

## Parental Involvement in Learning and Academic Achievement of Grade Six Students

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### Abstract

*The main purpose of this study was to investigate the relationship between parental involvement in learning and academic achievement of Grade Six students. In the study, Parent and School Survey (PASS) Questionnaire that was adapted from Khin Win Maw (2016) as well as English achievement test, Mathematics achievement test and Science achievement test developed by researcher were used as research instruments. English test, Mathematics test including Algebra and Geometry and also Science test were also based on Grade Six textbook. Each test is set for 25 marks. Descriptive research design and quantitative survey method were implemented. A total of 317 Grade Six students in Yangon Region were selected by using stratified sampling technique. The results revealed that there was no significant difference in parental involvement of Grade Six students by district, parents' education level and number of siblings. However, the independent sample t-test showed that there was significant difference in parental involvement of Grade Six students in terms of student gender. Interestingly, parents of female students were more interested in parental involvement than those of boys. However, both boys' and girls' parents support their children to some extent. Moreover, there was a positive relationship between parental involvement and students' academic achievement. Nevertheless, there may be other factors that influence on academic achievement beyond parental involvement. From the result, teachers have to encourage parents to involve in their children's learning and need to give time to discuss with the parents how their involvement affect the students' learning. This article highlight that parental support is important and parents need to motivate and support their children especially in Science and Mathematics Learning not merely to improve achievement but to keep up with the soft skills of 21<sup>st</sup> century.*

**Keywords:** Parental involvement; Academic achievement in Science and Mathematics; Parenting style; Volunteering

## **Introduction**

### **Background and Importance of the Study**

Education is the creation of desired behaviors in an individual. These desired behaviors are defined in accordance with cognitive, affective and social gains. The aim of schools is to establish these desired behaviors in each student. The three components exit an effective role in this process; i.e. school, teacher and parents. The desired behaviors in the individual become effective through the cooperation of these three key factors. Schools and teachers are important in achieving the desired individual characteristics. However, another factor namely ‘parents’ can have as much effect as teachers in achieving the gains. Therefore, it can be suggested that parental involvement is a influential factor in educational process (Siraj-Blatchford, 2010).

Parental involvement (PI) is an important factor in children’s academic learning. It is a social, cultural, and cognitive construct that may be helpful in improving educational learning outcomes (Creech et al., 2010, cited in Viray, 2016). Parental involvement has been identified as a priority for the education of inner city children. In addition, family plays an essential and immediate role throughout children’s development (Woolfolk, 2013, cited in Viray, 2016).

The research showed that parental involvement contributed to better academic scores. Parents can influence children’s academic achievement through active participation in learning at home. This typically involves activities such as engaging in cognitively stimulating tasks, like reading together (Evans, 1998), and managing children’s school-related behaviors, such as organizing and monitoring children’s time (Finn, 1998, cited in Rogers, 2009). According to Hornby and Lafaele (2011), parental involvement is important of education and can be achieved through home-based parental involvement like listening to them as they read, helping them in completing their homework and school-based activities which include parents’ involvement in education to improve academic achievement. This should be able to motivate learners not to give up easily when they do not understand a particular topic because they know that their parents are always monitoring their learning (Lemmer, 2007, cited in Netkane, 2018).

This study investigated the level of parental involvement in learning of Grade Six children and how this affects academic achievement. It also helps parents to know the crucial role of their influence on their child’s academic performance and how necessary it is to be involved in their child’s education.

### **Purpose of the Study**

The purpose of this study was to examine the level of parental involvement of Grade Six students, including six dimensions. Then, the relationship between parental involvement and academic achievement was also investigated.

### **Research Questions**

The following are Research Questions (RQs) formulated as guide of this study:

- (1) What is the level of parental involvement of Grade Six students?
- (2) Is there any relationship between parental involvement and academic achievement?

## Review of Related Literature

### Theoretical Framework of Parental Involvement

This study was theoretically based on Epstein (2000) model. Epstein offered six typologies of parent involvement, which was the foundation of the National Parent Teacher Association's (PTA) standards for family involvement, approved in 1997. The types of involvement are elaborated.

**Type 1: Parenting.** This refers to school assisting to advance parent's understanding of adolescent development, parenting skills, and gathering at home for learning. The school also seeks out to develop its own understanding of the families of its students. Home visits, family support groups, and referrals for social services providing information to parents about teens, and providing information to parents about teens, and providing parenting skills for teen parents are included in the school activities.

