



PIRLS for Teachers: Making PIRLS results more useful for practitioners

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SUMMARY

The IEA's Progress in International Reading Literacy Study (PIRLS) is a valuable resource for educational researchers and policymakers, but not well understood by teachers. To improve the impact of PIRLS data on pedagogy in the classroom, researchers and local teachers worked together on Oxford University's PIRLS for Teachers project. This project aimed to provide teachers in England with good guidance on interpreting and using knowledge from PIRLS to improve their own teaching of reading in primary schools. Outcomes included podcasts, posters and videos supporting best teaching practices. Education systems participating in PIRLS are advised to involve teachers in the interpretation of the PIRLS data to ensure educators can make an informed contribution to the national dialogue. As well as developing podcasts, posters or similar materials for practitioners, workshops or practitioner conferences where teachers can interact with researchers foster valuable dialogue on the best use of the data collected by PIRLS.

INTRODUCTION

International large-scale assessments (ILSAs) have had an increasing influence on the discourse surrounding education systems around the world. However, the results of these studies tend to have less impact on pedagogy in the classroom than would be expected. For example, a recent review of 114 published peer-reviewed articles on the IEA's Progress in International Reading Literacy Study (PIRLS) indicated that PIRLS is not often used to inform reading research, which could be one reason for its low impact on pedagogy in the classroom (Lenkeit et al., 2015).

Teachers often lack knowledge about ILSAs (Popat et al., 2017). Previous studies have indicated teachers struggle



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to make sense of assessment data (Young, 2006) beyond general findings. In the case of ILSAs, such general findings are normally restricted to aggregated country rankings. Educators' poor assessment literacy often leads to confusion about how ILSA data can and should be used to inform their pedagogy.

In this policy brief, we present findings from the PIRLS for Teachers¹ project, designed to improve teachers' assessment literacy and knowledge of PIRLS. In 2015, teachers from four schools in England worked closely with researchers from Oxford University to develop strategies for interpreting and using the knowledge from PIRLS 2011 to improve teaching of reading in primary schools.

PIRLS FOR TEACHERS

The PIRLS for Teachers project was designed to bridge the gap between researchers and teachers. It aimed to increase both teachers' assessment literacy and their capacity to understand and use the data provided by PIRLS. It also aimed to increase researchers' understanding of the challenges teachers face when trying to interpret the results presented by PIRLS, and to facilitate dialogue between teachers and researchers, with the aim of improving teaching practices for reading.

Aside from attainment scores for reading literacy, PIRLS collects a wide range of information through questionnaires about students, their learning environments, and motivation and interest in reading, which allows researchers to build a comprehensive picture of the state of teaching and learning. The PIRLS teacher questionnaire provides important contextual information about teaching strategies, reading instruction, and classroom materials. The information provided by these questionnaires offers an opportunity to discuss and share results with teachers, and to jointly interpret the results, based on educators' own knowledge of teaching and their particular students. The PIRLS for Teachers research team shared all available material with teachers and explained how PIRLS is carried out, what it measures and how data is collected. The research team wanted to hear teachers' evaluations of the material and establish which research questions were of interest and relevance to their own teaching practice.

Like most education systems participating in the PIRLS study, there is little dissemination of PIRLS data or engagement with teachers in England beyond the league tables published in the

1 Oxford University Centre for Educational Assessment was awarded an Economic and Social Research Council (ESRC) Impact Acceleration Account award to implement the PIRLS for Teachers project. As part of the National Centre for PIRLS in England, the research team was inspired by similar initiatives in New Zealand, Norway, and Germany to engage with teachers (Lenkeit et al., 2012; Chamberlain, 2012; Skافتun, 2006). The main aim of the award was to facilitate knowledge exchange between practitioners and researchers. The project was a case study where teachers and researchers worked together on the PIRLS data over a period of 18 months.



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national media (Twist, 2012). Research has shown that the link between assessment studies and their impact on classroom pedagogy is minimal (Horn et al., 2015). A review of the websites of the main teaching unions in England paints a similar picture. Clearly, there is a knowledge gap between the information that is available from the PIRLS data and what is used to inform teachers about the results.

