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EDUCATION POLICY | RESEARCH ARTICLE

Parental participation improves student academic achievement: A case of Iganga and Mayuge districts in Uganda

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Abstract: Educational research has linked parental participation in children's schooling with a wide range of children's academic outcomes. Parental involvement involves time and resource commitment towards children's academic performance. This paper extracts data from a cross-sectional survey involving 2,669 grade six students attending public and private primary schools serving households located in Iganga-Mayuge health and demographic surveillance system in rural Eastern Uganda. The paper adopts two of the six types of parental involvement detailed in the Epstein parental involvement framework. This paper hypothesises that parental participation through parenting and communication types of involvement will give children an advantage towards academic achievement. Using a regression model and controlling for individual, school and household covariates, the results indicate that a unit increase in parental participation through parenting and communication types of involvement significantly increases students' numeracy scores by 6 and 15 percentage points, respectively. Similarly, a unit increase in parental participation through parenting and communication types of involvement significantly increases students' literacy scores, by 6 and 12 percentage points, respectively. This implies that parental participation plays a pivotal role in motivating children to improve their academic grades. For students to reap maximum benefits in an education system, the learning should not be solely left to the student-teacher relationship but should be extended to include active parental involvement among other education stakeholders.

ABOUT THE AUTHOR

G.M. Mahuro is a research consultant, a statistician by profession and a PhD student specialising in Social statistics. He has a cumulative work experience of over 10 years in research in different disciplines (Market, Social and Health). His current research interests include understanding the barriers facing people living in sub-Saharan Africa that deny them chances to enjoying quality life. This is achieved through generating solutions adduced from data-driven evidence from implementation research and the evidence informs reviewing or making policies.

PUBLIC INTEREST STATEMENT

Extant literature links parental participation in children's schooling with varying academic outcomes. Parental involvement involves time and resource commitment. We extracted data from a cross-sectional survey involving 2,669 grade six students attending primary schools serving households in Iganga-Mayuge health and demographic surveillance system. We hypothesise that parental participation increases children's academic achievement. The regression model's results indicate that unit increase in parental participation through parenting and communication increases students' numeracy by 6 and 15 scores, respectively. Parental participation is pivotal in motivating children's academic grades. Learning should not be solely left to the student-teacher relationship but should enhance active parental involvement.

Subjects: Educational Research; Education Studies; Education Policy

Keywords: academic achievement; parental participation; parenting; communication

1. Introduction

The power of primary education on economic, health and social development cannot be underestimated. In 2000, the United Nations held a general assembly summit in New York to deliberate on the Millennium Development Goals (MDGs). One of the deliberations was that, by 2015, all school-aged children in the whole world should be able to complete at least five years of primary schooling giving both boys and girls equal chances (UN, 2000). To trace the impact of this declaration, the UNESCO (2010) data indicated that, specifically in Uganda, there was a significant 19% increase in student enrolment from 2008 to 2010. However, UN (2010) factsheet indicates that almost 70 million school-aged children do not receive basic education with almost half (45%) of them being from sub-Saharan Africa.

Uganda, a sub-Saharan African country, adopted the MDG number two on education, and the Ministry of Education, Science, Technology and Sports introduced the Universal Primary Education (UPE) policy in 1997 (Bategeka & Okurut, 2006). The main aim was to make education accessible, equitable and affordable which in return would reduce poverty by endowing every citizen with basic education. The UPE policy abolished all tuition fees and other non-statutory fees but only allowing parents to provide basic learning materials (exercise books, pen, pencil, eraser and ruler). In return, this led to an increased gross enrolment rate to 145% (4.5 million children) and created an opportunity for all parents to participate in the education system. The ripple effects made parents feel relieved of the school fees burden due to the reduction in inequity in access to education across all districts in Uganda.

If the students are to reap the maximum benefits in their schooling, they must enjoy parental support. In all spheres of learning, there is substantial research evidence that involvement of parents in their children's schooling gives a positive effect on their learning outcomes (Desforges & Abouchaar, 2003; Rafiq, Fatima, Sohail, Saleem, & Khan, 2013). The Epstein model of 1995 (Epstein, 1995) broadly deliberates on three overlapping environments that fulfil the needs of the child in terms of development, growth and learning. These three environments are the family, school and community and, above all, they are intertwined and interlinked. In these environments, a parent's presence is requisite since a parent appears either as a parent/guardian, teacher/instructor or a community member.

