Role of Starting School Age in the Academic Performance at the Tertiary Level

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Abstract

The purpose of this research was to find out whether starting school earlier than four years of age gave any academic benefit to the students in the long run. This research aimed to find out whether the students who started schooling earlier than four years of age are able to achieve better grades and are better at self-regulation at the tertiary level. For this purpose, a sample of 108 students from a private business school comprising both early and late school starters were made to fill in questionnaires reporting their school starting age, their CGPA and answering questions that showed their level of self-regulation. The findings of this study suggest that there is no difference in the academic performance of the two groups, both in terms of their CGPA and their self-regulation skills.

Keywords: academic performance, school starting age, self-regulation, tertiary level

Introduction

The number of preschools has grown dramatically in Karachi in the past two decades. Not only the number of schools, but also the age at which children begin going to these schools has changed intensely. Children as young as 1.8 years begin their formal schooling in these preschools. This new trend advocates the role of early childhood schooling in the later achievement of students. There are many determinants of students' academic achievement, such as quality of schools, teacher-student relationships, socio-economic factors, motivational levels, self-esteem and parental education. However, early years schooling is being emphasized upon the most and it has thus become a matter of much concern among parents.

School starting age varies in different countries. In Japan, Australia and Germany, school entry is at the age of six, whereas in Finland, it is at the age of seven. Sending children to schools as early as 1.8 or 1.10 years has become prevalent and a generally accepted trend in the urban areas of Pakistan. Parents, especially in the upper income strata continue to follow this trend and generally seem to be happy with their decision. However, some experts believe that early years schooling exposes children to separation anxiety at a very tender age when, ideally, they should be spending time in a stress free environment involved in self-directed free play and not separated from their parents for long hours. Save Childhood movement run by 130 experts in the United Kingdom claims that early education is causing profound damage to children (Ellyatt, 2015).

Starting school at four years of age is a general trend in the United Kingdom, though it is being criticized by educationists.

Academicians in the UK have declared that the United Kingdom's policy of early year education is detrimental to children's health and emotional well-being. They demand that children should not be subjected to formal learning and assessments before the age of seven (Malik, 2013). According to a study conducted in Denmark, children starting schooling later show much better self-regulation, which persists in later years too (Dee, 2015).

Conversely, some studies suggest that sending kids to preschools in the early years shows substantial benefits in terms of positive impact on learning and development. Recent research suggests that children who attend preschools show its positive impact on adult achievements such as school graduation, completion of college degree and higher income (Yoshikawa, 2013). Thus, it is very important to find out whether sending kids to school at a very young age has any benefits in the long run. Much research has been conducted to find out the impact of early schooling on later achievement though not much work has been done on how students perceive their early schooling and its relation with their later success. Therefore, investigation of how students perceive the early years education to impact their later achievement is also of considerable importance.

This study has been conducted to find out the relationship between students' early school experience and its impact on their achievement at the tertiary level of education. The aim of the study is to fill the niche in the field of early schooling and to find out its impact on the achievement among the business students of a private institute. This causal study sets out to see if early schooling affects the later achievements at the tertiary levels.

This study will be able to provide useful insights in the field of early schooling and contribute towards making useful recommendations in the field. This will have implications on early schooling concept, additions or modifications to the type and style of early schooling, thereby re-adjusting perceptions of children and their parents as well as the academia's perceptions about early schooling concept and practices. It will also facilitate further research in the field of early schooling and its impact on later achievements.

Based on the objectives of the study, the following research questions were developed:

1. To what extent are students who started schooling before age four able to score higher than those who started schooling at four or above?
2. To what extent are students who received early education (before age four) better at self- regulation than those who started schooling at age four or above?

Hypotheses

H2: Starting school earlier than age four enables students to score higher at the tertiary level

H2: Starting school earlier than age four helps develop self-regulation skills in the students.

