

# **Parental Involvement and Achievement Motivation: Association with Students' Achievement in Vocational Colleges, Malaysia**

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## **Abstract**

This study to identify the relationships between parental involvement and achievement motivation with an objective measure of the students' achievement through students' perception in vocational colleges, Malaysia. The study also examined the mediating effects of achievement motivation with students' achievement and moderating role of gender for the link between parental involvement, achievement motivation and students' achievement. Three hundred and sixty students (106 girls and 264 boys) were selected at thirteen vocational colleges students' all around Malaysia. Our results showed that parental involvement were positively related with achievement motivation and students' achievement which in turns achievement motivation also related to students' achievement. There is full mediation effects between achievement motivation and parental involvement with students' achievement. While gender were moderately correlated between achievement motivation and students' achievement. The findings contribute to understanding commonly reported the relationships between parental involvement and achievement motivation elements with students' achievement among the students in vocational colleges.

**Keywords:** Parental Involvement, Achievement Motivation, Students' Achievement, Vocational Colleges

## **Introduction**

Parental involvement has to be performed by all parents in their children education both at home and school. However, most of the parents nowadays were only focused on their children achievement only at the pre-school or primary school level not at higher level like secondary schools or colleges. Hence, most research were conducted on the parental involvement at the early stage of school (Adamski, Fraser, & Peiro, 2013; Cunha et al., 2015; Dumont et al., 2012; Gonida & Cortina, 2014; McNeal, 2015; Park & Holloway, 2013; Phillipson & Phillipson, 2012; Valdez, Shewakramani, Goldberg, & Padilla, 2013). There is very little study conducted on the secondary school level as well as college or universities (Chen & Ho, 2012; Rivers, Mullis, Fortner, & Mullis, 2012; M.-T. Wang & Eccles, 2013). According to Mcneal, (2014), the parents are less involved in secondary school level due to i) a challenging curriculum, ii) children

independencies and iii) the families are more focused on a smaller child. At this stage, parents' attention and involvement in their education field were observed to be lacking although they realized the importance of their attention and support. A challenging curriculum and syllabus, children in secondary schools are self-reliant and parents want to focus more on their smaller kids were the reasons given by parents involved (McNeal, 2012). However, the reasons given by the parents can be disputed. This is due to the fact that parents' involvement in their children's education does not necessarily involve direct participation. It can also happen indirectly and the involvement itself is not only limited to school but can also occur at home (Abd Razak, Zuwati, & Umi Kalsum, 2013; Abd. Razak & Noraini, 2011; Dikkers, 2013; Epstein & Susan., 1991).

### **Literature Review**

The involvement of parents in education at vocational colleges becomes a new issue since its implementation is only entering its second phase in the wave of technical and vocational education transformation. Parents involvement cover six domains namely parenting, communicating, volunteering, decision making, assisting in aspects of learning at home and collaboration with the community (Epstein, 1992). The involvement of parents including by presenting themselves to college, communicate with teachers and equally monitor the progress of children at home. Parents can support their children by attending a program organized by the college. Parents can also help their children to give their views and help with the assignments given by teachers during semester breaks. There are also parents who are concerned and providing a specific learning place for their children to study at home, monitoring the assigned tasks and also provide guidance for their children at home. However, the involvement of parents in this study will only involves the children' perspectives.

The findings of the studies conducted by Feng, Fan, & Yang, (2013); Gonida & Cortina, (2014); and Weihua & Williams, (2010), showed that the active involvement of parents gives a beneficial effect on academic achievement. The lack of parental involvement in school activities and programs also lead to a negative impact on student achievement (Weston & Lareau, 1991). Thus, the development of excellent students cannot be achieved if the involvement of parents in college programs and activities cannot be increased (Henderson & Mapp, 2002). According to Epstein, (1992); and Shaverand & Walls, (1998), the involvement of parents is not only just in school, but parents need to be involved in their children's education at home as well. However, Weston & Lareau, (1991), time constraints led to parents becoming less sensitive in playing their role in their children education and did not monitor their learning. The involvement of parents in the home and at school continuously correlated with academic achievement of children (Epstein, 1992; Wang & Eccles, 2013; Yahaya & Obih, 2010; Yeoh & Woo, 2010). It is clear that parental involvement has a positive effect on student achievement (Bower & Griffin, 2011; Desimone, 1999; Fan & Chen, 2001). In fact, there are studies that show the involvement of parents capable to combat student discipline problem. However, the question is, why are the parents becoming less involved in their children's education in high school or college level though they are aware of the benefits in their involvement (Christenson, Reschky, & Wylie, 2012; Rachel & Sean, 2014).

Previous studies also less focused on family context that plays a role in their children's academic achievement. These factors are very important and should be given attention. This is due to the fact that value implementation in family context is seen as one of the actions in parental involvement in their children's education. Besides, an ample of previous research only focusing on parental involvement from teachers and parents' point of view. There is less focus given on children perspectives towards parental involvement in secondary school or college. Thus, this research will evaluate parental involvement both in college or at home from students' perspective using Parental Involvement Instrument (PIQ) adapted from Salina & Epstein, 1992.