Epstein (1995) discussed the six types of parental involvement within the three environments encompassing child's development, growth and learning. The six include: parenting, volunteering, communication, learning-at-home, decision-making and community collaboration. In these contexts, parental involvement greatly involves commitment of time and resources towards their children's learning. The benefits accrued by students who enjoy such parental involvement in their schooling include improved learner attitudes towards schooling; developing positive behaviour; improved school attendance; decreased school dropouts; and improved academic performance (Desforges & Abouchaar, 2003; McNeal, 2001).

In 2010, William and Flora Hewlett Foundation, in partnership with Bill & Melinda Gates, initiated the improving learning outcomes in primary school (ILOPS) research project in four sub-Saharan African countries. The four countries were Burundi, Malawi, Senegal and Uganda and the research project was anchored by Institute of Education and Action Aid. From this project, Marphatia, Edge, Legault, and Archer (2010) reported that for Ugandan parents, other than providing basic learning materials and food, they do not maximally participate in their children's schooling. This report also indicated that only one in every three parents in the Ugandan sampled population participated in their children's schooling. The major reasons were their low literacy levels, dissimilarity on school inputs and the misunderstanding of the UPE policy. The dissimilarity was because at national level,

the policy-makers pressed that parents were not supposed to make any financial contribution towards education proceeds other than provision of basic learning materials such as pencils, erasers and rulers. On the other hand, the school heads were pressing parents to provide cash and non-cash items towards schooling of their children. Such cash items included fees for examination, development, parents and teachers association, security and extra tuition. The non-cash items included raw food, firewood and water. This, therefore, created the gap for parents' involvement in education matters as parents felt disillusioned and disempowered by policy-makers, felt confused and locked-out of schooling participation, had no space for discussion as well as their lack of sufficient knowledge of their roles in education.

There is a recent quasi-experimental education intervention study done by Abuya et al. (2014) involving over 1,200 girls living in two Nairobi urban slums in Kenya. In this intervention study, girls were exposed to various education intervention packages, with one intervention involving parental participation. Evidence from this study revealed that girls who enjoyed parental involvement in their schooling significantly improved their educational aspirations by 13 standardised mean scores than those not exposed to parental involvement package of the intervention. Similarly, the same girls significantly increased their numeracy and literacy mean scores by over 10 (in both) standardised mean scores than those not exposed to parental involvement intervention package. From that report, there is evidence that parental participation in their children's schooling goes a long way in shaping and moulding their children's educational outcome.

This paper is abstracted from a study that was carried out by the African Population and Health Research Center (APHRC) in collaboration with Iganga–Mayuge Health and Demographic Surveillance Site (IMHDSS) among grade three and grade six attending schools that serve families that reside in the IMHDSS. The main objective of the education study was to examine the patterns of schooling and the quality of education received by children living in rural settlements in Uganda. The results will help identify the critical barriers that have the most effect on access to schooling and learning among primary school students residing within or one kilometre proximate of IMHDSS. The study findings will improve the understanding of the learning barriers and quality of education in rural Uganda and the evidence generated will engage and inform policy-makers in Uganda about learning barriers and learning outcomes.

This paper seeks to add more evidence to the strength of the relationship between parental participation and the student academic achievement and other learning outcomes. The parental participatory roles were indirectly captured by asking the primary grade six students of their knowledge of parental involvement during their learning activities at home and school. In order to show the strength of the relationship, we hypothesise that the two types of parental involvement significantly improve students' academic achievement. The two types of parental involvement are parenting and communication, adopted from the 1995 Epstein framework of the six types of parental involvement (Epstein, 1995).

The evidence generated from this research will illuminate policy-makers on the significant roles played by parents when they maximally participate in their children's education. It will complement the many education research studies which have consistently shown that involving parents during education of their children has significantly improved academic achievement among other learning outcomes. Parental involvement increases student's opportunity to learn, and serves as a link between school (teacher) and home (student). This implies that the students will receive quality education during their schooling. The associated ripple effects of receiving quality education include improved academic achievement, students develop positive behaviours, improved student retention in school, improved grade progression and transition to higher levels and above all, parents feel that their resources and time on schooling inputs are optimally utilised.