**Type 2: Communicating.** It is the elementary duties of schools to improve the communications from home to school about the school programs and students' development, counting the use of litters, memorandums, different forms of report cards, information sheet, meeting and other instruments. Activities and ideas include facilitation to the high school (e.g., orientation letters, tours for middle grade students, summer and fall orientation for students and parents), holding back-to-school nights pledges/contracts with parents, using phone and mail communications (including newsletters), holding conferences, providing information on school policies and programs.

**Type 3: Volunteering.** It means the school and community volunteers, and involvement of parents as well as others come to watch students' acts, sporting and other occasions. It includes volunteer activities and increasing family attendance at events.

**Type 4: Learning at home.** It is to improve family involvement in learning activities at home, including involvement in homework, class work, and curricular-related interactions and decisions. Parents help students setting goals and selecting courses, providing college information, and conducting career transition programs.

**Type 5: Decision making.** Parents and other community inhabitants are not compulsory, and they are supporters, consultative committees for school improvement. Parents and community activities in responsibility advocacy groups that work for school enhancement discuss a lot. The school's activities and ideas take account of generating more active parent groups, growing the number of parents, students and community members as well as counseling and decision-making groups.

**Type 6: Community collaboration.** It refers to community civil service or associations that share some responsibilities for children's improvement and attainment. School activities and ideas take account of community involvement in school-linked health care programs, describing a clear role for families in businesses, present workshops at school about community resources, and updating families about students' community services activities and requirements.

## **Types of Parental Involvement and its Impact of Children' Academic Achievement**

Baumrind (1996) describes two dimensions of parenting practices: control and responsiveness. Control is the manner and strictness with which parents provide their children with limits and discipline. Responsiveness includes the affection, acceptance, and caring involved in parenting. Based on the levels of these two dimensions, Baumrind describes four parenting styles as elaborated.

- Authoritative parenting includes setting limits or having rules for child and adolescents, as well as enforcing those rules. Parents and children also exhibit a high level of emotional connectedness that allows the parents to be flexible when necessary. For example, parents may be less strict than usual because they understand that their child having difficulty with academic subjects such as science and mathematics learning as well as learning with peers at school or is upset about not making the cheerleading squad.
- Authoritarian parenting includes a high level of control in which limits are set and rules are enforced yet emotional connectedness is lacking. Parents may be viewed as “dictators” who are inflexible, unable to bend the rules to accommodate special or unusual circumstances especially the demands to learn difficult subjects such as science and mathematics.
- Permissive parenting involves less control, with parents either not setting rules for behavior or not enforcing rules. However, parents do have a close connection to their children such that observers might refer to them as “friends” rather than parents. For example, parents may show their affection by giving in to their child’s tantrums in the grocery line and buying candy, or they may ground their adolescents but not monitor whether the teenager is home.
- Uninvolved parenting lacks both control and responsiveness. Parents typically are unaware of their child’s behavior, friends, difficulties, or achievements. For example, a parent may not know when reports come home from school or may be unable to name his child’s friends. These parents are at risk of being neglectful or abusive. Besides the family context, child abuse can occur in various other microsystems, for example, neighborhoods, child care settings, schools, and churches (See Table 1).

Table 1 Baumrind's Parenting Practices

		Responsiveness	
		High ←	→ Low
<b>High</b>	Authoritative	Authoritarian	
↑	Limits are set and rules are enforced, but parents are flexible when necessary. Parents and children exhibit a high level of emotional connectedness.	Limits are set and rules are enforced, yet emotional connectedness is lacking. Parents are inflexible _unable to bend the rules in special or unusual circumstances.	
	Permissive	Uninvolved	
↓	Parents either do not set rules for behavior or do not enforce established rules. However, parents do have a close connection to their children.	Parenting lacks both control and responsiveness. Parents typically are unaware of their child's behavior, friends, difficulties, or achievements.	
<b>Low</b>			

## Method

### Sample of the Study

By using stratified random sampling technique, a total of 317 of Grade Six students and their parents were selected from four basic education high schools located in four districts of the Yangon Region were selected as the participants for this study.

### Instrumentation

In order to get necessary information for the study, 'Parent and School Survey' (PASS) questionnaire was used to assess parental involvement of Grade Six students and the three achievement tests such as English, Mathematics and Science were used to study students' achievement.