Literature Review

There are many features of students' academic achievement. These include active engagement in the learning process, acquisition

of the necessary skills and knowledge, contentment, completion of set goals, post-college performance and accomplishment of educational outcomes (York, Gibson, & Rankin, 2015). It is obvious that linked with this definition of achievement is the healthy cognitive development, self-regulation and emotional well-being of the students in question. Self- regulation is the ability to manage feelings and behaviors. Emotional well-being and self- regulation facilitate a child in becoming independent, managing stressful tasks, concentrating and paying attention to what is being said, adaptability and persistence; all of these facilitate their learning process. In preschool years, the self- regulation skills are still developing and keep fluctuating (Gillespie & Seibel, 2006).Thus, to determine whether early schooling affects the academic achievement and the self-regulation ability of students at the tertiary level, following research literature has been collected.

A research was conducted in New Zealand by Suggate, Schaughency and Reese (2009) comprising two groups of English speaking teenagers to see if the reading fluency in children who learnt to read later was different from those who received reading instructions earlier. The two groups comprised five children each; aged seven and five. The study was conducted in two parts over a period of two years. First, the reading fluency, word and passage reading were tested to find out that the group showing better results was the one that had received the early reading instructions. This analysis included parental income and their education, classroom environment, school-community affluence, home environment, age and self-perceptions. The earlier Reading Instruction Age (RIA) group had superior reading ability, word, non-word and passage reading in the first few years of school; however, when these students

reached grade four, it was observed that there was no difference in the reading ability of the two groups. The financial background, parental education, school and home environment, students' age and their self-perceptions were included in the analysis. A second study was then conducted on an additional 83 students, to compare the reading fluency and comprehension skills between the two groups. It was found that there was no difference in the two; however, the late starters showed better reading comprehension (Suggate, Schaughency & Reese, 2013).

Introducing math lessons in the early years is detrimental to the reasoning capacity of children and it also separates common sense from arithmetic concepts. According to Benezet (1936), if math lessons were given in the later years, children would better be able to understand and also would be able to apply these concepts to real life situations. The academic tests show the benefits of early schooling initially, though in long term, there seems to be no advantage of an early school start. Furthermore, in case of boys, early schooling demotivates them and usually they are mentally absent in the class even though are present physically and in worst cases they even dropout. Thus, for them early schooling distances them from the very objective of school (Katz, 2010).

The persistence of the beneficial effects of early years schooling was tested in a research conducted by the Center for Research in Children, Georgetown University (2012). It was found that the advantage in reading skills disappeared in the later years, whereas the persistence of the benefits in mathematic skills was found to be present, but just in case of boys and not girls. (Hill, Gormley & Adelstein, 2012). However, according to some studies

early childhood education helps the underprivileged. Several studies were conducted on individuals from underprivileged families and it as found that people who had attended early childhood school programs had a greater percentage of school graduation as compared to the ones from the same background who had not (Fuerst & Fuerst, 1993).

Piaget's cognitive development theory, explains the different stages of the development of human intelligence. He emphasizes on the role of early childhood in the development of a person and suggests that cognitive development depends on biological as well as environmental factors (Mcleod, Developmental Psychology; Jean Piaget, 2009). According to Piaget, there are four distinct stages of cognitive development. It is in the third stage, called the concrete operational stage when children's thinking process begins to mature and only in this stage they begin to make use of logic, which is between seven to eleven years (Mcleod, 2010). It therefore seems logical that children going to school before they are mentally ready to make use of logic, will not be benefited by early childhood schooling.

Another important research finding in this regard is the significance of play in early childhood and its role in the cognitive development and the development of self- regulation in children. Experts suggest that for small children, the time spent in playing is much more important for their cognitive development than the time spent in the classroom as they learn to regulate emotions and acquire language skills (Copple & Bredekamp, 2009). Thus, letting them spend time playing is much more conducive to their future success and achievement as opposed to sending them to school at an early age.

Future academic achievement also requires a person to have developed emotional skills and a healthy mind. Research suggests that play helps children develop social and emotional skills (Gray, 2011) and is crucial for social, cognitive and emotional well-being of children (Ginsberg, 2007). Moreover, research findings suggest that play initiated by children themselves as opposed to school-directed play, enhances the literacy and language development in children. This is due to the numerous opportunities to practice language in play (Bodrova, 2007).