2. Literature

It is known that family is the basic unit which nurtures a child from infancy to other higher stages of human development. Similarly, school is viewed as an institution responsible for enhancing cognitive development, learning, socialisation and moulding an individual who fits in the community. Finally, community is perceived as the universe where all individuals converge, irrespective of their character or past experience. To build a healthy and peaceful society, human interactions at various stages of human development are inexcusable.

Every individual is traced back to a family and therefore parental involvement in any stage of individual's growth is inseparable. It is worth noting that parental involvement in development of an individual varies within cultures and societies. Parental involvement takes many forms such as good parenting at home, provision of basic necessities, positive behaviour moulding, instilling positive social values and good citizenry and above all, enhancing educational aspirations (Rafiq et al., 2013). In particular, parental involvement in their children's academic performance may include activities such as helping the child in reading, supervising their homework, offering coaching and presenting learning activities outside schools.

The fourth edition of the *Evidence* publication entitled "New Wave of Evidence Report" by Henderson and Mapp (2002) is an Educational Research Information Centre (ERIC) document which reviewed over 80 research studies. This report indicated that the continuously generated evidence on positive parental participation influences their children's academic performance is substantial and consistent. When families, schools and communities work in collaboration in supporting the child's learning, the children gain better education outcomes. These outcomes include: improved learning achievement, retention in school and improved educational aspirations. The same report indicates that there are long-term effects associated with children whose families are involved in their education. Such include children attaining better test scores, being enrolled in education programmes which are perceived to be challenging, regular school attendance, positive behaviour and better socialisation skills.

Numerous education research studies have provided consistent evidence on interconnections between families, schools and communities in enhancing children's growth, development and learning (Albright, Weissberg, & Dusenbury, 2011; Boethel et al., 2004; Epstein, 2001). The comprehensive framework by Epstein (1995) details the six types of the parental involvement on their children's learning outcomes. This framework remains the most useful tool that links parental participation with learning outcomes within the three overlapping spheres of family, school and community. The six types of parental involvement are parenting, communication, volunteering, learning-at-home, decision-making and community collaboration. Each of these participation types has a significant and unique influence on the child's growth, development and learning, and of course on parents, school and community as well (Rafiq et al., 2013). To mention but a few, the author briefly describes the six types of parental involvement and the benefits to the students only while making reference from the book "Perspectives and previews on research and policy for school, family and community partnerships" by Epstein (1995, pp. 712–739). The six types are:

2.1. Parenting

This encapsulates helping families to establish a home environment that supports children as students. First, schools should help parents with information on how to create a conducive learning environment at home. This can be achieved through sharing information related to parenting approaches which include child's health, nutrition, discipline and adolescence. In return, the schools should endeavour to assimilate and incorporate the students' family life orientation into what is taught in the classroom. The benefits of the parenting type of involvement to the student include improved discipline, improved school attendance, increased learning time and understanding the importance of schooling later in life (Epstein, 1995).

2.2. Communication

This involves the two-way information sharing between the school and the parents regarding school programmes and students' progress. Schools are encouraged to devise various modes of relaying information between the school (teachers) and the family (students). In many instances, parents are encouraged to contact schools at onset of each grade entry. Various forms can be adopted which may include periodical parent-teacher meetings, telephone conversation and messaging, social media platform and student's report card. This creates a positive communication link which forms the basis of discussion in case the student develops problems later in the year. Students who enjoy such communication benefits have improved knowledge of their academic progress, improved school attendance, more decisive on courses they are undertaking, improved communication skills and better understanding of school rules, regulations and policies (Epstein, 1995).

2.3. Volunteering

A volunteer is any individual who desires to develop or support school goals for the benefit of students' learning. The schools therefore should adopt ways which encourage family individuals to volunteer and participate in school activities and events, especially parents with special talents. Such volunteers could be assigned to be a class parent, mentor students during school open forums, organise school visits with established role models, participate in school communal work and join students during sporting activities. Students who enjoy such voluntary participation by their parents develop enhanced communication skills with older individuals, become exposed to life outside school and they also emulate the volunteers and carry it on in their future life development (Epstein, 1995).

2.4. Learning at home

By nature, home becomes the first school that all students attend as parents actively engage with children during their development cycle. In this regard, schools should help parents with interactive activities which enhance learning activities similar to those taught in school. These may include: assisting parents to understand some activities in the school curriculum which their children require during their schooling progression, devise a mechanism that informs parents on how to monitor their children's practices and behaviour, educate parents on how to train their children on how to set and achieve appropriate career goals and how to choose school programmes that best fit the student's schooling interest. Students who enjoy such parental involvement have improved test scores, improved homework completion and they develop a positive attitude towards schoolwork (Epstein, 1995).

