profit of activities which, though in very scarce supply, were present in books and other resources. The other two respondents did not identify teachers' lack of knowledge as the cause of poor presence of inferential activities in the classroom. However, they both agreed that inference was dangerously undervalued and that approaching reading comprehension as a whole and not from the different comprehension processes was delaying efficiency.

In fourth place, regarding their future application of their knowledge about inference, students affirm to have included inference when they have to plan lessons in their practicum period. The author of FDD 1 reported to have tried to adapt to different levels the activities which implied inference. As it could be expected, the in-service teacher includes inference in her lessons since she completed her FDD.

Finally, as regards the question why all teachers should be familiar with the concept of inference and how to approach it, there was consensus about the requirement to make teachers aware of inference for a successful teaching of reading. The emergency finds one of its foundations in the instrumental nature of this skill. Respondents also highlighted children would benefit if teachers were trained in teaching reading.

To conclude this section, two notorious aspects should be commented. In first place, the general consensus among the four, though expressed with variation. Secondly, the quality of recollection of the four authors, considered that their FDDs were implemented and written in May 2013 and the questionnaires were administered nearly three years later. This seems to indicate the enduring nature of learning by doing and its effects not only on knowledge but mainly on competence development.

Conclusions

As previously stated, the small-scale investigations or experiences in these FDDs are only relevant for their own context and fulfilled the purpose of providing the competences required to obtain a qualification. However, some pertinent conclusions of the overall experience could be applied to other contexts.

Their significance will be endorsed with guidelines and recommendations by *Eurydice*²⁵ report or by literature.

Regarding the contribution of FDDs to competence development, as it can be observed, in the four FDDs there is an evident relationship among the competences associated with the dissertation itself and subsequently with the specific competences of the degree. Many of the competences seen as generic in the curricula are dealt with by these FDDs. Evidently, there are still some competences which the FDD does not cover, as it is merely a complementary space to the rest of the subjects in the degree. However, it can be said that the students have developed competences to teach reading and in particular, competence to teach and observe inferential comprehension.

As regards continuous professional development, writing this paper verifies that practising teachers /lecturer (as the author of this chapter) can continue their learning through the processes of teaching. Tutoring and guiding the undergraduates in their FDDs provided an insight not only of the reality of teaching reading comprehension in the classrooms, but mainly of teachers' requirements. Primary school teachers' knowledge about reading comprehension will also benefit from the feedback received in their own evaluations of children's competences and in their own process of teaching.

Eurydice states an advantage which has been proven in our context: «For prospective teachers, applying knowledge to field experiences provides opportunities for reconstructing prior beliefs inconsistent with effective reading instruction»²⁶. For example, undergraduates reported to have considered reading comprehension as a whole and not taking into account the different comprehension processes. An evident pedagogical implication is the need to train teachers in the different abilities of the reading comprehension process²⁷.

The same report suggests that «shifts in student teacher beliefs may be attributed to consistency between theoretical foundations provided during coursework and carefully structured and supervised field experience»²⁸. In our context field experience regarding teaching reading was especially supervised since it was part of the FDD. In the case of undergraduates with a different FDD topic, this aspect was not observed. As a consequence of their shifts, prospective teachers display confidence in their ability to teach, another aspect mentioned in *Eurydice*. With these FDDs prospective teachers were given the opportunities to learn the necessary skills for teaching reading and they were able to practice them during their teaching practice.

According to the results in PIRLS (2011) emphasis on how to teach reading during initial education is related to effective reading instruction. Our experience serves to illustrate an approach to that initial teacher education. Later, in

²⁵ EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, op. cit.

²⁶ *Ibid.*, p. 86.

²⁷ MORENO, *Sobre lectura y educación*, op. cit.

²⁸ EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, op. cit., p. 86.

continuous professional development, these undergraduates could recur to collaborative forms (i.e. knowledge-sharing or peer-learning activities) to learn from other professionals or to enrich them with the experience acquired in their FDDs. Continuous professional development (or initial training) will have to prepare teachers for the teaching of reading of electronic texts via today's communication technologies, taking into account the changing nature of reading in contemporary society.