Ryan & Deci, (2000) were defined that achievement motivation as an effort and individual desires to learn and work hard to achieve excellence results especially in the academic fields. Researcher Aydin & Coskun, (2011) were found that achievement motivation is one of the important element to show either the students have reach their level or not in their achievement. Achievement motivation will influence students behavior and action and they will try their best to increase an effort in academic fields and skills especially for vocational colleges students (Mohd Effendi Ewan, Ahmad Zamri, & Nordin, 2015; Mohd. Rustam et al., 2014; Nasrin & Begum, 2013; Noor Erma & Eu, 2014). This research was supported by Siti Nor Idayu & Mohamad Hisyam, (2015) were found that intrinsic motivation will influence students to do better in their On Job Training (OJT). While research by Lee, (2010) in Taiwan was reported effort by parents and teachers at school were encouraged students to be more motivated in English subjects. Researcher Nasrin & Begum (2013) also found that there is a significant relationships between achievement motivation and students achievement either in academic fields or skills.

### **Methodology**

This study is a quantitative correlational research. Pencil and questionnaire are the main data collection method has to been used in this research. All participants were required to answer questionnaires which were distributed and administered by the researcher. A permission to conduct the study was obtained from the Division of Research and Development (EPRD), Ministry of Education, Division of Technical and Vocational Education (BPTV) and subsequently from administrators of each vocational colleges involved. Out of all administered questionnaires, 360 were successfully completed with a good response by the respondents.

### **Sample Size**

The research sample included 360 students aged 16 to 17 years were selected from 13 vocational colleges. Stratified random sampling technique was used to identify respondents which are selected from pioneer vocational colleges throughout the country. Mean for the gender of respondents was 1.2992. A total of 60% of the students were boys and the remaining 40% were girls.

### **Research Instruments**

There are two instruments have been measured in this research involving PIQ and AMQ for independence variables, while achievement among the vocational colleges students was measured by cumulative grade (CGPA) accessed from Operation Unit, Technical and Vocational Education Department.

- i. Students Perception on Parental Involvement Questionnaires (PIQ) by (Epstein, 1992) which is consist of items in six domains; parenting (5 items), communicating (7 items), volunteering (5 items), learning at home (10 items), decision making (4 items) and collaborating with community (4 items).
- ii. Achievement Motivation Questionnaires (AMQ) by (Robert J. Vallerand, 1992) which is consist of 28 items in three domains; intrinsic motivation (12 items), extrinsic motivation (12 items) and amotivation (4 items).

PIQ containing 35 items were adapted from Salina & Eipstein (1992), which measures the involvement of parents. See Table 1.1 to identify the items involved. Earlier, this instrument is also measuring the parental involvement from parents, teachers and students perspectives (Eipstein, 1992). However, in this study the researchers only measuring the involvement of parents only from students' perspective. Respondents were asked to choose the answer from likert scale of 1 (strongly disagree) until 5 (strongly agree). PIQ overall score was obtained by adding all the scores for these items. The highest score indicates a higher degree of agreement given by the respondents (Zainudin, 2015). Reliability tests conducted indicate that the items used in this instrument had a Cronbach alpha values between .763 to .863. If the value of R indicates a high value, then the instruments used to have high reliability (Gonida & Cortina, 2014). Alpha value which is more than .70 is consistent for each dimension that will be used. The guidelines in the literature suggests a reliability coefficient of 0.9 as very good, between 0.8 as good and 0.7 as adequate (Cronbach & Shavelson, 2004).

While, AMQ containing 28 items to measure achievement motivation among the students in vocational colleges through their perspectives in intrinsic, extrinsic and amotivation. Those are three constructs in measuring students' achievement motivation. Respondents were asked to choose the answer from likert scale of 1 (strongly disagree) until 5 (strongly agree). The original instruments was adapted and adopted into Malay language through back translation process. The reliability test showed that  $\alpha=.78$ . Alpha value which is more than .70 is consistent for each dimension that will be used. The guidelines in the literature suggests a reliability coefficient of 0.9 as very good, between 0.8 as good and 0.7 as adequate (Cronbach & Shavelson, 2004).

