Validation of the role of the student's age on parental involvement in children academic outcomes: Case study of grade thirteen students of the modern high schools of the district of Kara

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ABSTRACT: The objective of this research is to deepen the knowledge and to validate the effects of the age of the student on the parental involvement in his or her schooling and the implication of this parental involvement on the student’s academic results or performance in the Togolese context. To do this, 472 parents were chosen from among those who enrolled their children in Form Seven classes in the commune of Kara. They responded to a questionnaire we submitted to them. A review of the literature on this issue has identified benefits for children, teachers and parents related to parental involvement. The analysis of the answers obtained from the survey allowed us to evaluate the effect of the student’s age on the involvement of the parent in the formal education of students.

KEYWORDS: parental involvement, age of student, performance, schools, Kara.

1 INTRODUCTION

More than ever, educational success has become an essential prerequisite for an individual’s full participation in society. Faced with this challenge, Togo is looking for ways to improve academic success, particularly because of the problems of failure and school drop-out. One of the main ways for Togo to achieve this is parental involvement. In fact, it is well known that parents play a key role in the development and educational success of their children (Bempechat & Shernoff, 2012). Their role begins well before their children attend school and continues throughout their children’s schooling, thus, making parents the favourite educational collaborator that can efficiently guide the student facing the challenge of educational success.

Unsurprisingly, research is unanimous on the importance of parental involvement upon students’ perseverance in their formal education (Larivée, 2011) and in the decisions made for the needs and services of their children (Bornstein & Bohr, 2011; Kanouté, André, Charrette, Lafortune, Lavoie and Gosselin-Gagné, 2011, Mondain & Couton, 2011).

According to the above, many studies have focused on parental involvement in school monitoring with students (Deslande & Lafortune, 2001, Fan & Chen, 2001, Jeynes, 2005, Epstein, 2011, Larivée, 2011 Tardif-Grenier, 2015). However, given the wide disparities between countries, the results of these studies cannot be applied to the Togolese context. In Togo, research by Bawa (2012), Kola et al. (2009), Mindamou (2011), Tchable (2015),) and many others have described the role of parental involvement, but none to our knowledge has focused on the relationship sex-age of the student, parental involvement and academic outcomes. Still, it is useful to demonstrate, in general terms, the irreducible link between these variables and parental involvement in children’s education, both at school and at home. In this respect, the aim of this article is to define the importance of parental involvement in the schooling of the student in general, but also to show to what extent this involvement of the parent is associated with the age and the sex of the child.

In addition to this significant shortcoming, we have found out through the literature review that the overwhelming majority of scientific work on parental involvement limits itself only to primary level education (Hill & Taylor, 2004) whereupon parental involvement is at its peak (Catsambis, 2007, Daru-Bellat & Van Zanten, 2006). Whereas we think, as Mathieu Ichou (2010) points out, we need to understand this on-going process of parental involvement at higher levels of education.
Furthermore, this study has some practical implications, especially for school workers who are called often to deal with parents of students. The former, having been well-informed on the positive aspects of the concerns of the parents for their children’s success at school, can deploy measures that promote a warm welcome in schools. In short, the study should contribute to improving parental involvement in high school and, consequently, its impact on academic results.

Besides, the conclusions drawn from this study will help to put in place environments conducive to parental involvement in schools in order to strengthen educational practices with a view to improving the implicit education of children.

This study will help, as well, to understand that students are not solely responsible for their success or failure. Factors from their social background also have an impact on their school experience, for example the quality of their relationship with their parent plays a key role in their success.

2 PARENTAL INVOLVEMENT AND ACADEMIC SUCCESS

There is consensus in the scientific literature on the importance of parental involvement in academic success and in the fight against early school leaving. This parental involvement offers the student the best opportunities of success and helps the student to adjust to the school environment and to counter any prospective failure.

Among the researchers who have made academic achievement a concern, we mention Epstein (1995), whose work has been used by several authors to support parenting as a pedagogical measure to counteract difficulties and promote academic success. According to Larivée (2010), parental involvement in school gives the student a positive attitude towards school, a lower rate of absenteeism and an improvement in academic performance. In addition to these benefits, Claes and Comeau (1996), for their part, pointed out that parental involvement facilitates the integration of students into school life and benefits both the teaching staff body and the parents themselves. A major point of their research is that in a relationship between school and home, a positive parental involvement allows teachers to better understand the cultural and family environment of children for tolerance and better adaptation of their educational practices. According to researchers Ford et al. (1998) and Henderson et al. (2002) and Christenson, (2004), parental involvement in school increases the rank and quality of solutions, the integrity of educational programs and the improvement of school infrastructures, the improvement of leadership, school staff, curriculum and teaching. Likewise, these scholars have a positive view of the value that parents place on school activities as well as on their own. As regards parents, their participation in the school makes it possible to have the necessary information to better understand the problems of some children in their studies and to follow up the evolution of the educational paths of their children. Similarly, a positive involvement at the school level enhances in each parent self-confidence and trust in their children's teachers because they have a better understanding of the reality that surrounds their everyday experiences.