PIRLS for Teachers was designed as a knowledge exchange project, meaning that the two partners, teachers and researchers, are seen as equal experts in different areas, sharing their experience and expertise to reach a common goal. To achieve this, the project focused on how best to

GOALS OF THE PIRLS FOR TEACHERS PROJECT

1. Review how other education systems disseminate PIRLS findings to teachers,
2. Engage and familiarize teachers with PIRLS, to enable them to gain a better understanding of the study,
3. Identify what constitutes useful knowledge for teachers,
4. Identify ways in which the information provided by PIRLS could be used to improve teaching practice,
5. Conduct in-depth analysis of PIRLS data depending on teachers' interests,
6. Develop practitioner materials, in collaboration with teachers, to support teaching,
7. Provide visual and online resources for wider dissemination.

communicate and share knowledge between the two groups. While teachers are regularly required to communicate with other practitioners, students and parents, researchers are only used to communicating their findings to colleagues at conferences and through academic journals. Researchers are not equally skilled at, or trained in, talking to teachers about their research and its implications for teaching and learning. In fact, some researchers would argue that it is not part of their mandate to disseminate their research findings to practitioners, or that they do not know how to do so (Reed, 2016).

Recognizing this, the Oxford University Centre for Educational Assessment (OUCEA) was awarded funding for a project to collaborate with teachers with the aim of increasing their understanding of the PIRLS study and how the results from international assessments could be used to improve teaching practice in reading. A second goal was to increase researchers' understanding of the challenges teachers face when trying to make sense of PIRLS findings, and to better communicate the results to schools and teachers. The project was designed to provide a forum for teachers and researchers to discuss which research questions could be addressed by the PIRLS findings, and which would be of particular interest to teachers when working on methods to improve teaching practice.



WORKING WITH TEACHERS AND PIRLS DATA IN ENGLAND

The PIRLS for Teachers project researchers worked with eight teachers from four different schools in England, with the aim of making PIRLS and its findings more accessible and useful for practitioners. The teachers involved in the project taught at schools with differing sociodemographic characteristics:

half the teachers taught in small village schools around Oxford, where most children come from higher socioeconomic backgrounds, while the other half came from larger towns near London, where more than half the families have an immigrant background and pupils' parents often have English as an additional language. One school was located in an area where most of the students came from less socioeconomically privileged backgrounds. The teachers recruited were either particularly interested in literacy, in charge of literacy development in their school, or had worked with literacy and reading in other ways. The participants were invited to attend two workshops at the University of Oxford, and to meet the research team to share their ideas and knowledge regarding PIRLS, teaching and reading instruction.

At the first workshop, the teachers were introduced to PIRLS, the design of the study and the reading framework behind it. The reading texts used in the test were also discussed, as were the items used to measure reading comprehension processes such as:

1. interpreting and integrating ideas and information,
2. focusing on and retrieving explicitly stated information,
3. evaluating and critiquing content and textual elements, and
4. making straightforward inferences based on the text.

The teachers worked through the reading passages, accompanying tasks and marking schemes, in order to better understand how PIRLS measures reading. They also discussed how they interpreted the questions, text, and suggested marking scheme. The teachers were particularly interested in comparing the text and question formats with their own teaching materials, and commented on which texts they would expect to motivate certain groups, for example boys versus girls.

The teachers were also provided with the student background questionnaires and worked in groups to discuss the different areas measured, such as "interest in reading". The teachers could thus see for themselves which questions students would be asked and say to what extent they agreed with statements assessing interest in reading such as: "I read only if I have to" and "I would be happy if someone gave me a book as a present".

After discussing the texts, questions, and background questionnaires, the teachers worked in two groups to identify which areas they were interested in finding out more about (see Appendix at www.iea.nl/sites/default/files/publications/Electronic_versions/PolicyBrief17App.pdf for more detailed information about the teacher workshops). Among the questions teachers asked were: "How does reading to students affect their motivation, confidence and interest in reading?" and "How does reading engagement in a specific PIRLS text differ between boys and girls, between those students who always speak English at home and those with more or fewer resources at home?"

To address these questions, the PIRLS 2011 achievement, student, and classroom data from England were analyzed using the IEA's IDB Analyzer². At the second workshop, the participants critically reflected on whether the findings from these analyses coincided with their own experiences in the classroom. The group identified possible implications of these findings for the teaching of reading in different settings (such as schools with relatively affluent students versus those with a higher proportion of less affluent students). Although the research team initially expected the teachers to be interested in developing online materials about PIRLS, the teachers asked for posters they could display in their staff rooms and classrooms. Teachers argued that visual aids, such as posters, were more likely to prompt discussion about the materials and encourage application to teaching practice. The research team therefore agreed to develop poster materials for practitioners, and, following feedback from the teachers themselves and guidance from experts, two posters were uploaded to the OUCEA website for further dissemination (see <http://oucea.education.ox.ac.uk/research/recent-research-projects/pirls-for-teachers/pirls-for-teachers-project-outcomes/>).

RESULTS: THE PIRLS FOR TEACHERS PROJECT OUTCOMES

Teacher input was invaluable in developing the project's practitioner materials and ideas. The materials focused on two key themes that the teachers identified as important:

1. Fostering pupils' motivation through after-reading activities,
2. Supporting pupils' reading motivation with instructional materials.