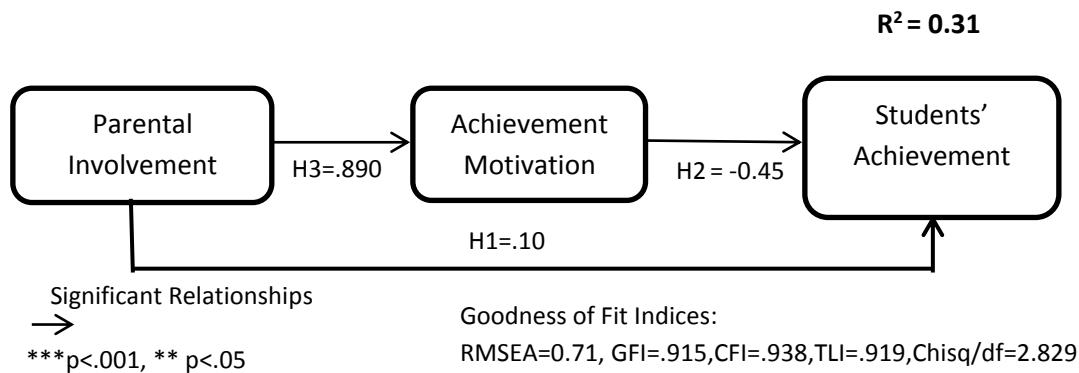
### **Research Findings**

*Direct relationships between parental involvement and achievement motivation with students' achievement.*

Hypotheses testing analysis was conducted to measure a direct relationships through Structural Equation Modeling (SEM) showed that 31 percent of R<sup>2</sup> value were determined by parental involvement and achievement motivation. There is a positive significant relationships between parental involvement and students' achievement ( $\beta=.100$ ,  $p<.05$ ). However, achievement motivation showed there is a negative significant relationships between achievement motivation and students' achievement ( $\beta= -.450$ ,  $p<.001$ ). While, there is a positive significant relationships between parental involvement and achievement motivation ( $\beta=.089$ ,  $p<.05$ ).

Table 1: Direct Relationships for Hypotheses Testing Analysis

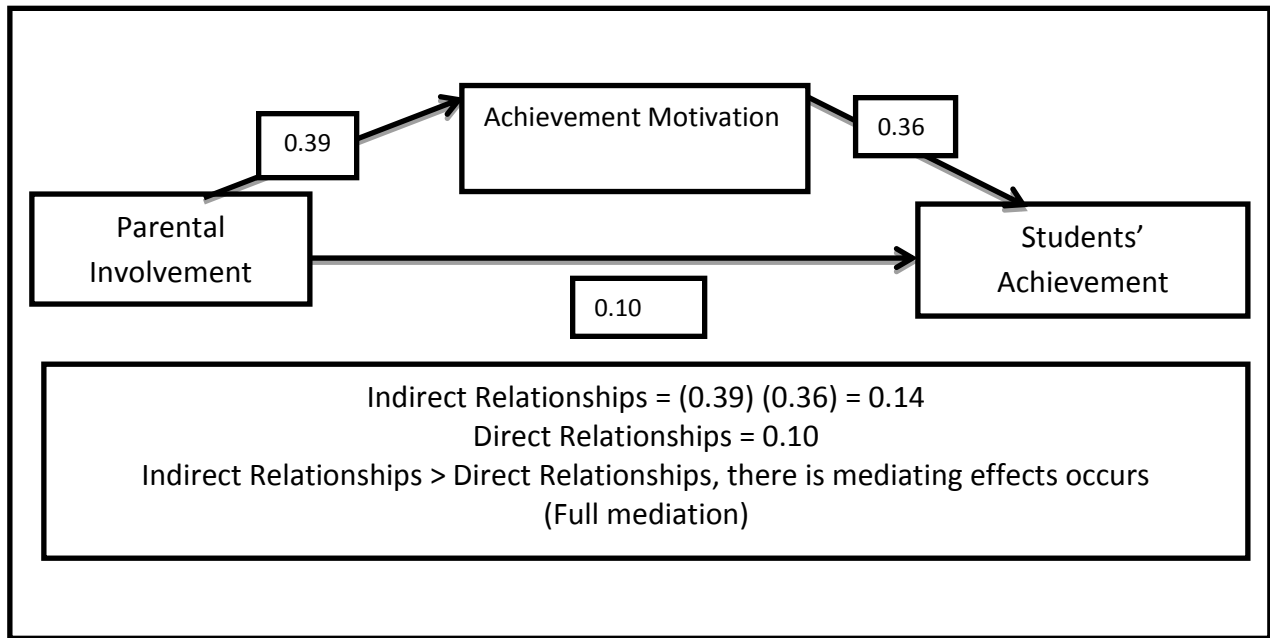
No.	Hypotheses	Relationships
1.	H1: There is a significant relationships between parental involvement and students' achievement.	PI → SA
2.	H2: There is a significant relationships between achievement motivation and students' achievement.	AM → SA
3.	H3: There is a significant relationships between parental involvement and achievement motivation.	PI → AM



**Figure 1: Results of hypotheses testing for direct relationships**

*Mediating effects of relationships between parental involvement and achievement motivation with students' achievement.*

Mediating effects was tested by Multi Modal Analysis (MMA) through Structural Equation Modeling (SEM) with Amos. According to Hayes & Preacher, (2010) to identify the mediating effects, indirect relationships must excluded zero values and mediator will occurs in each of the relationships when direct relationships and indirect relationships has been measured. Full mediation will occurs when indirect relationships was insignificant but direct relationships was significant (Pearl, 2001; Wang, Jackson, Gaskin, & Wang, 2014).