**Parental Involvement Questionnaire.** In this study, 'Parent and School Survey' (PASS) was adapted from Khin Win Maw (2016) and used to examine parental involvement of Grade Six students. It includes six subscales such as parenting, communicating, volunteering, learning at home, decision making and community collaboration. Each subscale has 4 items. There are altogether 24 items in this questionnaire. The instrument is a four-point Likert scale ranging from strongly disagree =1 to strongly agree =4. The whole scale of parental involvement

indicated satisfactory internal consistency with 0.89. Therefore, this instrument can be considered as reliable instrument for the study.

**English Achievement Test.** A 25 marks English test developed by researcher was used to measure the English achievement of Grade Six students. Time allowance was 45 minutes. It was developed based on review exercise and Unit 10 of Grade Six English Textbook by using table of specification (see Table 2).

Table 2 Table of Specification

Content	Knowledge		Comprehension		Application	Total Marks	Total Marks %
	Vocabulary	Choosing correct word	Verb form	Matching	Read the passage		
Review	1	1	1	-	-	3	12%
Project	1	-	-	-	-	1	4%
Poem	1	1	1	-	-	3	12%
Unit (10) lesson- 1	1	2	2	-	-	5	20%
Unit (10) lesson- 2	-	-	-	-	5	5	20%
Unit (10) lesson- 3	-	-	-	5	-	5	20%
Unit (10) lesson- 4	1	1	1	-	-	3	12%
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>25</b>	<b>100%</b>

**Mathematics Achievement Test.** A 25 marks Mathematics test developed by researcher was used to measure the Mathematics achievement of Grade Six students. It took the students 45 minutes to take the test. It was developed based on Mathematics 1 (Algebra), Chapter (Ch.) 9 Exercise 9.1 to 9.3 and Mathematics 2 (Geometry) Chapter 9 Exercise 9.3 to 9.5 of Grade Six Mathematics by using table of specification (see Table 3).

Table 3 Table of Specifications for Grade Six Mathematics Achievement Test

	Contents	Knowledge	Comprehension	Application	Total Marks	Total Marks %
Math 1	Ch.9,9.1	1	2	3	6	24%
	Ch.9,9.2	1	2	3	6	24%
	Ch.9,9.3	1	4	-	5	20%
Math 2	Ch.9,9.3	1	2	-	3	12%
	Ch.9,9.4	1	-	3	4	16%
	Ch.9,9.5	1	-	-	1	4%
Total		6	10	9	25	100%

**Science Achievement Test.** A 25 marks science test was used to measure the Science achievement of Grade Six students. It took the students 45 minutes to take the test. It was developed from Chapter (Ch.) 9 Exercise 9.1 to 9.4 of Grade Six Science Textbook by using table of specification (see Table 4).

Table 4 Table of Specifications for Grade Six Science Achievement Test

Contents	Knowledge	Comprehension	Application	Total Marks	Total Marks %
Ch.9,9.1	1	1	2	4	16%
Ch.9,9.2	1	3	-	4	16%
Ch.9,9.3	3	3	3	9	36%
Ch.9,9.3	2	3	3	8	32%
Total	7	10	8	25	100%