² An introduction to the IDB Analyzer, and other related video tutorials explaining the use of the software, are available at <http://www.iea.nl/training>

SUMMARY OF THE PIRLS FOR TEACHERS PROJECT OUTCOMES

The PIRLS for Teachers project:

<http://oucea.education.ox.ac.uk/research/recent-research-projects/pirls-for-teachers/>

Links to posters:

http://oucea.education.ox.ac.uk/wordpress/wp-content/uploads/2017/01/PIRLS-for-Teachers_Poster_After-reading-activities.pdf

http://oucea.education.ox.ac.uk/wordpress/wp-content/uploads/2017/01/PIRLS-for-Teachers_Poster_Reading-resources-motivation.pdf

Links to podcasts:

<http://oucea.education.ox.ac.uk/research/recent-research-projects/pirls-for-teachers/pirls-for-teachers-project-outcomes/>

The two posters produced by the project were intended to prompt teachers to reflect on the methods they used to teach reading. The first poster, "Fostering pupils' motivation through after-reading activities", summarized analyses of PIRLS 2011 data from England. The poster communicated that oral after-reading activities, such as talking with peers and answering questions about what they have read, were positively related to students' interest in and motivation to read, particularly for boys and students with few books at home. The conclusion was that it was especially important to encourage oral after-reading activities to foster interest in reading and motivate students who had limited exposure to books at home.

The second poster was designed around the theme: "Supporting pupils' reading motivation with instructional materials". It summarized analyses from the PIRLS data that revealed that the use of a wide range of different reading resources and text genres was positively related to students' interest in, engagement with and confidence in reading, as well as students' motivation to read. More specifically, the analyses demonstrated that pupils who had teachers who used seven or eight different reading resources were more motivated to read than pupils whose teachers used a narrower range of reading resources. The results differ between boys and girls, and for students of different abilities. High-achieving pupils tended to like reading more when their teacher used a wide variety of reading resources, and girls demonstrated higher confidence in reading when teachers used a higher number of resources. Further analyses of the PIRLS data found that boys were more motivated to read and lower-achieving pupils were more engaged with reading when these groups were exposed to a variety of reading resources.

Despite the positive association between a wider range of reading resources, confidence in reading and being motivated to read, PIRLS has shown that one in three teachers in England uses a limited number of reading resources. One important goal in primary school is to teach pupils how to understand different text forms and genres (see the English programs of study for key stages 1 and 2; Department for Education, 2013). The PIRLS analyses prompted the poster summarizing advice and recommendations for teachers, and suggesting that they use a wide variety of reading resources, as this has been found to enhance reading motivation for all pupils, independent of their reading ability, and is of particular importance for low-achieving pupils, fostering their motivation to read, their engagement with, and confidence in reading. In particular, the poster communicated that using a wide range of reading resources will benefit girls' confidence in reading and boys' motivation to read.

The project team also produced informative podcasts for teachers. The first podcast explained the PIRLS for Teachers project from the teachers' perspective (Lenkeit & Robinson, 2016), while the second presented the researchers' view (Lenkeit, 2016). In the teachers' podcast, a deputy head teacher responded to questions like, "Has the PIRLS for Teachers project changed your view of PIRLS or what you know about it?" A key comment was that she valued working with researchers, as teachers in England rarely get time away from school or to work on such projects. She focused on the benefit of knowledge exchange between teachers from different schools and the researchers, but also challenged researchers to share future PIRLS analyses with teachers, designed to investigate further some of the questions set by the teachers. The researchers' podcast focused on the research impact and importance of being able to translate research knowledge into findings relevant to potential users, such as teachers, to improve education. As participating education systems can include questions in the PIRLS study as national options, the responses to these questions may be of more interest and relevance to teachers in a country.

DISCUSSION

When we set up the PIRLS for Teachers project, our expectation was that teachers would request online materials to support their teaching. However, we found that teachers preferred teacher and classroom posters, as daily visual prompts to focus teaching practice, perceiving materials they would have to search for online as less accessible. Posters are an accessible way of presenting the answers to highly specific research questions on topics that are directly related to teachers' instructional practice, and provide an opportunity for teachers to reflect on their own teaching and discuss their approach with colleagues in the same school.

Through this project, we were able to inspire teacher interest in PIRLS and its potential as a resource for informing teaching practice. However, we also found that teachers' interests did not always align with the data that is available in PIRLS. Many

had ideas for investigating questions relevant to their local contexts that were beyond the scope of the PIRLS dataset. Participating education systems may reflect on how they could make more and better use of the national options in background questionnaires to address the need for more context-based knowledge for teachers.