2.5. Decision-making

For a school to run smoothly, it is of paramount importance to involve parents in the administration, governance and decision-making roles. Schools should engage parents in decision-making by including them through parent-teacher associations, school management committees and school patrons or chairperson. Students who enjoy such parental involvement have improved schooling and learning outcomes and enjoy enactment of some policies on their behalf which favour them (Epstein, 1995).

2.6. Collaborating with the community

Since the schools and families are community-based, they benefit from the resources bestowed in that community while supporting their children's education. The community gatekeeper may be involved in any of the aforementioned involvements. The associated benefits to students include improved learning outcomes, exposure to more learning opportunities, tapping talents for those with extra-curricular potentials, applying the school knowledge with world realities, best choice in career options and ability to associate with other individuals apart from students, teachers and their parents (Epstein, 1995).

In this paper, parenting and communication types of parental involvement are discussed. The measures of parenting contexts included preschool attendance, monitoring school attendance and

checking students' progress records. These parenting contexts have been documented to have positive learning outcomes on the students. For example, a cross-sectional study done by Ngware et al. (2015) in two rural districts in Uganda indicated that grade six students who attended preschool for at least two years significantly outperformed their counterparts by 12 and 7 mean scores in literacy and numeracy, respectively. Additionally, many studies have shown that students with good school attendance rates have improved learning outcomes—academic performance and transition to other grades (Ou & Reynolds, 2008; Ready, 2010).

The measures of communication type of parental involvement for this paper included sharing information on where the student stays after school, provision of basic learning materials, distance to school, parent having a meeting with the school when their children enter each grade, monitoring and discussing student academic performance with teachers, having clear information on school rules and policies and communication about programmes offered in the school. Students who enjoy such parental support have improved awareness of their own academic achievement, become more informed on education courses offered and understand the school's rules and regulations. These benefits are also complemented by the quasi-experimental study carried out by Abuya et al. (2014) in two urban slums in Kenya. The study found that students who enjoyed the parental component intervention had improved attendance rates, became more self-confident and had open communication with their parents against their counterparts who did not enjoy parental component intervention.

3. Methods

3.1. Study site

The data for this paper are from a larger study carried out in two eastern Uganda districts (Iganga and Mayuge). The larger study involved all public and private schools which serve children residing in households located in Iganga–Mayuge health and demographic surveillance system (IMHDSS). IMHDSS is located astride the two districts, about 120 km from Kampala city (Ugandan capital) in eastern Uganda. The site is managed by Makerere University School of Public Health and covers 65 rural villages with over 80,000 households. Although the IMHDSS site is in a rural setting, some areas within the administration centre (e.g. Iganga and Mayuge town) were considered as urban or peri-urban. This region is marked as the most fertile of the Ugandan population with total fertility rate (TFR) of seven against the national TFR of six. About half of the population has not completed a primary 7 education level, 12% have completed primary 7 out of which 4% has completed a secondary S4 education level. The area is agriculturally very productive in subsistence farming alongside fishing (IMHDSS, 2007).

3.2. Study design, target population, sampling and sample

This study adopted a cross-sectional design to collect quantitative and qualitative data from different target subjects at specific points in mid-2014. The study involved a three-stage cluster sampling design; in the first stage, schools were selected from the sampling frame having fulfilled the inclusion criteria. The second stage involved selecting a single stream for each grade six in each school. In case there were more than two streams, random selection of one stream was done by tossing a coin—which occurred rarely. The third stage involved the selection of at least 40 students in each grade six. For instances where there were less than or equal to 40 students in grade six, all the students participated. In the event that there were more than 40 students, a table with randomly generated numbers was used to select 40 students.

The targeted participants were all the head teachers of the public and private primary schools, all the grade three and grade six English and mathematics teachers and randomly selected grade three and six students and some of their parents. The sampling frame for all the schools was obtained from the respective District Education Offices. Listing of schools within the IMHDSS was done with an inclusion criteria that: schools must be within the IMHDSS; those within one kilometre proximate and must have students in both grade three and six. Sampling procedures for the larger study are

described in Ngware et al. (2015). For the purposes of this paper, we investigate the characteristics and responses of interest from 2669 (98.5%) of the 2711 grade six students who participated in the cross-sectional study.

