
Parental Involvement in School Activities and Student Reading Achievement – Theoretical Perspectives and PIRLS 2011 Findings¹

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This article is concerned with involvement of parents in their children's education. Research on the topic suggests that students whose parents take an active role in their school activities are more likely to attend school regularly, have higher achievements, and continue their education beyond high school (Henderson & Mapp, 2002; OECD, 2012). Enhancing parental involvement is a major concern of policymakers in education in many countries. For instance, in the United States, the *No Child Left Behind Act* includes, among its purposes, providing parents meaningful opportunities to participate in the education of their children (US Department of Education, 2001). In the United Kingdom, the Government's White Paper, *Higher Standards, Better Schools for All* (UK Department for Education and Skills, 2005), seeks to increase parental choice, responsibility, power and involvement. In Chinese Taipei, parental involvement in school affairs is regulated by the *Educational Fundamental Act* during the period of compulsory education (Taiwan Ministry of Education, 1999). Most European and many Latin American countries now also have formal initiatives to support ties between the school and the family (Miljević-Ridički & Vizek Vidović, 2010; Muñoz Zamora 2011).

However, regardless of widespread advocacy of increased parental involvement in education, strategies that promote it are not always systematically implemented and are not always equally effective across different socie-

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tal groups. According to the *Encyclopedia of the Progress in International Reading Literacy Study (PIRLS) 2011*, most of the 56 participating education systems report having formal policies to ensure parental involvement in schools. As expected, the implementation of these policies varies considerably across countries. In approximately half of these education systems, national or regional laws mandate that parents are part of the school governing bodies, while in others the involvement of parents is encouraged, but not compulsory (Mullis et al., 2012). Regarding the effectiveness of these policies across different societal groups, previous research points out that it is likely that strategies to increase parental involvement mainly attract parents who are already involved (Reynolds, 2005). As a consequence, these actions may be unintentionally widening achievement gaps between disadvantaged students and their already advantaged peers.

This paper seeks to answer two questions. First, is there a relationship between parental involvement in school activities and student reading achievement in the education systems participating in PIRLS 2011? Given that both parental involvement and student achievement are often influenced by the family socio-economic context, particularly by parental level of education (Desforges & Abouchar, 2003). The second question is whether parental involvement is associated with the level of parental education within each of the analysed education systems?

Theoretical Framework: Achievements in PIRLS' Reading Literacy and Parental Involvement in a School Life

Sociologists' attention to school, families and communities has changed dramatically over the past decades. In the late 1960's and 1970's, most studies on families, schools, or communities were conducted as if these were separate or competing contexts. The first framework to explain the concept of parent involvement focused mainly on the roles that parents' needs to play and not the work that schools need to do to organize strong programs to involve all families in their children's education. The community was rarely considered in research that examined family conditions or school effects on students. In the 1980's, studies began to clarify terms, recasting the emphasis from parent involvement (activities left up to the parent) to school and family partnerships (programs that include school and family responsibilities). Discussion also turned to ways that communities influence the quality of family life and the students' futures. It became generally accepted that school, family and community partnership are needed to improve the children's chances of success in school (Epstein & Sanders 2002, pp. 525-526). In contemporary theory, we can identify the theory of overlapping spheres of influence, also known as Epstein mo-

del of overlapping spheres of influence as social organizational perspective of school, family and community partnership. Epstein suggested that a new perspective was needed and proposed that the most effective families, schools, and communities had common goals and shared missions concerning children's learning and development, instead of setting separate goals and unique missions. Also, that these contexts are overlapping spheres of influence (Epstein, 1987). The model of overlapping spheres of influence includes external and internal structures. The external structures can be pulled together or apart by important forces (that creates conditions, opportunities and incentives for more or fewer shared activities in school, family and community contexts). These forces being the background and practices of families, schools and communities, the developmental characteristics of students, historical and policy context. The internal structures of the model specify institutional and individual lines of communication, and locates where/how social interactions occur within and across the boundaries of school, home and community. The theory integrates and extends many ecological, educational, psychological and sociological theories of social organizations, interpersonal relationships and life course development. The overlapping spheres model places concepts of cultural capital, social networks and social capital in a broader theoretical context (as the areas of overlap and internal structure show where and how networks are formed and cultural and social capital are required (Epstein & Sanders, 2002, p. 526).