POLICY IMPLICATIONS AND RECOMMENDATIONS

Although studies such as PIRLS are designed to compare national systems and do not provide feedback information to individual classes or schools, we strongly agree with Rutkowski and Rutkowski (2016) that it is important to include teachers in the debate on the use of such data. Sebba (2004) indicated that there was little information available on how to involve practitioners in research, and the use and impact of research on practice was therefore minimal. The exclusion of practitioners is leaving schools "data rich" but "information poor" (Horn et al., 2015). A review of practitioner material on ILSA studies (Popat et al., 2017) indicated that very few of the participating countries share PIRLS data with teachers. We recommend that teachers should be more involved in interpreting PIRLS results. Feedback from the workshops and posters indicated that teachers recognized that the collaborative aspect of the project had triggered considerable dialogue on how to improve reading within their own school contexts, and teachers from different schools had communicated alternative ideas and

examples from their classrooms. The project demonstrates how results from PIRLS and other studies may thus have a positive impact on classroom pedagogy. As such, the PIRLS for Teachers project has contributed towards improving the culture of feedback from PIRLS in England, in a way that makes the study relevant for teachers. This included gaining teachers' trust by ensuring that they knew that their input to interpreting findings was valued and recognizing and acknowledging their needs. The project demonstrated that the PIRLS data is a good informational resource for teachers if presented in a way that makes the relevant data accessible. Given the time and effort involved in conducting studies like PIRLS, careful consideration should also be given to the small- and large-scale projects that attempt to make findings useful for those at the very heart of the teaching and learning process.

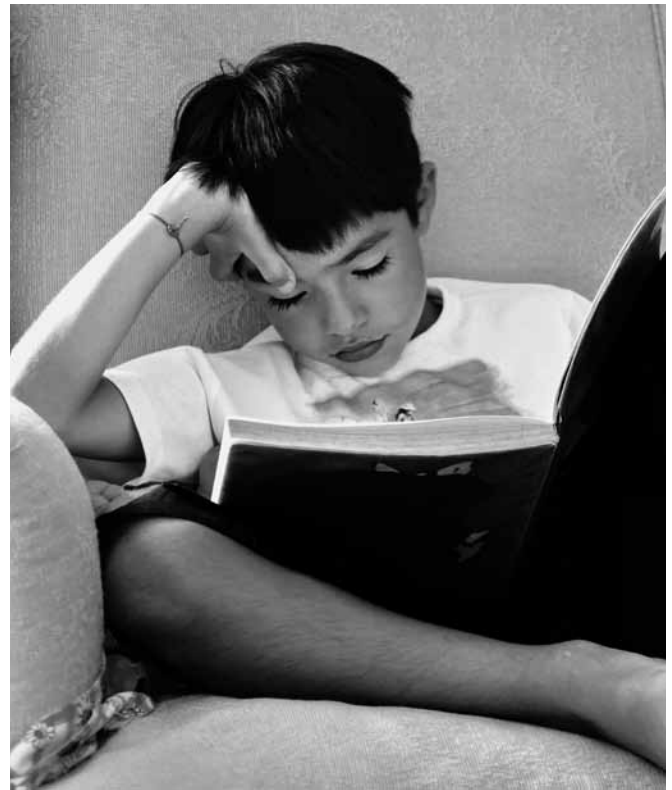
Acknowledging the unique expertise of teachers in interpreting results, based on their knowledge of their students, classrooms and everyday teaching practice, could increase the use of the study results among teachers. It could also encourage teachers to implement what they believe are relevant ways of enhancing students' learning.

As most teachers are interested in enabling their students to succeed, encouraging teachers to engage with international studies such as PIRLS has the potential to benefit pupils in the classroom more than if the interpretation and use of ILSA studies are left to policymakers and the media alone. If the main focus of the PIRLS study is to inform governments around the world how to increase students' reading comprehension and understanding, not involving the professionals who interact with pupils in the classroom on a daily basis would appear to be a lost opportunity to gain valuable expertise.

RECOMMENDATIONS FOR EDUCATION

Based on our project and connected research we would recommend the following to systems that participate in PIRLS:

1. Include teachers in the interpretation of the PIRLS data when the results are released, to ensure educators contribute fully to the national dialogue surrounding the results in each country.
2. Work with teachers in education systems that participate in PIRLS to develop podcasts, posters, and similar materials, and make these easily available to practitioners.
3. Run workshops or practitioner conferences where teachers can interact with researchers, fostering valuable dialogue on how the data collected by PIRLS can be communicated and used to support good teaching practice.



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IEA POLICY BRIEF

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