3.3. Survey tools, data collection and data quality

Although this study involved many survey tools, for the different study objectives and study samples (see Ngware et al., 2015), this paper particularly used the self-reported student questionnaire and the numeracy and literacy assessment tests. Cognisant that the assessment tests assessed various learning domains in both numeracy and literacy, this paper only considers the standardised mean scores for each student as the outcome variable. From the student questionnaire, only two of the six types of parental involvement as defined in the Epstein framework (Epstein, 1995) were adopted. For this paper, the two types are: parenting (preschool attendance and monitoring student absenteeism) and communication (checking student performance records, parents visiting schools when their children progress in grades, where the child stays after school, distance to school and provision of basic learning materials). Other demographic characteristics for students (age and sex), parents (level of education and household wealth index) and school (location, distance and type) were also included.

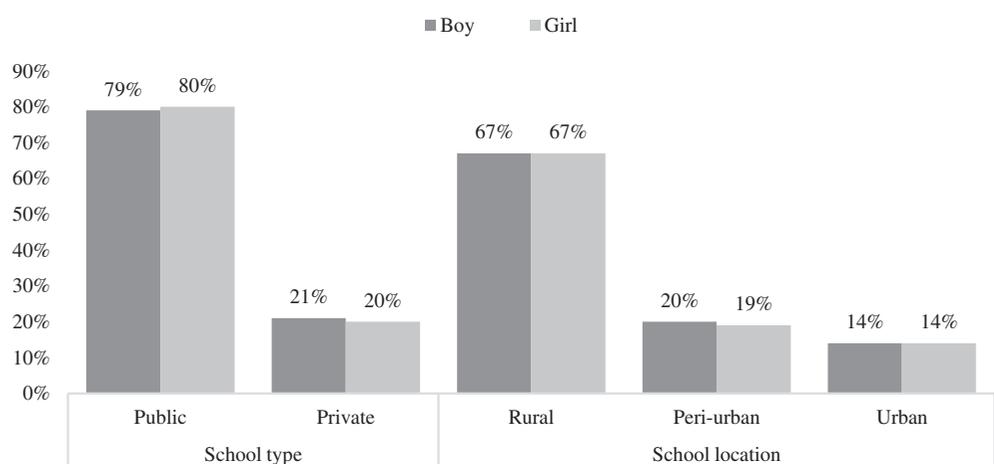
3.4. Analytical technique

This paper examines the relationship between parental participation and student academic achievement. The student academic achievement was measured using scores for each numeracy and literacy assessment tests that was administered to each student. This yielded a continuous outcome variable which was then standardised with mean of zero and one standard deviation. Since the two types of parental involvement were measured using different questions, a proxy latent variable was constructed using principal component analysis data reduction technique and each student was assigned a computed regression factor score. This yielded the two independent variables, namely: parenting and communication. On the other hand, the covariates were not transformed from their original measures. To obtain the best estimate of the parental involvement on academic achievement, while controlling for other covariates, a multiple linear regression model was used. Notably, when estimating influence of parental involvement on numeracy scores, literacy was used as a covariate alongside others but the reverse was not true.

4. Results

The unit of analysis in this study was the student sex. The district as unit of analysis would not yield plausible results because 76% (62 out of 82) of the schools in the sample were from Iganga district. The overall sample comprised of 56% girls with Iganga and Mayuge having 57 and 54% female participants, respectively, and the difference was not significant. The Figure 1 indicates the comparison

Figure 1. Distribution of school type and school location by student sex.



of school characteristics in terms of type and its location by student’s sex. There is no significant difference observed in the type of school (public vs. private) they attended and neither by the location (rural, peri-urban and urban) of the school. This is an implication that students had similar distribution with respect to location and type of school they attended.

To coherently understand the distribution of the data, the test of independence was done between the student’s sex and other household and school characteristics. For purposes of reading the results in Table 1, the boy student is the reference category and therefore a positive mean difference favours the boy student while the reverse is true. From Table 1, most of the household and school characteristics were not any different between the boy and the girl. This is an indication that there were no differences between boys and girls in some household and school characteristics and on numeracy and literacy scores. However, parents (father and mother) of the girl students were significantly educated than parents (father and mother) of the boy students. On the other hand, boy students were significantly older, lived far from school and were more absent in school than their girl counterparts. Since boy students were older, lived far from school and their parents were less educated than those of girl students, this could explain why more boys than girls were significantly absent from school in the last school month.