Another important aspect of academic success is the self-regulation skills in students. There is considerable evidence that students' academic performance is associated with their level of self-regulation (Kitsantas, Winsler & Huie, 2008). Self- Regulation is defined as the ability of students to actively participate in their own learning process motivationally, behaviorally and meta-cognitively (Zimmerman, 1989). Self-control, the main aspect of self-regulation, is an important determinant of academic success. Studies show that there is a positive relationship between students' self-control and their academic success. (Honken & Ralston, 2013)

The difference in the academic performance of students with and without learning disabilities is also due to the difference in their self- regulation skills. Research evidence suggests that students must develop self- regulation skills in order to succeed academically. The development of self- regulation in students has a beneficial effect on their grade point average (GPA). Therefore the development of these skills must be emphasized upon (Ruban, McCoach, McGuire & Reis, 2003). On the other hand, there is also substantial amount of research that suggests the benefits of early childhood schooling.

According to a report published by Missouri Department of Elementary and Secondary Education, good quality early childhood schooling results in above average test scores, higher graduation rates and positive attitudes towards learning (Missouri Department of Elementary and Secondary Education, nd.).

Few empirical researches also suggest that children who receive early childhood (pre- school) education, develop a higher level of vocabulary, mathematics skills and executive functioning and these help them to develop a strong base for future academic success and achievement in primary and middle schools. Early math and reading skills were found to be linked to future academic achievement in later years. (Duncan, Claessens, Huston, Pagani, Engel & Dowsett, 2007; Weiland & Yoshikawa, 2013).

Methodology

Quantitative analysis using comparative design is used to compare the tests scores and self-regulation skills of early and late school starters and gauge the effects of school starting age on these two aspects of academic performance.

Variables

The dependent variables are the academic scores (CGPA) of students and the self- regulation skills in them as shown through the surveys. Primary data is used in terms of students filling in the questionnaires regarding their CGPA scores and their self- regulation skills.

Data collection

A survey questionnaire was used to collect data regarding students' self- regulation skills and their CGPA. This is shown in frequency tables. This main body of the questionnaire is based on direct question to find out the CGPA as well as the Likert scale as to assess the self-regulation in students. The Likert scale questions to assess the self-regulation are taken from a self- regulation questionnaire SRQ developed by Brown, Miller and Lawendowski (1999) with internal consistency being $\alpha = 0.91$.

For the purpose of this research, twelve questions were taken from the SRQ assessing the self-regulation of students. Thus, the questionnaire developed, had three sections: first for demographics, asking for the age group, gender and parental education of the students; second section asked for the school starting age of these students to differentiate the two groups and their current CGPA to assess the academic performance, and the third section comprised of the likert scale to assess the self-regulation skills of students which comprised of questions taken from the SRQ.

Sample

Purposive sampling was used. Feedback of 109 students of a business institute with ages 19 and above was collected through the adapted questionnaires.

Data analysis

The T- Test model is applied on the data to compare the early

and late school starters. Analysis is done employing SPSS.

Results and Discussion

The purpose of this study was to find out if there was any difference in the academic performance of early and late school starters in terms of their GPA and their self-regulation at the tertiary level. To test this hypothesis, the T-test independent sample model was used to compare performance in terms of the GPA and the self-regulation skills. The results of this study show that there is no difference in the academic performance of early and late school starters both in terms of their GPA and their self-regulation skills.

The data collected from the primary source i.e. business school students, both male and female, 19 and above years of age, demonstrated that the students who started schooling after four years of age were able to catch up with students who started their schooling between one to four years of age. They showed no disadvantage in the development of their self-regulation skills or their GPA scores at the tertiary level.

Table 1

School Starting Age Size of Groups

	Academic Performance	N	Mean	Std. Deviation	Std. Error Mean
SSA	1-4	74	3.6520	.64952	.07550
	4 and above	34	3.6593	.65049	.11156
CGPA	1-4	75	2.9067	.47000	.05427
	4 and above	34	2.8529	.74396	.12759

Table 1 shows the sample statistics. Out of a total of 108 business school students, 74 were found to have started their schooling between the ages of 1-4 whereas only 34 were found to have started their schooling after 4 years of age. This means that only 31.4% of the sample started schooling after age 4 and 68.51% of the students started their schooling between ages 1-4.