## Findings and Discussion

### Parental Involvement of Grade Six Students

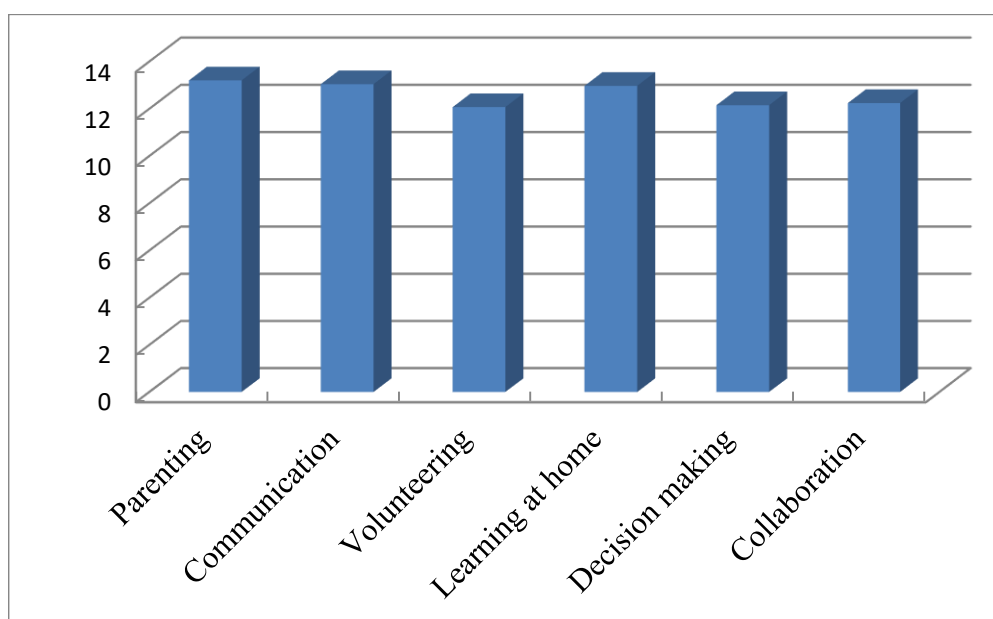
There are six components of parental involvement; parenting, communication, volunteering, learning at home, decision making and collaboration with community (Table 5). The number of question items in each component of parental involvement questionnaire are the same. The mean of parenting factor was higher than other factors. The results showed that the means of parenting and communication factors are almost the same and the means of volunteering, learning at home, decision making and collaboration are nearly the same.

Table 5 Descriptive Statistics for Each Component Parental Involvement of Grade Six Students

Component of Parental Involvement	Mean	SD
Parenting	13.20	1.76
Communication	13.04	1.95
Volunteering	12.07	1.90
Learning at home	12.97	1.67
Decision Making	12.15	1.88
Collaboration	12.24	2.01

From the analysis of results, 'volunteering' has the lowest mean and needs to be carried out more to improve the parental involvement. It could also be interpreted that schools need to give opportunity to parents to be engaged in school activities voluntarily. The differences of means can be vividly seen in Figure 1.

Figure 1 Mean comparison six factors of parental involvement



### Comparison for Parental Involvement of Grade Six Students by District

To compare the mean and standard deviation of parental involvement by district, descriptive analysis was done. The results showed that the mean values of parental involvement among district were slightly different (see Table 6).



Table 6 Descriptive Statistics for Parental Involvement of Grade Six Students by District

Variable	District	N	Mean	SD
Parental Involvement	East	80	77.18	7.90
	West	80	74.80	7.79
	South	80	76.38	8.09
	North	77	74.25	8.89
	Total	317	75.66	8.22

To obtain more detailed information on district, One-way Analysis of Variance (ANOVA) was conducted. ANOVA result showed that there was no significant difference in parental involvement of Grade Six students by district ( $F = 2.182, p = .090$ ). It can be said that parental involvement of Grade Six student did not depend on district wherein their school is.

### Comparison for Parental Involvement of Grade Six Students by Student Gender

Mean and standard deviation for parental involvement of Grade Six students by student gender were reported in Table 7. The following table revealed that the mean scores were slightly different between parents of girls and parents of boys in parental involvement of Grade Six students.

Table 7 Descriptive Statistics for Parental Involvement of Grade Six Students by Student Gender

Variable	Gender	N	Mean	SD
Parental Involvement	Parents of boys	149	74.48	7.56
	Parents of girls	168	76.71	8.66

To get more detailed information, the independent sample t-test was computed. According to the result, there was significant difference in parental involvement of grade six students by student gender at  $\alpha = 0.05$  level ( $t = -2.438, p = 0.015$ ). It can be said that parental involvement depends on student gender because parents are more involved in their daughters than their sons. It was consistent with the study of Chen (2011) in which parental involvement effect on girls more than boys.

### Comparison for Parental Involvement of Grade Six Students by Father's Education Level

Descriptive analysis revealed the differences in means and standard deviation of parental involvement by Father's education levels in Table 8.

Table 8 Descriptive Statistics for Parental Involvement of Grade Six Students by Father's Education Level

Variable	Father's Education	N	Mean	SD
Parental Involvement	Primary	34	76.41	8.44
	Middle	102	74.76	7.83
	High	117	75.23	7.95
	Graduate	64	77.48	9.05

Next to obtain more detailed information on parental involvement by father's education level, one-way analysis of variance of (ANOVA) was conducted. The result indicated that there was no significant difference in parental involvement by father's education level ( $F = 1.66$ ,  $p = 0.174$ ). Therefore, parental involvement is not concerned with father's education level.