**Figure 2: Mediating effects in relationships between parental involvement and achievement motivation with students' achievement**

Based on Figure 2, showed that full mediation has been occurred when indirect relationships  $(0.14) >$  direct relationships  $(0.10)$ . It was fulfill the requirement for testing mediating effects and Table 2 showed that achievement motivation as a mediator in relationships between parental involvement and students' achievement when direct relationships was insignificant value  $(p=.936)$  towards students' achievement after achievement motivation was included in the model. While, indirect relationships showed a significant value  $(p=.001)$ . At the same time, there ia a decreasing in  $Beta(\beta)$  values which is  $.323$  for direct relationships model  $(X \rightarrow Y)_1$  to  $.005$  for full mediation model  $(X \rightarrow Y)_2$ .

Table 2: Mediating Effects of Relationships between Parental Involvement and Achievement Motivation with Students' Achievement

Path Hypotheses	$\beta$	SE	Beta	CR	P
<b>Direct Relationships Model</b>					
Parental Involvement $\rightarrow$ Students' Achievement (X $\rightarrow$ Y) <sub>1</sub>	.692	.104	.323	6.633	.000
<b>Full Mediation Model</b>					
Parental Involvement $\rightarrow$ Students' Achievement (X $\rightarrow$ Y) <sub>2</sub>	.003	.036	.005	.081	.936
Parental Involvement $\rightarrow$ Achievement Motivation (X $\rightarrow$ M)	.149	.039	.205	3.776	.000
Achievement Motivation $\rightarrow$ Students' Achievement (M $\rightarrow$ Y)	-.286	.069	-.286	-3.628	.000

\* Results: There is full mediation occurs

*Gender differences in parental involvement and achievement motivation with students' achievement among respondents.*

Moderating effects was testing through Multi Group Analysis, Structural Equation Modeling, using Amos. Gender differences were identified among the respondents and the samples were divided by two groups. The first group for a boys and second group was for a girls. Sample sizes for a boys are 254 students, while for a girls there are 106 students were involved

Table 3: Goodness of Fit Indices for Gender Differences Moderating Test

Indicator	Accepted Values	Goodness of Fit Indices		
		Separately Boys	Girls	Simultaneously Boys and Girls
$\chi^2$		372.445	448.669	395.00
df		202	254	208
<i>Absolute Fit Indices</i>				
PROB(P-Val)	> .05	.000	.000	.000
RMSEA	< .08	.049	.046	.047
<i>Incremental Fit Indices</i>				
CFI	> .90	.944	.936	.933
TLI	> .90	.925	.932	.929
<i>Parsimony Fit Indices</i>				
Chisq/df	< .50	1.844	1.766	1.795

Two indicators for AFI values showed the good fit of  $p=.000$ , RMSEA=.049 for boys group. While, indicator IFI values, CFI=.944 and TLI=.925 which is > .90 as required to the model complexion and sample sizes. *Persimony Fit Indices* (PFI) values also achieve the goodness of

fitness indices,  $\text{Chisq/df}=1.844$ . Meanwhile, for a girls group AFI values showed  $p=.254$  dan  $\text{RMSEA}=.046$ . The indicator for IFI values,  $\text{CFI}=.936$  and  $\text{TLI}=.932$  which is  $> .90$  as required and *Persimony Fit Indices* (PFI) also achieve the goodness of fit indices,  $\text{Chisq/df}=1.766$ . For simultaneously group through *Multiple Group Analysis* also achieve the goodness of fit indices which  $p=.001$  and  $\text{RMSEA}=.047$ . For IFI values,  $\text{CFI}=.933$  and  $\text{TLI}=.929$  which is  $>.90$  and *Persimony Fit Indices* (PFI),  $\text{Chisq/df}=1.795$ . The overall results showed that the model was achieved the goodness of fit and can proceed for the next analysis.

Table 4: Structural Invariance Test for Path Hypotheses

Path hypotheses	Groups	Beta (b)	Significant (p)	Value	Results
PI → SA	Boys	.028	.690		Not moderator.
	Girls	-.072	.466		
AM → SA	Boys	-.388	.000		Moderator
	Girls	-.195	.122		

Moderating effects for parental involvement and students' (PIB→SA) for boys group ( $\beta=.028, p=.690$ ) was positively significant. While, girls group showed ( $\beta= -.072, p=.466$ ) was negatively insignificant. Those criteria was not fulfill the requirement for moderating effects. So that, no moderation effects occurs between parental involvement and students' achievement. Meanwhile, moderating effects for achievement motivation (AM→SA) for boys group showed ( $\beta= -.388, p=.000$ ) was negatively significant. However, for girls group showed ( $\beta= -.195, p=.122$ ) was negatively insignificant. Those criteria was fulfill the requirement of moderation effects. As a conclusion, gender was a moderator in relationships between achievement motivation and students' achievement.