Various terms are used to refer to the cooperation between parents, teachers and schools (e.g. parental involvement, parental participation, school-family relations, educational partnership and so forth). Internationally, the term 'partnership' is increasingly being used to give form to the concept of meaningful cooperative relations between schools, parents and the local community (Smith et al., 1999, in Driessen, Smith, and Sleepers, 2005, p. 510). Such a partnership is then construed as the process in which those involved mutually support each other and attune their contributions with the objective of promoting the learning, motivation and development of pupils (Epstein 1995, in Driessen, Smith, and Sleepers, 2005, p. 510).

Based on Franklin's (2008, p. 426) definition on educational partnership, this is a realm that takes a myriad of forms- at the simplest level; the notion of partnership can be used to describe the joint efforts of schools and parents to enhance the academic success of children. In addition, parental involvement can contribute positively to the teacher's performance, school climate and a schools' effectiveness, all of which may eventually result in greater student achievement (Christenson and Clea-

ry, 1990; Epstein 1995; in Bellibas and Gumus 2013, p. 179). With regards to the fact that schools are increasingly seen as providing a possible focal point for retaining and regenerating community, also teacher professionalism is redefined in line with that: teachers, as professionals, do not stand on pedestals above parents and community, but develop more open and interactive relationships with them (Hargreaves and Fullan, 1998, in Hargreaves, 2006, p. 688). The new relationship that teachers have to form with parents is one of the greatest challenges for their professionalism in the postmodern age. For sure, communication with parents has always been a part of a teacher's work and responsibility. Teachers often stress the importance of support at home for student success at school. Parent involvement in school has traditionally taken many forms, including parent-teacher interviews, parent nights, special consultation on student problems, parent councils, and parent volunteer help in the school and classroom (Young and McGheery, 1970; Midwinter 1972; Epstein 1995; in Hargreaves 2006, p. 688). In recent years, teachers' relationships with parents in schools have become more extensive, and more prominent (Hargreaves, 2006, p. 688).

The extensive research carried out in the last thirty decades across Europe and North

America indicates that parental involvement in children schooling has positive association with the variety of educational outcomes such as; better school achievement and higher grades, better school attendance, less drop-out rates, less behaviour problems including drug and alcohol abuse as well as more positive student and parent attitudes toward education (e.g. Eccles and Harold, 1996; Fantuzzo et al., 1995; Epstein et al., 1997; Griffith, 1998; in Miljević-Ridički and Vizek Vidović, 2010, p. 2).

Fan and Chan (2001, p. 1) argued that the idea that parental involvement has a positive influence on students' academic achievement is so intuitively appealing that society in general, and educators in particular, have considered parental involvement an important ingredient for the remedy for many problems in education. The vast proportion of the literature in this area, however, is qualitative and non-empirical. Among the empirical studies that have investigated the issue quantitatively, there appears to be considerable inconsistencies. A meta-analysis was conducted to synthesize the quantitative literature about the relationship between parental involvement and students' academic achievement. The findings reveal a small to moderate, and practically meaningful, relationship between parental involvement and academic achievement. Through moderator analysis, it was revealed that parental aspiration/expectation for children's education achievement has the strongest relationship, whereas parental home super-

vision has the weakest relationship, with students' academic achievement. In addition, the relationship is stronger when academic achievement is represented by a global indicator (e.g., GPA) than by a subject-specific indicator (e.g., math grade) (2001, p. 1).