Scientific literature has amply demonstrated that there is a positive relationship between parental involvement and academic achievement of the student. Moreover, the relationship age-sex of the student, parental involvement and educational outcomes deserves to be investigated, since to date it does not seem that the impact on the results has been very well understood.

3 AGE AND PARENT-SCHOOL INTERACTION

The scientific literature has retained the undeniable effect of a number of variables on the basis of which parents involve themselves differently with their children in school. The student’s age is therefore one of the factors to be taken into account when it comes to integrating parents into the school life of children; let us see in what way. Many studies about the impact of the adolescent crisis on parental involvement in school have proved the inevitable presence of conflicts between parents and adolescents for several reasons that come intermingle or overlap. The constant search for autonomy, which is a central reality in adolescence, leads to the inevitable discrepancies between parents and adolescents over the conception of rights, permissions or age of permissions (Cloutier & Groleau, 1987, Claes, 2004). Also, parents feel that they give too much privilege and that decisions are made on the basis of mutual exchanges, while teenagers claim more rights and more room for decision-making. The fact that relationships between parents and adolescents fall within a vertical framework of obligations and impositions increases the risk of conflict and reduces the equitable resolution of conflicts. Moreover, the mode of conflict resolution that dominates between parents and adolescents is that of withdrawal. Indeed, most often, the adolescent or the parent abdicates and leaves everyone occupy the field of reproaches and recriminations. Conflict resolution methods based on discussion, exchange of views or compromise are rare (Smetana, 1989; Youniss & Smollar, 1985). The gap between parents and children increases to a peak at around 15-16 years. Restoration occurs in early twenties (Collins & Russell 1991, Steinberg 1987). This makes adolescence very often a trying period for parents. Parental satisfaction is lowest during the marriage cycle at the time of their child's adolescence (Argyle & Henderson, 1985). Other studies have found that parents are more involved when the child is young, that is, when he or she begins in the school world than when the child is more advanced in schooling.
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(Deslandes, 2001, Paquin and Drolet, 2005). All this adds to the studies that showed that interactions between parents and children centred on school decreased with age or the level of involvement of parents (Eccles & Harrold, 1993). On the whole, the synthesis of these readings brings to light the idea that parental involvement in the school which determines the results is affected by the age of the student. Consequently, we decided to focus our research towards this direction especially since few studies have been carried out on the link between the trio age-parental involvement-academic results. After some clarifications, the research question becomes: Is there a relationship between the age of the student, parental involvement, and academic achievement? From this question, the general assumption is that the parental involvement which leads to the results is mediated by the age of the student. It is divided into three sub-hypotheses:

- Students who are younger are more successful in school paths than students who are older;
- Parental involvement in school has effects on students' success;
- The parental investment that leads to academic achievement is mediated by the student's age.

However, these assumptions should be supported by the results of a field survey.