References

- ALONSO TAPIA, J., *Claves para la enseñanza de la comprensión lectora*, in «Revista de Educación», núm. extraordinario, 2005, pp. 63-93.
- DOLZ, J., GAGNON, R., MOSQUERA, S., *La didáctica de las lenguas: una disciplina en proceso de construcción*, in «Didáctica. Lengua y Literatura», n. 21, 2009, pp. 117-141.
- EURYDICE, *Teaching reading in Europe: Contexts, policies and Practices*, Brussels, 2011.
- KISPAL, A., *Effective teaching of inference skills for reading: literature review*, Department for Children, Schools and Families (DCSF) National Foundation for Educational Research, corp creators, 2008.
- MECD-INEE, *PIRLS – TIMSS 2011. Estudio Internacional de progreso en comprensión lectora, matemáticas y ciencias*, IEA, Volumen I y Volumen II, Informe español, 2012. Recuperado de <http://www.mecd.gob.es/inee/publicaciones/estudios-internacionales.html#PIRLS1_2011> (Last accessed 22/08/2020).
- MECD-INEE, *Panorama de la Educación. Indicadores de la OCDE 2013*, Informe español, 2013.
- MOATS, L., *Science, language and imagination in the professional development of teachers*, in P. McCardle and V. Chhabra (Eds), *The voice of evidence in reading research*, Paul H Brookes Publishing, Baltimore, 2004, pp. 69- 288.
- MORENO, V., *Sobre lectura y educación*, in «Revista de Educación», núm. Extraordinario, 2005, pp. 9-14.
- MORENO-CAMPOS, V., *Sobre el concepto de inferencia: un diálogo entre Lingüística y Psicología*, in S. Díaz, A. Goin (coord), *Territorios en red: prácticas culturales y análisis del discurso*, Biblioteca nueva, Madrid, 2007, pp. 159-178.
- MULLIS, I.V.S., MARTIN, M.O. (Eds), *PIRLS 2016 Assessment Framework*, 2nd Edition, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill, MA, 2015.
- MULLIS, I.V.S., MARTIN, M.O., GOH, S., PRENDERGAST, C. (Eds.), *PIRLS 2016 Encyclopedia: Education Policy and Curriculum in Reading*, 2017, Retrieved from Boston College, TIMSS & PIRLS International Study Center website: <<http://timssandpirls.bc.edu/pirls2016/encyclopedia/>> (Last accessed 22/08/2020).

- REAL DECRETO 1393/2007, de 29 de octubre, por el que se establece la ordenación de las enseñanzas universitarias oficiales. Boletín Oficial del Estado, 30 de octubre de 2007 núm. 260, pp. 44037-44048.
- ROMÁN-SUERO, S., SÁNCHEZ-MARTÍN, J., ZAMORA-POLO, F., *Opportunities given by final degree dissertations inside the EHEA to enhance ethical learning in technical education*, in «European Journal of Engineering Education», n. 38(2), 2013, pp. 149-158, doi:10.1080/03043797.2012.755498.
- SÁNCHEZ, E., *Los textos expositivos: estrategias para mejorar su comprensión*, Santillana, Madrid, 1993.
- *Comprensión y redacción de textos*, Edebé, Barcelona, 1998.
- SANZ MORENO, A., *La lectura en el proyecto PISA*, in «Revista de Educación», núm. extraordinario, 2005, pp. 95-12.
- WAYNE, A.J., YOUNGS, P., *Teacher characteristics and student achievement gains: A Review*, in «Review of Educational Research», 73 (1), 2003, pp. 89-122.
- ZAMORA POLO, F., SÁNCHEZ MARTÍN, J., *Los Trabajos Fin de Grado: una herramienta de desarrollo de competencias transversales en la Educación Superior*, in «REDU – Revista de Docencia Universitaria», n. 13(3), 2014, pp. 197-211.

Final Degree Dissertations reported

- PAREDES OREJUDO, S., *Comprensión lectora en las disciplinas no lingüísticas, su relación con el momento de aprendizaje del código*, Trabajo de Fin de Grado, Universidad de Valladolid, 2013.
- MARINERO ARAGÓN, I., *La comprensión lectora en un colegio rural agrupado*, Trabajo de Fin de Grado, Universidad de Valladolid, 2014.
- OÑATE DÍAZ, E., *Comprensión lectora: marco teórico y propuesta de intervención didáctica*, Trabajo de Fin de Grado, Universidad de Valladolid, 2013.
- RODRIGUEZ FORTEA, S., *Observación de la inferencia en la comprensión lectora de 2º de Primaria*, Trabajo de Fin de Grado, Universidad de Valladolid, 2013.