On the grounds of empirical research, Epstein (1992; 2001) has distinguished six types of parental involvement reflecting different types of cooperative relations between schools and parents:

1. Parenting. Schools must help parents with the creation of positive home conditions to promote the development of children. Parents must prepare their children for school, guide them and raise them.
2. Communicating. Schools must inform parents about the school program and the progress of children's school careers. Schools must also present such information in a manner, which is comprehensible to all parents, and parents must be open to such communication.
3. Volunteering. The contribution and help of parents during school activities (e.g. reading mothers, organization of celebrations).
4. Learning at home. Activities aimed at the support, help and monitoring of the learning and development activities of one's school-going children at home (e.g. help with homework).
5. Decision making. The involvement of parents in the policy and management of the school and the establishment of formal parental representation (e.g. school board or parent council memberships).
6. Collaborating with the community. The identification and integration of community resources and services with existing school programmes, family child-rearing practices and pupil learning (in Driessen, Smith, and Slegers 2005, pp. 511).

Desforges and Abouchaar (2003) exposed that parental involvement is a catch-all term for many different activities including 'at home' good parenting, helping with homework, talking to teachers, attending school functions, through to taking part in school governance. It is relatively easy to describe what parents do in the name of involvement. It is much more difficult to establish whether this activity makes a difference to school outcomes particularly since school outcomes are influenced by so many factors (Desforges and Abouchaar, 2003, p. 13). Along these lines, the socio-economic status is also one of the main recognized factors. Socio-economic status has today become a recognized factor that has an impact on student achievements in various, diverse and complicated ways (Saha, 1997).² Lareau (1978) argues that the socio-economic status of parents is one of the most important determinants of parental involvement in edu-

2 A general agreement does exist, i.e., that the socio-economic status represents income, education level and job (Gottfried 1985, Hauser 1994; in Schulz et al. 2010, p. 32).

cation. Following her study, many other studies have shown that patterns of parental involvement, in both, quality and quantity, significantly vary in different communities that differ in their socio-economic, cultural and ethnic characteristics (Bandlow, 2009; Chavkin & Williams, 1993; Desimone, 1999; in Bellibas and Gumus, 2013, p. 179). Strengthening the cooperation between schools and parents appears to be critical to improve the school careers of disadvantaged groups, such as ethnic minority and low socio-economic status pupils (Abrams and Gibss, 2002; Barnard, 2004; Jeynes, 2003, 2005; Lopez, Scribner & Mahitivanichcha, 2001; in Bellibas and Gumus, 2013; Smith et al., 2002; in Driessen, Smith, and Sleepers, 2005, pp. 509-510). According to Lareau (1978), low income parents' lesser involvement in their children's education can be explained in two ways: First, since these parents are mostly have lower educational attainment, they do not have sufficient skills to assist their children in educational matters. Second, they do not have adequate information about schooling, such as curriculum, subject areas, and instruction, and they often do not have enough resources (money, time, etc.) to invest in their children's schooling (Bellibas and Gumus, 2013, p. 180).

Methods

Data

For exploring the association between parental involvement in school activities and student reading achievement, we used data from the latest cycle of the Progress in International Reading Literacy Study (PIRLS 2011) conducted by the International Association for the Evaluation of Educational Achievement (IEA). The study assesses reading literacy at Grade 4 using representative samples of students in the participating education systems. PIRLS also collects extensive, internationally comparable information on the background characteristics of the students, their parents, teachers and the schools where they study. The analyses we conducted utilizing information on parental involvement in school activities (as reported by school principals), parental level of education (as reported by parents), and student reading achievement (PIRLS achievement scores). We used data from 54 of 56 education systems that included all relevant data needed for the analyses.

Measures

The study uses the reading achievement in PIRLS 2011 as an outcome variable to explore its relationship with parental involvement in school activities. Achievement scores in PIRLS result from IRT scaling. The test booklet completed by each student contained only a subset of the items

from the whole assessment item pool. The item parameters are estimated using two and three parameter logistic models for the multiple-choice and dichotomously scored constructed-response items and a Partial Credit Model (PCM) for the constructed response items scored polytomously (correct, partially correct and incorrect). The achievement scores for each student are “plausible values” (PVs), randomly drawn from a conditional distribution where the information from achievement items and background questions are pooled together. To account for the measurement error, the estimation of achievement of the population or groups within the population is done for each PV separately and afterwards the results are averaged, deriving a correct estimate of the standard error. The scale for reporting the results has a mean set to 500 and standard deviation of 100 (Martin & Mullis, 2013).