4 METHODOLOGY EMPLOYED

The objective of this research is the evaluation of the influence of the age factor of the student on the parental involvement in the school and by extension on the results of the school. In order to do so, the data were collected from 500 students targeted in the final grades (Form Seven students) of the modern secondary and high schools of the commune of Kara. The students who were selected were those who lived with their parents and were thus subjected to a questionnaire consisting of 29 questions in total. These questions relate to the respondent's identification points and provide information on indicators of parental involvement. In addition, many difficulties were encountered in the field, which reduced the sample to 472 individuals, not to mention the problem of missing values which will further reduce this number. In sum, the sample is composed of 472 students of all Series (A4, C and D) from the Chaminade, Espoir, Fraternité and Kara-Tomdè high schools of modern education. This study, carried out during the academic year 2016-2017, highlights the age parameters of the child, parental involvement in the child's studies and academic results. For this purpose, these academic results represent the general averages of the previous class (i.e. Form Six) obtained by each student during the previous academic year (2015-2016). In addition, these averages are coded into four (04) ordinal categories according to: Very poor (M < 8.00), Insufficient (8.00 ≤ M <10.00), Fair (10.00 ≤ M <12.00) and Good (12.00) where M stands for the mean average. The variable “student’s age” is also an ordinal variable represented on three (03) age groups ranging from 15 to over 22 years as follows: the average teen age group (15 to 18 years), the adolescents (19 to 22 years) and the group of young people over 22 years old. However, parental involvement is a scale variable with six (06) indicators, each identified by a number of items that form part of the questionnaire. Indeed, a total of seventeen (17) items spread over the set of indicators allowed to calculate the scale scores. These items are defined according to the Likert scale (1: Always, 2: Often, 3: Sometimes, 4: Never) for items with 4 response atoms or (1: Yes, 2: No) for dichotomous items, the “parental involvement” scale is then a decreasing additive scale of Likert type simply because the negative responses are attributed to the heavy scores (never = 4). Consequently, the scores used are calculated by the algebraic sum of the atomic indices of all the items constituting the scale. In sum, the variables "student age" and "student achievement" are ordinal and "parental involvement" is a quantitative variable. This study involved multiple methods of data analysis starting from a descriptive analysis of the sample that allowed the students of the four (04) schools (Chaminade, Fraternité, Espoir and Kara Tomdè High Schools) to be assigned to the Kara commune according to their age. For this purpose, analyzes of variance were used to evaluate the relationship between parental involvement and the student’s age and the relationship between parental involvement and educational outcomes. However, the relationship between the student’s age and the results obtained was analyzed through a contingency table. Moreover, in a second step, a covariance analysis was used to evaluate the mutual dependence between the three (03) parameters of the study, i.e. parental involvement, age of the child and school results; in order to highlight this ricochet relationship between these parameters.

Table 1: Age distribution table of students in the sample

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 15 to 18</td>
<td>223</td>
<td>48.1</td>
<td>48.1</td>
</tr>
<tr>
<td>From 19 to 22</td>
<td>213</td>
<td>45.9</td>
<td>94</td>
</tr>
<tr>
<td>Older than 22</td>
<td>28</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>464</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
The study sample is composed of 472 students from the four (4) institutions, the analysis of the chart below shows that students are evenly distributed across their age groups. Indeed, this distribution characteristic of the sample is proved by the Gaussian curve of the age frequencies. Far from everything we can already see that our sample is divided into just three age classes. Indeed, the new generations of undergraduate bachelors are of lower age classes. Thus, there is a high concentration of ages between 15 and 18 years, with a fairly high proportion of students, or 48.1% of all respondents. Moreover, for the class of adults between the ages of 19 and 22, the number of youngsters is also quite high, with the adjusted percentage of 45.9% slightly below the first class. Unfortunately, the over-22 age group holds only 6% of the total distribution of the sample. Moreover, if only for a few registered individuals, it is difficult to meet older people in the new generations. Thus, it must be said that these individuals were greatly retarded in their school career during which they had to repeat a certain number of classes.

![Chart 1: Sample Distribution by Age of Students](chart)

5 RESEARCH RESULTS

5.1 RELATIONSHIP BETWEEN STUDENT CHARACTERISTICS AND PARENTAL INVOLVEMENT IN SCHOOL

<table>
<thead>
<tr>
<th>Age group</th>
<th>Population</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 15 to 18</td>
<td>223</td>
<td>34.9283</td>
<td>7.97147</td>
</tr>
<tr>
<td>From 19 to 22</td>
<td>213</td>
<td>37.9953</td>
<td>8.71428</td>
</tr>
<tr>
<td>Older than 22</td>
<td>28</td>
<td>39.8571</td>
<td>7.32178</td>
</tr>
</tbody>
</table>

Statistics

- ANOVA: $F = 7.082$  $\text{ddl} = 2$  $\text{p} = .000$ (***)
- Linearity: $F = 19.076$  $\text{ddl} = 1$  $\text{p} = .000$ (***)

***: the test is significant at the 0.001 level (bilateral test)
The analysis of this table shows that the average parental involvement score for average adolescents youth aged 15 to 18 years, is 34.928 with a standard deviation of 7.971. This means that if we consider one individual taken at random in this group of average adolescents with a total enrolment of 223 students from these four different institutions, he or she has a lower or higher parental involvement than the average. On the other hand, for adolescents who are adults (young people aged 19 to 22), there are 37,995 for 8,714 as a score for parental involvement, while the average of 39,857 for 7,322 is used for young adults more than 22 years old. It should be noted that the high scores show little parental involvement, so we find that the average of the parental involvement scores is lower the higher the age of the child gets, especially the variation of this same involvement is higher among teenage adults. Therefore, the analysis of variance shows that the difference between these average means is statistically significant (F = 7.082; p = .000). Thus, the age of the child determines the extent of parental involvement, i.e. when the child’s age increases, his parents’ involvement in his schooling decreases progressively. Moreover, by a linearity test (F = 19.076, p = .000), we note that this relationship is more linear, in other words, the parental involvement is more intense with small children and gradually fades with the coming of age or the growing up.