**Discussion**

The findings of this study are able to present important information regarding relationships between parental involvement and achievement motivation with students' achievement. Positive relationships in relationships between parental involvement and students' achievement (PI→SA,  $\beta= .100, p<.05$ ), and relationships between parental involvement and achievement motivation (PI → MP,  $\beta=.089, p<.05$ ) was proved the importance of parents role in their children's' education. For instance, parents should be able to give full attention when their kids at home, helps them in their homework and always make sure all the task given by teacher were completed. This effort will helps students to increase their motivation level and will try their best to achieve the goals either in academic or skills. The researcher like (Charlotte, 2014; Sheldon, Epstein, & Galindo., 2010) found that parental involvement will give good impression and develop a good relationships with teachers at school. This situation will influence parents and teachers collaboration in order to achieve excellence in their achievement.



However, finding for relationships between achievement motivation and students' achievement ( $AM \rightarrow SA$ ,  $\beta = -.450$ ,  $p < .001$ ) found that there is a negatively significant between achievement motivation with students' achievement was contradicted with theory of achievement motivation by McClelland. Negative relationships meaning that when students' motivation was increased students' achievement will decrease. This situation was appeared because students' achievement among vocational colleges were included both academic and skills. They were exposed with 40 percent academic and 60 percent skills. Skills were required students' to have high competency and commitment from students' themselves. Even though, the motivation among the students were high, but the factor were not influenced towards skills that they learnt in colleges. There were many external factors will encourage students' to achieve in their education for example peers and environmental (Zaidatol Akmaliah & Afsaneh, 2011). This finding supports a research by Elliot & Church, (1997) was proved that competency will reject to avoidance performance goals and achievement motivation among the students will decrease. Competency among the students will cause to low achievement especially in academics. This findings were in line with research by Habibah & Wan Rafaei, (1995) among the universities students were negatively significant in course work.

Achievement motivation as a mediator between parental involvement and students' achievement was in line with findings by (Chen et al., 2015; Gonida & Cortina, 2014; Hayes & Preacher, 2010; Preacher, Zyphur, & Zhang, 2010). They were agreed that parental involvement was influenced directly but when achievement motivation comes in between it will give better impact in students' achievement. Students will give more effort because they were cleared with their goals and were full supported by parents and teachers. Encouragement, attention and collaboration by parents was part of the intrinsic motivation and extrinsic motivation that were measured in this research. Researcher Dumont et al., (2012) also found that parents who always helps their kids at home encourage students to get better results in examination. Influence form parents will give better direction to students and understand why they were learnt and go to colleges.

Moderation effects was analyzed through Multi Group Analysis to identify genders between two groups, boys and girls among the students in vocational colleges. The difference in  $\chi^2 = 76.233$ ,  $DF = 52$  for both groups was significant ( $\beta = .016$ ,  $p = .005$ ). Values for  $\chi^2$  unconstrained model was bigger than  $\chi^2$  values in measurements residuals model. It showed that, there is a moderation effects occurred in the tested model (Kline, 2011). So that, genders as a moderator only occurred in relationships between achievement motivation and students' achievement ( $AM \rightarrow SA$ ) which is boys have negatively ( $\beta = -.388$ ,  $p = .000$ ) and, girls have negatively insignificant ( $\beta = -.195$ ,  $p = .122$ ). This finding means that achievement motivation among the boys were higher than girls. It were supported by findings from (Cavas, 2011; Dresel & Grassinger, 2013; Ocak & Yamac, 2013).

Researcher Fin & Zahari, (2012); and Salasiah Hanin, Zainab, Rosmawati, & Ermy Azziaty, (2011) also proved that girls have low motivation compared to boys in their academic achievement. Achievement motivation among the boys were higher than the girls because achievement among the students were measured in two aspects including skills field not only academic achievement. Researcher Rosaffri & Shabariah, (2011) also found that tasks given by teachers will influence achievement motivation among the boys compared to the girls. Skills and competencies needed in the activities will encourage boys to increase their levels compared to the girls (Musa, Dauda, & Umar, 2016; Zghidi & Loumi, 2016).

### **Conclusion**

As a conclusion, the findings from the research will give an implication to other researcher for the future. Research can be done by adding other variables for instance peers factor, environmental and focused on skills instead of academic achievement. For the theoretical part, some improvement especially in parental involvement aspects, it could be better to encourage parents to be involve in their kids education even though in the higher level. Attention should be given especially in parenting aspects and collaboration with community. This will helps students seems they were staying either in the hostel or rental the house. Some students will demotivated because of the financial problems and ignored their main focused to study. They will find solution by finding a job or quit from the colleges and some will make trouble in colleges. That's why parental involvement was really important to avoid those thing would not happen. Parental involvement will encourage students' achievement motivation and at the same time helping them to be more focus in their performance. The contribution of the study especially in achievement motivation should be aware by parents, teachers and administrative themselves. Achievement motivation play an important roles as a mediator and also a moderator in relationships of parental involvement with students' achievement.