For optimal estimation of the parental involvement on student academic achievement, the above demographic characteristics which showed significant differences were used as covariates in the next level of analysis. Two multiple linear regression models were fitted in the data, where the first

Table 1. Comparison of students’ sex with household and school characteristics

	Pupil sex	Mean difference	Std. error difference	Sig. (2-tailed)	95% CI lower	95% CI upper
School type	Boy vs. girl	0.008	0.016	0.597	-0.023	0.039
District where school is located	Boy vs. girl	0.026	0.017	0.121	-0.007	0.058
School location	Boy vs. girl	-0.002	0.028	0.951	-0.057	0.054
Wealth quintiles: three categories	Boy vs. girl	-0.002	0.032	0.957	-0.064	0.061
Student’s age	Boy vs. girl	0.319	0.063	0.000***	0.196	0.441
Did you attend preschool?	Boy vs. girl	0.091	0.354	0.797	-0.603	0.785
How often do you speak English at home?	Boy vs. girl	-0.011	0.022	0.614	-0.055	0.033
Mother/female guardian’s education level	Boy vs. girl	-0.138	0.070	0.049**	-0.276	-0.001
Father/male guardian’s education level	Boy vs. girl	-0.137	0.074	0.063*	-0.282	0.007
Repeating grade 6	Boy vs. girl	0.009	0.031	0.759	-0.050	0.069
Ever changed schools?	Boy vs. girl	0.035	0.047	0.463	-0.058	0.127
Mathematics scores	Boy vs. girl	0.305	0.471	0.517	-0.618	1.228
English scores	Boy vs. girl	0.665	0.801	0.407	-0.906	2.236
Number of days absent from school in the last school month	Boy vs. girl	0.363	0.216	0.093*	-0.061	0.786
How far do you live from this school in kilometre?	Boy vs. girl	0.205	0.102	0.045**	0.004	0.405
Numeracy scores	Boy vs. girl	0.305	0.517	0.471	-0.618	1.228
Literacy scores	Boy vs. girl	0.665	0.407	0.801	-0.906	2.236

*Significant at 10%.
 **Significant at 5%.
 ***Significant at 1%.

outcome was the numeracy score, controlling for literacy scores alongside the four covariates. The second model was using literacy scores as the outcome while controlling for the four covariates. Using the first model, the regression accounted for 33% variation in the model which was significant ($F_{(11,2093)} = 94$ and a p -value = 0.000), an implication that the data fitted the model well and the estimation can be relied on.

Using numeracy score as the outcome variable and reading from Table 2, the household wealth index, grade six repetition, students' age and school absenteeism lost their significance. Speaking English at home, parental (mother and father) education level, literacy scores and distance to school had significant influence on the numeracy scores. These factors, even after controlling for them, are attributing to the low proportion variance due to regression ($R^2 = 33\%$). The two types of parental involvement (parenting and communication) have a significant influence on students' numeracy scores. From the model's results, it can be inferred that a unit increase in parenting and communication forms of parental involvement significantly increases students' numeracy scores by 6 and 15 units of measure ($\beta_1 = 0.060$, p -value = 0.001 and $\beta_2 = 0.146$, p -value = 0.000), respectively. On running the second model where literacy score is treated as the outcome variable, the model explained 18% proportion of variation due to regression and the model significantly fits the data ($F_{(10,2094)} = 44$ and a p -value = 0.000). In this model, the household wealth index, speaking English at home and school absenteeism lost their significance. Parental education level, grade six repetition, student age and distance to school had significant influence on literacy scores—which could explain the presence of low proportion of variance due to regression ($R^2 = 16\%$). However, a unit increase in parenting and communication forms of parental involvement significantly increases students' literacy mean score by 6 and 12 units of measure, respectively ($\beta_1 = 0.058$ with p -value = 0.006 and $\beta_2 = 0.12$ with p -value = 0.000).