#### Comparison for Parental Involvement of Grade Six Students by Mother's Education Level

To compare the mean and standard deviation of parental involvement by mother's education level, descriptive analysis was done. The result showed that the mean values of parental involvement among mother's education level were slightly different (see Table 9).

Table 9 Descriptive Statistics for Parental Involvement of Grade Six Students by Mother's Education Level

Variable	Mother's Education	N	Mean	SD
Parental Involvement	Primary	41	77.49	7.447
	Middle	95	74.12	7.261
	High	107	75.55	8.873
	Graduate	73	76.79	8.644

Next to obtain more detailed information on the differences of parental involvement by mother's education level, one-way analysis of variance of (ANOVA) was conducted. The result indicated that there was no significant difference in Grade Six students' parental involvement by mother's education level ( $F = 2.283$ ,  $p = 0.079$ ). Therefore, parental involvement in students' learning is not concerned with mother's education level.

### Comparison for Parental Involvement of Grade Six Students by Number of Siblings

Mean and standard deviation for parental involvement by number of siblings were reported in Table 10. The following table revealed that the mean scores were slightly different between numbers of siblings. In Table 10, the mean scores of '1-2 siblings group' were higher than that of '3-5 siblings group'.

Table 10 Descriptive Statistics for Parental Involvement of Grade Six Students by Numbers of Siblings

Variable	Number of Siblings	N	Mean	Std. Deviation
Parental Involvement	1-2 siblings group	180	76.12	8.30
	3-5 siblings group	136	75.04	8.13

To know more clearly, the independent sample t-test was conducted. According to the result, there was no significant difference in parental involvement by number of siblings ( $t = 1.153$ ,  $p = 0.250$ ). It can be said that parental involvement was not influenced by number of siblings. So, it can be interpreted that parents' involvement does not depend on how many children they own.

### Mean Comparison for Each Component of Parental Involvement of Grade Six Students by Student Gender

Mean and standard deviation for parental involvement of grade six students by student gender were reported in Table 11 that is also reflected in Figure 2 (with comparison of gender). The following table revealed that the means scores were slightly different between parents of girls and parents of boys in parental involvement of grade six students.

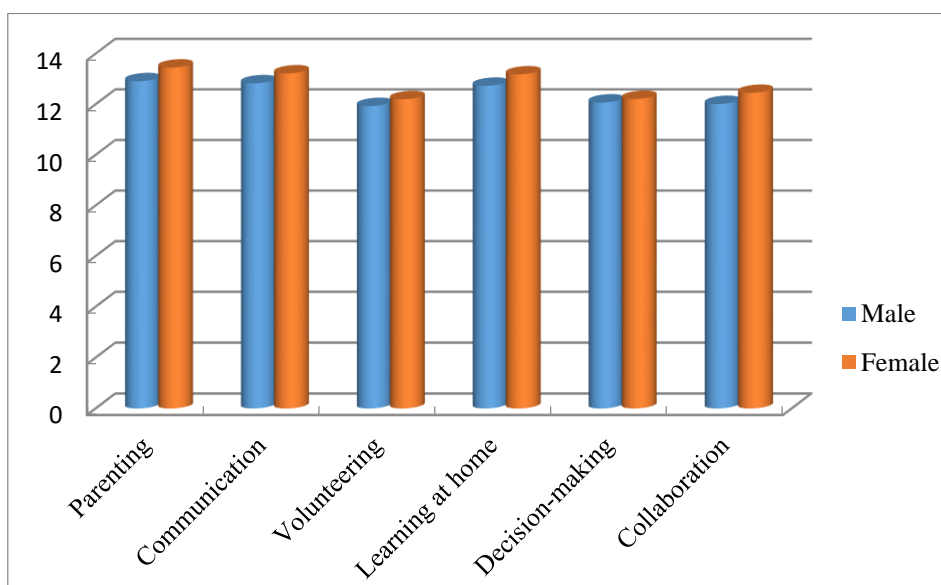
According to the independent sample t-test, the mean values of parents of girls were higher than parents of boys. Moreover, the t-test result showed that there was no significant difference between parents of boys and girls for communication, volunteering, and decision making factors. However, there was significant difference in parenting factor for parental involvement by student gender, at  $\alpha = 0.01$  level. Moreover, in learning at home and collaboration with community, there was significant difference in parental involvement by student gender at  $\alpha = 0.05$  level (see Table 11). So, it can be concluded that parents of girls are more interested in parenting of their children, communication with teachers, volunteering and learning at home than parents of boys.