### **References**

- Abd Razak, Z., Zuwati, H., & Umi Kalsum, M. S. (2013). Family Context and its relationship with parental involvement in the education of secondary school children. *International Journal of Asian Social Science*, 3(4), 1063–1076.
- Abd. Razak, Z., & Noraini, M. S. (2011). Konteks Keluarga dan Hubungannya dengan Penglibatan Ibu bapa dalam Pendidikan Anak-anak di Sekolah Menengah. *Jurnal Pendidikan Malaysia*, 36(1), 35–44. Retrieved from <http://journalarticle.ukm.my/4365/> on 3 September 2015.
- Adamski, A., Fraser, B. J., & Peiro, M. M. (2013). Parental involvement in schooling, classroom environment and student outcomes. *Learning Environments Research*, 16(3), 315–328. doi:10.1007/s10984-012-9121-7
- Aydin.F, & Coskun.M. (2011). Secondary school students:“Achievement Motivation towards Geography lessons”. *Arhives of Applied Science Research*, 3(2), 121–134.
- Bower, H. A., & Griffin, D. (2011). Can the Epstein Model of Parental Involvement Work in a High-Minority, High-Poverty Elementary School? A Case Study. *Professional School Counseling*, 15(2), 77–87. doi:10.5330/PSC.n.2011-15.77

- Cavas, P. (2011). Factors Affecting the Motivation of Turkish Primary Students for Science Learning. *Science Education International*, 22(1), 31–42.
- Charlotte, D. (2014). Teacher Evaluation and Development in the Common Core Era Where It All Began. In C. Danielso (Ed.), *ASSD Annual Conference, March 16, 2014*. Los Angeles, California: The Danielson Group.
- Chen, H., Newland, L. A., Liang, Y., Giger, J. T., Newland, L. A., Liang, Y., & Giger, J. T. (2015). Mother Educational Involvement as a Mediator Between Beliefs , Perceptions , Attachment , and Children' s School Success in Taiwan. *Journal of Family Studies*, 9400(December), 1839–3543. doi:10.1080/13229400.2015.1020985
- Chen, W. W., & Ho, H. Z. (2012). The Relation Between Perceived Parental Involvement and Academic Achievement: The Roles of Taiwanese Students' Academic Beliefs and Filial Piety. *International Journal of Psychology*, 47(4), 315–324. doi:10.1080/00207594.2011.630004
- Christenson, S. L., Reschky, A. L., & Wylie, C. (2012). *Handbook of Research on Student Engagement. Procedia - Social and Behavioral Sciences* (First., Vol. 7). New York, United States: Springer New York Dordrecht Heidelberg London. doi:10.1007/978-1-4614-2018-7
- Cronbach, L. J., & Shavelson, R. J. (2004). My Current Thoughts on Coefficient Alpha and Successor Procedures. *Educational and Psychological Measurement*. doi:10.1177/0013164404266386
- Cunha, J., Rosário, P., Macedo, L., Nunes, A. R., Fuentes, S., Pinto, R., & Suárez, N. (2015). Parents ' conceptions of their homework involvement in elementary school. *Psicothema*, 27(2), 159–165. doi:10.7334/psicothema2014.210
- Desimone, L. (1999). Linking Parent Involvement With Student Achievement: Do Race and Income Matter? *The Journal of Educational Research*, 93(1), 11–30. doi:10.1080/00220679909597625
- Dijkers, A. G. (2013). Family Connections: Building Connections Among Home, School, and Community. *Childhood Education*, 89(2), 115–116. doi:10.1080/00094056.2013.774247
- Dresel, M., & Grassinger, R. (2013). Changes in Achievement Motivation among University Freshmen. *Journal of Education and Training Studies*, 1(2), 159–173. doi:10.11114/jets.v1i2.147
- Dumont, H., Trautwein, U., Lüdtke, O., Neumann, M., Niggli, A., & Schnyder, I. (2012). Does Parental Homework Involvement Mediate the Relationship Between Family Background and Educational Outcomes? *Contemporary Educational Psychology*, 37(1), 55–69. doi:10.1016/j.cedpsych.2011.09.004
- Elliot, A. J., & Church, M. A. (1997). A Hierarchical Model of Approach and Avoidance Achievement Motivation. *Journal of Personality and Social Psychology*, 72(1), 218–232.
- Epstein, J. L. (1992). *School and Partnerships*. In Encyclopedia of educational research. New York: Mac Millan.
- Epstein, J. L., & Susan L., D. (1991). School Programs and Teacher Practices of Parent Involvement in Inner-City Elementary and Middle Schools. *The Elementary School Journal*, 91(3), 289. doi:10.1086/461656