### 5.2 **Student Age and Achievement**

#### Table 3: Student Distribution by Age and Educational Achievement

<table>
<thead>
<tr>
<th>Age of Students</th>
<th>Student Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>From 15 to 18</td>
<td>19.3%</td>
</tr>
<tr>
<td>From 19 to 22</td>
<td>5.6%</td>
</tr>
<tr>
<td>Older than 22</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

The descriptive analysis of the students sample population through the age distribution and academic performance of these students shows firstly that students who are older are less successful than those who are younger. Secondly, it can be seen that among those who succeed, the students of lower age produce more distinguished results than those of advanced age. In fact, success being conditioned by an average greater than or equal to 10.00, in the first table above of this paragraph one observes this: the percentages of students aged 15 to 18 years with a passable and good results (40.6% and 19.3%, respectively), are higher than the percentages of students aged between 19 and 22 years (28.7% and 5.6% respectively) and over 22 years (23.1% and 3.8%, respectively).

As a result, young students succeed much more in number and much better than their older classmates. This is partly explained by all the actions taken by the parents with regard to the education of their young children for the good pursuit or continuation of the studies. In contrast to those who succeed, the situation is reversed for those students who fail, that is to say those whose results are insufficient and very insufficient. In other words, among those with an average below 10.00 and even very much below (less than 8.00), young students aged 15 to 18 years are less represented (37.1% and 3%) as compared to the students aged 19 to 22 years and over 22 years of age (59% and 6.7% respectively) and (61.5% and 11%), respectively, very much in the same proportions as previously.

#### Table 4: Validity tests of the contingency table

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Value</th>
<th>Ddl</th>
<th>prob. (bilateral test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>37.414</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>38.218</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>33.771</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>423</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the remainder of this paragraph, when we look at this second table, the significance of the parameters of the contingency assessment (Chi-Square and Likelihood Ratio) validates the characteristics of this sample in the population. In other words, the results provided by young students are far much better than those of older students. In addition, the Linear-by-Linear Association shows that the mediocrity of school results evolves linearly with age; that is, when children grow older, their school results are less appreciated. Therefore, up to the 1% threshold a student’s academic performance systematically depends on the student’s age.
5.3 PARENTAL INVOLVEMENT AND EDUCATIONAL ACHIEVEMENT

Table 5: Parental Involvement Based on Student Achievement

<table>
<thead>
<tr>
<th>Academic Results</th>
<th>Mean Average</th>
<th>Standard Deviation</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>34.7692</td>
<td>7.96959</td>
<td>52</td>
</tr>
<tr>
<td>Passable</td>
<td>34.8699</td>
<td>8.11832</td>
<td>146</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>38.4300</td>
<td>8.14634</td>
<td>207</td>
</tr>
<tr>
<td>Very insufficient</td>
<td>39.6818</td>
<td>9.50382</td>
<td>22</td>
</tr>
</tbody>
</table>

Statistics: \( F = 2165.231 \), \( \text{ddl} = 4 \), \( p = .000 \), \( R^2 = .953 \)

Parental involvement is the set of actions carried out by parents with regard to children in their schooling with the main objective of achieving good academic performance. Thus, these results change when parental involvement varies in terms of quality and degree of involvement. Indeed, the descriptive analysis in this table above shows bilateral growth in average parental involvement scores and their respective standard deviations in relation to different levels of school performance ratings (Good; Passable; Unsatisfactory, Very insufficient). In addition, the lowest average scores of parental involvement are recorded in families where children's academic performance is better with low variances: Good (34.769; 7.969); Passable (34.869; 8.118). Moreover, according to the test of averages which gives Fisher's statistic \( F = 2165.231 \) with zero probability at the 5% threshold, we conclude that the difference is very significant up to the threshold of 1% and therefore parental involvement and educational outcomes of children are intimately linked. Also, with a coefficient of determination \( R^2 \) which rises to .953, we will say that this relationship will be all the stronger as the parental involvement gets more intense.