As for the parental involvement in school activities, the study uses the report by the school principals. The principals are asked to characterize the parental involvement in school activities on a five-point Likert scale, from “Very high” to “Very low”. To present the patterns more clearly in the analysis, the scale was collapsed to just three categories prior to the analysis: “Very high or high”, “Medium”, “Low or very low”.

The highest parental education in PIRLS as reported by the students’ parents on a five-point scale: university or higher; post-secondary, but not university; upper secondary; lower secondary; some primary, lower secondary or did not attend school. The variable takes the information of either parent having higher educational degree. In order to obtain more clear results, the categories were collapsed into two: 0 – below university degree; 1 – university degree or higher.

Analysis Methods

First, the average achievement per level of parental involvement (very high or high, medium, low or very low) was computed. The significance of the differences was tested using a regression model where the parental involvement was used as dummy coded independent variable and the achievement (five PVs) was the dependent variable. In nearly all countries statistically significant relationship was found. As it is known that higher educated parents tend to participate more (see Desforges & Abouchaar, 2003; Hornby & Lafaele, 2011), the highest education of students’ parents was introduced as a control variable in the model and it was tested if the relationship between parental involvement and achievement is still significant after taking out the effect of the parental education.

Second, the association of the level of parental involvement and parental education was tested. For this purpose, the level of parental invol-

vement in school activities (very high or high, medium, low or very low) was computed. The strength of the relationship between the percentages of students for whom at least one parent has higher education (i.e. university degree) was computed by adding the percentage of students for whom at least one parent has a university degree as a dependent variable and the different levels of parental involvement as dummy variables in a regression model: the effect of “Very high or high” was tested against the other two dummies (“Medium” and “Low or very low”).

Research Questions:

In the paper, two research questions were within our sphere of interest: 1. Is parental involvement associated with student reading achievement? and 2. Is parental involvement associated with the levels of parental education?

Results

Is Parental Involvement Associated with Student Reading Achievement?

In order to answer this question, we divided schools into three groups according to the level of parental involvement reported by principals. Then, we calculated the average reading performance of students for each of these three groups within each education system. On average, students in schools with high levels of parental involvement (green dots) had higher scores than those attending schools with medium (yellow dots) or low levels (red dots) of parental involvement in almost all countries and these differences are statistically significant.

Previous research suggests that both parental involvement and student achievement can be strongly influenced by the family socio-economic context, particularly by the parental level of education (Desforjes & Abo-uhaar, 2003; Hornby & Lafaele, 2011). For this reason, we tested whether there was a relationship between student achievement and parental involvement above and beyond the parental level of education³. The question we answered with this analysis is: If all parents had the same level of education, would students whose parents participate more in school still show higher reading achievement than students whose parents don't participate as often? We added the parental education as a control variable. The results are presented in Figure 1. As the figure shows, in 31 out of the 54⁴ education systems analysed, this is the case. In other words, in more than the half of the analysed educational systems, the association between reading

3 As a measure of the parental level of education, we used the reports of parents on the highest level of education completed by either the father or the mother of the student.

4 England and United States did not collect data on parental education and were excluded from the list of education systems when controlling for this variable.

achievement and parental involvement is positive and statistically significant even after taking into account the differences in parental education. These education systems are marked with an asterisk in Figure 1.