T-tests, independent sample, were run on the two groups to see if there was any difference in students' performance in terms of their CGPA and their self-regulation skills.

Table 2

Comparison of Self-Regulation Skills and Academic Performance of Both Age Groups

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SRR	Equal Variances Assumed	.090	.765	-.054	106	.957	-.00729	.13463	-.27421	.25963
	Equal Variances Not Assumed			-.054	64.08	.957	-.00729	.13471	-.27639	.25963
CGPA	Equal Variances Assumed	15.249	.000	.457	107	.649	.05373	.11759	-.17938	.28683
	Equal Variances Not Assumed			.387	45.36	.700	.05373	.13865	-.22547	.33292

Table 2 shows the independent sample t-test for the

performance of both the groups. The results show that the difference in the academic performance of both the groups that is the early school starters between the ages 1-4 and the late school starters aged 4 and above in terms of their CGPA is statistically insignificant. The sig value is 0.957 which is greater than 0.05; therefore, there is no difference in the CGPA of early and late school starters at the tertiary level.

Likewise, the results of the t-test comparing the self-regulation skills of both the groups show insignificant difference. The sig value 0.649 is greater than 0.05 which shows that there is no difference in the self-regulation skills of early and late school starters. The findings effectively negate the assumption that starting school earlier than age four has any academic benefits in the long run or is beneficial to the development of self- regulation skills in children.

The results are aligned with the findings of a research conducted by Suggate, Schaughency and Reese (2009), as discussed earlier in the literature review. Likewise this research also proves the given hypothesis that starting school earlier than five years of age does not benefit the child academically in the long run, as there was no difference among the CGPA obtained by students who started schooling earlier than four years and at four and above. The results are however are not aligned with the research findings of Weiland and Yoshikawa (2013). According to them, early year school education has a lasting effect on the academic performance of students. They also found that early year's education had moderate to intense impact on the performance of students in the later years though this is negated by the results of this research that showed no

difference in the academic performance of students, having started their formal education early or late at the tertiary level.

The second part of the results dealing with assessing the difference in the development of self-regulation skills of early and late school starters also negated the assumption that early school starters have better developed self-regulation skills. This research proved that students at the tertiary level show similar kind of self-regulation skills whether they start their schooling earlier than four years or later. This is in alignment with the findings of Bulotsky-Shearer, Fantuzzo and Dermott (2008) who attempted to determine the relationship between the preschool experience and the development of social and self-regulation skills in children. Three main classroom situations were focused upon to look at this relationship; the academic learning, peer interaction and the instructions by and interaction with the teacher. They discovered that the children that were younger than their classmates faced problems in all three classroom situations. This further hindered the development of their social and self-regulation skills (Bulotsky-Shearer, Fantuzzo, & McDermot, 2008). Therefore, sending children to preschool earlier than four years of age does not help develop their self-regulation skills any better and they do not display better self-regulation than the ones starting school later than four years at the tertiary level as proven by the research presented in this paper.

The research findings support both hypotheses stating that starting school earlier than four years of age does not enable students to score higher at the tertiary level. It also supports the second hypothesis that starting school earlier than four years of age does not help develop self- regulation skills in students.

Conclusion and Recommendations

Sending children to school as early as one year of age has become a common practice in Pakistan because of the belief among parents that this would not only enhance their children's academic performance in the years to come, but would also increase their self-efficacy, self-reliance and self-awareness resulting in self-regulation skills. The results of this research, on the other hand, show that this is not the case and sending children to school before the age of four does not give them any academic benefit and neither does it enhance their self-regulation skill.

On the basis of the results of this study, it is recommended that the educational researchers conduct a further and more extensive research in order to find out the best age for school entry which is both conducive to the children's academic performance in the long run as well as the development of their self-regulation skills.

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