Table 2. The regression standardised estimates and significance level

	Using numeracy score as DV				Using literacy score as DV			
	Beta	Sig. (2-tailed)	Lower bound	Upper bound	Beta	Sig. (2-tailed)	Lower bound	Upper bound
Wealth quintiles: three categories	0.003	0.863	-0.044	0.052	0.011	0.637	-0.040	0.066
How often do you speak English at home?	0.033	0.080*	-0.007	0.120	0.015	0.475	-0.045	0.097
Mother/female guardian's education level	0.050	0.035**	0.002	0.055	0.157	0.000***	0.061	0.120
Father/male guardian's education level	0.049	0.032**	0.002	0.052	0.124	0.000***	0.042	0.097
Repeating grade 6	0.007	0.696	-0.039	0.058	-0.034	0.094*	-0.100	0.008
Student's age in years	-0.005	0.796	-0.026	0.020	-0.155	0.000***	-0.119	-0.069
Literacy scores	0.449	0.000***	0.409	0.486	-	-	-	-
Number of days absent from school in the last school month	-0.005	0.794	-0.011	0.008	-0.001	0.966	-0.011	0.010
How far do you live from this school in kilometre?	-0.057	0.002***	-0.037	-0.009	-0.069	0.001***	-0.043	-0.012
Parenting skills	0.060	0.001***	0.024	0.099	0.058	0.006***	0.017	0.101
Communication skills	0.146	0.000***	0.107	0.184	0.116	0.000***	0.074	0.160

Note: DV = dependent variable.

*Significant at 10%.

**significant at 5%.

***Significant at 1%.

5. Discussion

This paper investigates the strength of the relationship between parental involvement and their children's schooling outcomes. Out of the six types of parental involvement in the Epstein (1995) comprehensive framework, this paper has been able to identify and adopt two of them (parenting and communication skills) from a larger study, which will be discussed with respect to their influence on numeracy and literacy scores as the learning outcomes. The results obtained from this study have coincided with many other educational research studies investigating parental involvement and academic achievement—see Murray et al. (2014). When families, schools and communities partner together towards supporting schooling of their children, they create a conducive environment for learning, strengthen parenting and communication skills, improve their children's academic achievement and the society develops improved social values and good citizenry.

Preschool attendance is one the parental roles constituting parenting context in the Epstein (1995) parental involvement framework. By far and large, parents are expected to enrol their children for preschool education. Preschool education level serves as the initial entry for a learner towards the educational journey and is associated with later-in-life successes on various human development contexts. The results of this study have shown that parental involvement in the parenting form of parental involvement significantly increases the students' numeracy and literacy scores. Similarly, other educational studies have revealed related associated benefits of preschool attendance. For example, in sub-Saharan Africa, a study done in Ethiopia by Eshetu (2014) and another one in Uganda by Ngware et al. (2015) have shown that those students who attended preschool have significantly higher numeracy and literacy scores than those who never attended.

Communication serves as the medium of information sharing between two or among many involved parties. In Epstein's (1995) parental involvement framework, communication between the three overlapping spheres plays a fundamental role towards students achieving optimal learning outcomes. This study has revealed that consistent communication form of parental involvement, such as providing conducive environment at home, checking students' progress record and random visits to school, significantly increases students' numeracy and literacy scores. This finding is congruent to other education studies such as one done by Abuya et al. (2014) in Kenya which revealed that parental participation by engaging and creating an open communication with their teenage school-going children significantly improved their learning outcomes. Teenage children became more aspired in education, developed open communication and were able to make critical decisions. Also, Henderson and Mapp (2002) found that effective communication among family, school and community was associated with improved student academic achievement, higher enrolment in education programmes perceived to be challenging, improved school attendance and improved social behaviour at home and school.

Despite the loud call for parental involvement in their children's education, it should be understood that the extent of parental involvement is very variable. This is attributed to the parent's myriad family responsibilities and commitments. For example, a parent who is in full-time employment may forfeit attending parent-school meetings for employment (office) duties. Epstein's (2001) framework of overlapping spheres categorised parental involvement barriers into family, school and community. Further research by Hornby and Lafaele (2011) adopted these overlapping spheres and classified them into a four-model concept which includes societal factors, individual parent and family factors, child factors and the parent-teacher factors.

6. Conclusion

The results of this paper provide an overarching evidence to the concerned parties in the implementation of UPE policy. The policy holders should reflect on their decisions and consider putting up mechanisms that will attract parents to participate in the education systems in Uganda. Such mechanism would include rephrasing the policy in a clear and concise language, outline what school inputs the parent is supposed to contribute, create opportunities for parents to be involved in school activities and encourage active interaction with education stakeholders.

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