Table 11 Mean Comparison and Independent Sample t-Test for Each Component of Parental Involvement by Student Gender

Component	Gender	N	Mean	SD	<i>t</i>	<i>p</i>
Parenting	Parents of boys	149	12.91	1.69	-2.775**	.006
	Parents of girls	168	13.45	1.79		
Communication	Parents of boys	149	12.83	1.96	-1.768	.078
	Parents of girls	168	13.22	1.94		
Volunteering	Parents of boys	149	11.93	1.74	-1.265	.207
	Parents of girls	168	12.20	2.03		
Learning at home	Parents of boys	149	12.73	1.58	-2.393*	.017
	Parents of girls	168	13.18	1.73		
Decision-making	Parents of boys	149	12.07	1.83	-0.661	.509
	Parents of girls	168	12.21	1.94		
Collaboration	Parents of boys	149	12.01	1.83	-1.978*	.049
	Parents of girls	168	12.45	2.14		

Note. \* $p < 0.05$ , \*\* $p < 0.01$

Figure 2 Mean comparison for parental involvement by student gender



### The Relationship between Parental Involvement and Academic Achievement of Grade Six Students

Table 12 showed that there was a positive relationship between parental involvement and academic achievement at 0.01 level. It could be interpreted that the more parental involvement in learning the students get, the better achievement they have got. Therefore, this result was consistent with the study of Hornby and Lafaele (2001) in which parental involvement is positively correlated with the student's academic achievement.

Table 12 Correlation between Parental Involvement and Academic Achievement of Grade Six Students

Variable	Parent Involvement
Parental Involvement	1
Academic Achievement	.194**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Conclusion

#### Summary and Implications

In this study, mother's education level, father's education level and number of siblings do not influence on parental involvement of Grade Six students. However, there were significant differences in parental involvement of Grade Six students by student genders. It can be

concluded that parents of girls were more involved in their children's learning than those of boys. Moreover, there was no significant difference between parents of boys and girls in the subscale of communication, volunteering, and decision-making factors. However, in the subscale of parenting, learning at home and collaboration, girls' parents were more involved in rearing their children. Moreover, it was found that there was a positive relationship between parental involvement and students' academic achievement. The implication of this study is that parental involvement will affect students' academic achievement in subjects such as science and mathematics (with surveys conducted in this study).

Parents have an enormous impact on their children's education in a variety of ways. Districts and schools must learn how to best utilize each parent as a resource and identify which models of parental involvement are most closely associated with student achievement. In essence, it also requires parental involvement in school governance, planning and decision-making, as well as a governing committee, at school sites and district levels (Chemagosi, 2012).

### **Limitations and Suggestions for Further Study**

This study examined parental involvement and academic achievement through quantitative approach only and no reports on case studies through qualitative approach. So, there may be other factors that impact on academic achievement of middle school students such as motivation, school climate and so on. In order to know detail information, qualitative analysis should be conducted. More research should be conducted on the impact of school environment and motivation on children learning. Based on the findings of this study, it should be highlighted that parents should support their children, not discriminating gender difference. Parents should have high interests in their children's education on the following aspects:

1. Manage the time for children's learning at home;
2. Provide the facilities for the children's education;
3. Actively involved in the school activities;
4. Attend Parent-Teachers Association meetings, Board of Trustees meetings and other meetings;
5. Contact teachers concerning their children's educational outcomes;
6. Have positive attitudes about the schools and educational system (Khin Win Maw, 2016).

Therefore, to increase parental involvement in students' education, as a school, more flexibility could be made available to parents. Work place schedule could be more flexible and family friendly so that parents could have time to address children's basic learning needs and to engage in school related activities. Nevertheless, parents' engagement in school activities can enhance children's emotional, social well-being and academic achievement (Mamta & Garcia, 2018). In view of current pandemic situation where a lot of studies have to be conducted at home, the findings of this study may inspire more future research activities to explore how parental involvement could enhance the academic achievement of learners especially in academic subjects such as Science and Mathematics that need experts' input.

## Significance and Contribution in Line with Philosophy of LSM Journal

This article contributes by illustrating the significant relationship between parental involvement and academic achievement of especially in Science and Mathematics learning. So, the role of parents' interest and support to their children is vital to learning in science and mathematics to keep up with the soft skills of 21<sup>st</sup> century.

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