5.4 PARENTAL INVOLVEMENT, AGE OF STUDENT OUTCOMES AND STUDENT OUTCOMES

The study of the parental involvement-age of the student-academic achievement relationship focusing on the indirect effect of parental involvement on the educational outcomes provided by the child according to age is summarized by the results recorded below through an analysis of variance taking into account the three variables. Since the parental involvement variable is a scale variable that is constructed from a certain number of indicators, we will then evaluate the mean scores of the implication according to the three age groups (15-18 years, 19-22 years and over 22 years) and the two categories of academic achievement success, i.e. (Fairly Good or Good and Passable) and failure, i.e. (Unsatisfactory and Very Insufficient). For this purpose, the analysis of the graph below shows a disjunction between the distribution curves of the scores of parental involvement in the schooling of their children, compared with the results provided for each group of students in a same age group. This disjunction clearly shows that parents are more active in their children’s academic achievement when they are still 15 to 18 years old. On the other hand, this parental manoeuvre towards children tends to gradually diminish as these children grow older, that is to say, the action is weak on young people aged 19 to 22 years, very weak for those who are over 22 years of age. Indeed, in our case study, the scores calculated on the scale of parental involvement have a meaning that is inversely proportional to the degree of parental involvement, this would mean that the higher the score obtained, the lower the parental involvement and vice versa. Thus, graphic results show that parental involvement is even stronger among young people aged 15 to 18 than it is among those over 22 years of age. In other words, the average parental involvement scores for youth aged 15 to 18, which are between 32.33 and 37.04, are generally inferior to the average scores for young people over 18 years of age, save for an exception. This is what explains the position of the curve in blue (15 to 18 years) compared to the other two curves green and gray (19 to 22 years and over 22 years). In particular, if we consider only the group of students in the first age group, we find that parental involvement is stronger and stable for good academic performance or success than for failure. Indeed, when the results obtained by the children are passable, fairly good or good, their parents' participation is important and almost constant, whereas it is rather variable when the results are poor and insufficient. On the other hand, although this is reversible, when the parent-school interaction centred on the child's success tends to diminish or at least deviates from the child's school setting, the results get worse (hence the peak of the curve in blue due to passing from Passable to Unsatisfactory). In sum, the analysis of the table giving the statistics of the covariance analysis model of the three parameters shows that at more than 95%, the relationship model thus established is well explained. Moreover, the model is validated by means of the bilateral test of comparison of the means of which Fisher's statistic \( F = 736.035 \) is highly significant of zero probability \( p = .000 \) at the 1% threshold. Thus, the age of the student is a determining factor in the impact of parental involvement on the educational outcomes of the child.
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6 DISCUSSION

The age of the child influences parental involvement. The older the child grows, the less the parents want to get involved to give the child more autonomy. Age varies parental involvement, which in turn affects school outcomes. Going in the same direction as our results, studies by St-Laurent et al. (1994); Zill (1999); Deslandes (2001); Paquin and Drolet (2005) pointed out that parents involved themselves more when the child is young, that is, when he or she first steps into the school world than when the child gets to higher grades or classes.

When we look at the relationship between the three variables (chart 2), that is, age, parental involvement, and academic results, we find that the good results at school are obtained by the younger students (15 to 18 years old). We thought that the age of the student has an incidence on the parental involvement and by ricochet on the results of schooling. This hypothesis is confirmed. The relationship between parental involvement and academic achievement is very significant. Here is the work of Epstein (1995) and Larivée (2010), who assert that school success depends on parental involvement in school. From the specific point of view, the 472 students surveyed allowed us to see that the parental involvement which is the determining factor of success at school is influenced by the age of the student who benefits from it.

7 CONCLUSION

Faced with the challenge of reducing inequalities in educational opportunities among children, the scientific literature accounts for the need to strengthen the presence and involvement of parents in the schooling of students. Families are an important means of preventing failures and protecting academic perseverance. Indeed, parental involvement is related to student outcomes. Our hypothesis is that the influence of parental involvement on outcomes varies according to the age and sex of the child, a subject on which the literature has lingered. Our results show that age appears to be an important characteristic to consider in relation to parental involvement and specify that the sex of the child has no power over educational practices. However, from a professional point of view, it would be interesting to pay particular attention to it in order to establish and improve school-home relationships and to make education a vector of sustainable development objectives.

Chart 2: Relationship between parental involvement, student age and educational outcomes

- Estimated Marginal Means of Scores des items à l'échelle de l'implication parentale
- Chart 2: Relationship between parental involvement, student age and educational outcomes
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