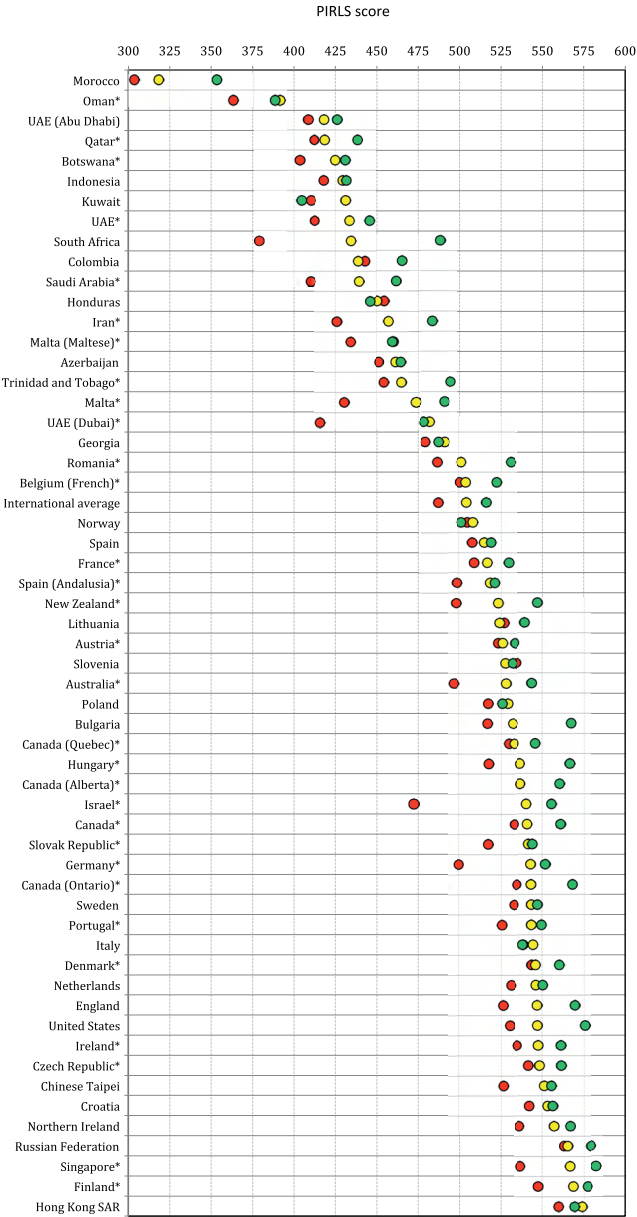
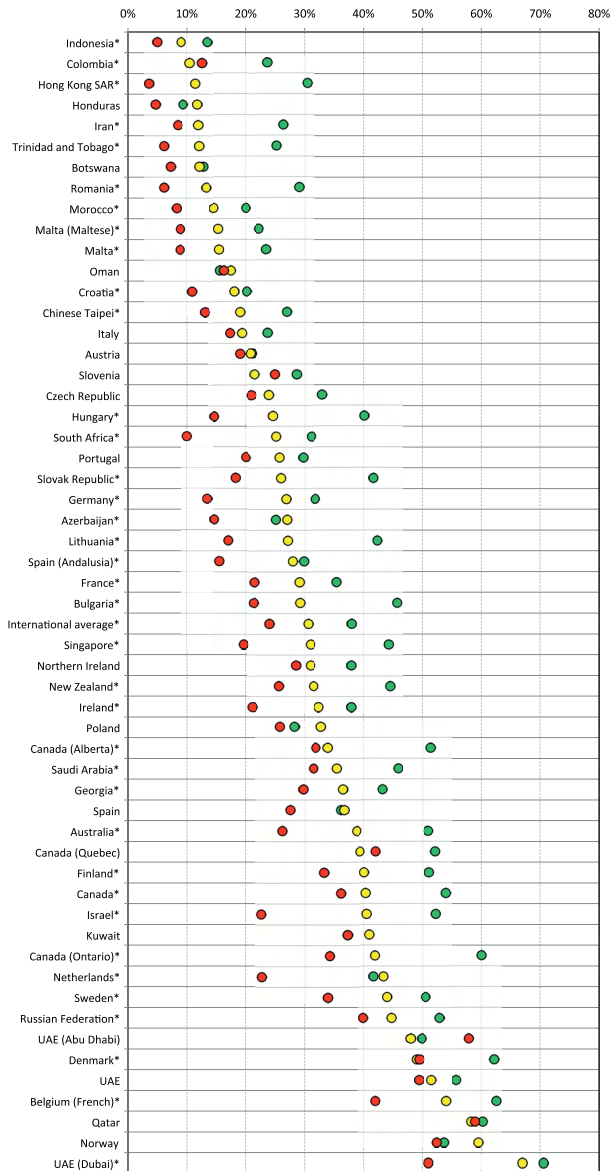