- Fan, X., & Chen, M. (2001). Parental Involvement and Students' Academic Achievement: A Meta-Analysis. *Educational Psychology Review*, 13(1), 1–23. doi:10.1023/A:1009048817385
- Feng, H., Fan, J., & Yang, H. (2013). The Relationships Of Learning Motivation and Achievement Motivation In EFL: Gender As an Intermediated Variable. *Educational Research International*, 2(2), 50–58.
- Fin, L. S., & Zahari, I. (2012). A Priori Model of Students' Academic Achievement: The Effect of Gender as Moderator. *Procedia - Social and Behavioral Sciences*, 65(ICIBSoS 2012), 1092–1100. doi:10.1016/j.sbspro.2013.02.122
- Gonida, E. N., & Cortina, K. S. (2014). Parental involvement in homework: Relations with parent and student achievement-related motivational beliefs and achievement. *British Journal of Educational Psychology*, 376–396. doi:10.1111/bjep.12039
- Habibah, E., & Wan Rafaei, A. R. (1995). Achievement Motivation of University Students. *Pertanika Journal of Social Science and Humanities*, 3(1 (ISSN:0128-7702)), 1–10.
- Hayes, A. F., & Preacher, K. J. (2010). Quantifying and Testing Indirect Effects in Simple Mediation Models When the Constituent Paths Are Nonlinear. *Multivariate Behavioral Research*, 45(4), 627–660. doi:10.1080/00273171.2010.498290
- Henderson, A. T., & Mapp, K. L. (2002). A New Wave of Evidence: The Impact of School, Family and Community Connections on Study Achievement. In *SEDL -Advancing Research, Improving Education* (pp. 1–241). Austin, Texas: National Center for Family & Community Connections with Schools. Retrieved from [www.sedl.org](http://www.sedl.org)
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modelling* (Edition 3.). New York: Guilford Press.
- Lee, I. (2010). The Effect of Learning Motivation , Total Quality Teaching and Peer-Assisted Learning on Study Achievement : Empirical Analysis from Vocational Universities or Colleges ' students in Taiwan. *The Journal of Human Resource and Adult Learning*, 6(December), 56–73.
- McNeal, R. B. (2012). Checking In or Checking Out? Investigating the Parent Involvement Reactive Hypothesis. *The Journal of Educational Research*, 105(2), 79–89. doi:10.1080/00220671.2010.519410
- Mcneal, R. B. (2014). Parent Involvement , Academic Achievement and the Role of Student Attitudes and Behaviors as Mediators. *Universal Journal of Education Research*, 2(8), 564–576. doi:10.13189/ujer.2014.020805
- McNeal, R. B. (2015). Parent Involvement and Student Performance: The Influence of School Context. *Educational Research for Policy and Practice*, 14, 153–167. doi:10.1007/s10671-014-9167-7
- Mohd Effendi Ewan, M. M., Ahmad Zamri, K., & Nordin, A. R. (2015). The Influence of AQ on the Academic Achievement among Malaysian Polytechnic Students. *International Educational Studies*, 8(6), 69–74. doi:10.5539/ies.v8n6p69
- Mohd. Rustam, M. R., Azlina, K., Hamdan, S., Norashuha, T., Noriadah, A. K., & Van, N. T. (2014). Correlational Analyses Between Mathematics Anxiety and Mathematics Achievement Among Vocational College Students. *Jurnal Teknologi*, 6, 117–120.

- Musa, A. K. J., Dauda, B., & Umar, M. A. (2016). Gender Differences in Achievement Goals and Performances in English Language and Mathematics of Senior Secondary Schools students in Borno State , Nigeria. *Journal of Education and Practices*, 7(27), 165–175.
- Nasrin, & Begum, P. (2013). A Study of Achievement Motivation and Vocational Interests of Secondary School Students. *Excellence International Journal Of Education and Research*, 1(1 September. ISSN 2322-0417.).
- Noor Erma, A., & Eu, L. K. (2014). Hubungan Antara Sikap, Minat, Pengajaran Guru dan Pengaruh Rakan Sebaya terhadap Pencapaian Matematik Tambahan Tingkatan 4. *Jurnal Kurikulum Dan Pengajaran Asia Pasiifik*, 2(1), 1–10.
- Ocak, G., & Yamac, A. (2013). Examination of the Relationships between Fifth Graders' Self-Regulated Learning Strategies, Motivational Beliefs, Attitudes, and Achievement. *Journal of Educational Sciences: Theory & Pacatice*, 13(1), 380–387.
- Park, S., & Holloway, S. D. (2013). No Parent Left Behind: Predicting Parental Involvement in Adolescents' Education within a Sociodemographically Diverse Population. *Journal of Educational Research*, 106(2), 105–119. doi:10.1080/00220671.2012.667012
- Pearl, J. (2001). Direct and Indirect Effects. In *Proceedings of the Seventeenth Conference on Uncertainty in Arificial Intelligence* (pp. 411–420). San Francisco: University of California.
- Phillipson, S., & Phillipson, S. N. (2012). Children's Cognitive Ability and Their Academic Achievement: The Mediation Effects of Parental Expectations. *Asia Pacific Education Review*, 13(3), 495–508. doi:10.1007/s12564-011-9198-1
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A General Multilevel SEM Framework for Assessing Multilevel Mediation. *Psychological Methods*, 15(3), 209–233. doi:10.1037/a0020141
- Rachel, C. R., & Sean, J. S. (2014). Understanding the Roles of Families in Virtual Learning. *Teaching Exceptional Children*, 46(5), 117–126. doi:10.1177/0040059914530101
- Rivers, J., Mullis, A. K., Fortner, L. A., & Mullis, R. L. (2012). Relationships Between Parenting Styles and the Academic Performance of Adolescents. *Journal of Family Social Work*, 15(3), 202–216. doi:10.1080/10522158.2012.666644
- Rosaffri, M., & Shabariah, M. S. (2011). Kesan Penggunaan Laman Sosial ke atas Kaedah Perbincangan di dalam Pengajaran dan Pembelajaran Mata Pelajaran Sejarah. *Jurnal Teknologi Pendidikan Mlaaysia*, 1(2004), 75–80.
- Ryan, R., & Deci, E. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54–67. doi:10.1006/ceps.1999.1020
- Salasiah Hanin, H., Zainab, I., Rosmawati, M. R., & Ermy Azziaty, R. (2011). Methods of increasing learning motivation among students. *Procedia - Social and Behavioral Sciences*, 18, 138–147. doi:10.1016/j.sbspro.2011.05.021
- Shaverand, A. ., & Walls, R. . (1998). Effect of title 1, parental involvement on student reading and mathematics achievement. *Journal of Research and Development in Education*, 31(2), 91–97.
- Sheldon, S. ., Epstein, J. L., & C.L., G. (2010). Not Just Numbers: Creating a Partnership Climate to Improve Math Proficiency in Schools. *Leadership and Policy in Schools*, 9, 27–48.