Figure 1: Average Grade 4 student reading achievement scores in schools with different levels of parental involvement, by country: PIRLS 2011.

Is Parental Involvement Associated with Levels of Parental Education?



* Statistically significant difference in percentage between schools with low high involvement

Figure 2: Percentage of Grade 4 students in schools with different levels of parental involvement who had at least one parent with a university degree, by country: PIRLS 2011.

So far we have seen that most education systems participating in PIRLS 2011 have policies in place to encourage parental involvement in school. We have also shown that, in most of these education systems, there is a positive association between parental involvement and student reading achievement above and beyond parental level of education. But do parents tend to get more or less involved in school activities depending on their level of education?

In this section, we investigate whether the level of parental involvement in school is associated with levels of parental education. Figure 2 presents the percentage of students who had at least one parent with a university degree (horizontal axis) in schools with different levels of parental involvement. The graph clearly shows that, in most cases, schools with higher parental involvement (green dots) have more parents with higher education than schools with medium (yellow dots) or low (red dots) levels of parental involvement. In other words, parents with a university degree tend to be more involved in school activities than those who have lower levels of education. The countries where we found a statistically significant difference in the percentage of parents with higher education, between schools with low and high parental involvement are marked with an asterisk in Figure 2.

Conclusions

Based on our analysis, we can draw the following conclusions that have possible policy implications:

1. Higher parental involvement in school activities is associated with better student reading achievement.

Our analyses indicate that, in most of the education systems participating in PIRLS 2011, students in schools with high parental involvement achieve better scores than those attending schools where parents are less involved. Furthermore, this association holds even after taking into account parental education, which the literature perceives to be the main factor affecting parental involvement at school. We therefore consider policy interventions aimed at increasing parental involvement in school activities as a potential measure to support the improvement of student reading achievement.

2. Strategies aimed at enhancing parental involvement are especially relevant in schools with low levels of parental education.

Even though the education of parents does not affect the strength of the relationship between parental involvement and achievement, given that less educated parents tend to be less involved in school activities, we suggest that policymakers direct specific attention to developing strate-

gies that have the potential to enhance parental involvement in schools with students coming from households with low levels of parental education. Such initiatives should take into account the barriers to involvement already identified in the literature. For example, parents with low levels of education often have limited time and financial resources to invest in their children's education. Additionally, they may lack the necessary skills to assist their children academically and to glean information on the educational processes, e.g. curriculum, subjects, instruction (Bellibas & Gumus, 2013). They may also be intimidated from becoming involved in school affairs (Thurston & Navarrete, 2011).

3. *Policymakers need to be mindful that reading achievement is influenced by multiple factors.*

In preparing this paper, we analysed only two of these factors: parental level of education and their involvement in school activities. However, other factors such as student attitudes and socioeconomic background, or teacher and school characteristics, are also known to have an impact on student learning (for example, see Hattie, 2009). More work is needed in order to identify the factors that influence the contribution of parental involvement to student achievement in specific contexts, especially given that the context differs across the countries around the globe. Preferably, in order to be able to identify causal relationships, these works should consider research designs including the analysis of longitudinal data and randomized trials. A good example is a recent large-scale controlled experiment run in a disadvantaged educational district in France. This study demonstrated that parental school involvement can be significantly improved through simple participation programs and that such policies have the potential for developing students' positive behaviour and attitudes toward school (Avvisati et al., 2014).

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