- Siti Nor Idayu, M. N., & Mohamad Hisyam, M. H. (2015). Pelaksanaan Program Transisi bagi Memperkasakan Murid Berkeperluan Pendidikan Khas Masalah Pembelajaran( BPKMP ) ke Alam Kerjaya. In *The 3rd Global Summit on Education GSE 2015 (e-ISBN 978-967-0792-01-1), 9-10 March 2015, Kuala Lumpur, Malaysia* (Vol. 3, pp. 672–683). Batu Pahat, Johor: Univeriti Tun Hussein Onn Malaysia. Retrieved from <http://www.worldconferences.net>
- Valdez, C. R., Shewakramani, V., Goldberg, S., & Padilla, B. (2013). Parenting Influences on Latino Children's Social Competence in the First Grade: Parental Depression and Parent Involvement at Home and School. *Child Psychiatry and Human Development*, 44(5), 646–657. doi:10.1007/s10578-013-0358-x
- Wang, J. L., Jackson, L. A., Gaskin, J., & Wang, H. Z. (2014). The Effects of Social Networking Site (SNS) Use on College Students' Friendship and Well-being. *Computers in Human Behavior*, 37, 229–236. doi:10.1016/j.chb.2014.04.051
- Wang, M.-T., & Eccles, J. S. (2013). School Context, Achievement Motivation and Academic Engagement: A Longitudinal Study of School Engagement Using a Multidimensional Perspective. *Learning and Instruction*, 28, 12–23. doi:10.1016/j.learninstruc.2013.04.002
- Weihua, F., & Williams, C. M. (2010). The Effects of Parental Involvement on Students' Academic Self Efficacy, Engagement and Intrinsic Motivation. *Educational Psychology*, 30, 53–74. doi:10.1080/01443410903353302
- Weston, W. J., & Lareau, A. (1991). Home Advantage: Social Class and Parental Intervention in Elementary Education. *Contemporary Sociology*. doi:10.2307/2072154
- Yahaya, A. H., & Obih, D. M. (2010). Hubungan Antara Motivasi, Gaya Pembelajaran Dan Iklim Bilik Darjah Terhadap Pencapaian Akademik Pelajar Tingkatan Empat, 24.
- Yeoh, S. H., & Woo, P. J. (2010). Parental Involvement And Its Effects On Satisfaction Of Parent-Child Relationship. *Sunway Academic*, 7, 48–62.
- Zaidatol Akmaliah, L. P., & Afsaneh, B. (2011). Malay Students ' Entrepreneurial Attitude and Entrepreneurial Efficacy in Vocational and Technical Secondary Schools of Malaysia. *Pertanika Journal Social & Human*, 19(2), 433–447.
- Zainudin, A. (2015). *SEM Made Simple. A Gentle Approach to Learning Structural Equation Modeling* (Edition 1.). Bandar Baru Bangi, Selangor, Malaysia.: MPWS, Rich Publication.
- Zghidi, N., & Loumi, A. (2016). The Sense of Competence ; A Moderator between Motivation and Academic Performance in Physical Education : An Application by the Principal Component Analysis. *International Journal of Physical Education, Sports and Health*, 3(5), 316–322.