P-ISSN: 2790-6795	Annals of Human and Social Sciences	Oct-Dec 2022,Vol. 3, No. 3
O-ISSN:2790-6809	http://doi.org/10.35484/ahss.2022(3-III)23	[241-250]

Annals of Human and Social Sciences
www.ahss.org.pk

RESEARCH PAPER

Conceptualizing the Effect of Psychological Capital on the Academic Performance of the Students of Education

[1]Sadia Khan* [2]Umar Farooq [3]Tanveer Kouser

1. Institute of Education and Research (IER), University of Punjab, Lahore, Punjab, Pakistan
2. Assistant Professor, University of Education Attock Campus, Punjab, Pakistan
3. Assistant Professor, Department of Education, The University of Lahore, Punjab, Pakistan

***Corresponding Author** khansadia527@gmail.com

ABSTRACT

This study is an attempt to investigate the effect of student's Psychological Capital on the academic performance. To meet desired objectives, this study selected the sample of 450 (384 female and 66 male) students from three campuses of the University of Education in Lahore using random sampling technique. The well structure Questionnaire was used to collect data from students of education department. Data is analyzed by using the Pearson correlation coefficient and regression analysis. The overall results reveal that Students' psychological capital is positively associated with their academic performance. In addition, results of regression analysis also substantiate the fact that Psychological Capital has positive and significant effect on student's academic performance. These results provide useful insight for academia, researchers and policy makers for designing the relevant and more effective policies.

Keywords: Academic Performance, Performance Outcomes, Psychological Capital, Regression Analysis

Introduction

Academic performance signifies a vital part of student's life, as it has propounding impact on their self-concept, social adjustment and professional development (Valentine & Dubois, 2005; Ray & Elliott, 2006; Duncan et al., 2007). Moreover, the academic performance of students is also important for the sustained human capital accumulation and hence plays a crucial role in overall growth and development. Therefore identifying the determinants of academic performance is important for not only educational outcome but also correct understanding of mechanisms underlying professional development. Factors associated with Academic Performance of students have been broadly categorized into the institution-level and student-level factors (Hill & Rowe, 1996). Institutions-level factors such as teacher's characteristics, class size, physical resources and learning environment plays pivotal role in student performance (Akram & Shah, 2018; Ozel et al., 2013; Uy, Manalo & Cabauatan, 2015; Ma, Ma, & Bradley, 2008; Darling-Hammond, 2000). Moreover, engagement of students in classroom, students' perception of classroom environment and students' belief toward classroom environment are important predictors of academic performance. (Park, 2005; Baek & Choi, 2002; Winheller et al., 2013). Student level factors such as students' self-concept, attitude, aspiration, motivation, parenting styles, and socioeconomic status also contribute to the academic performance of students (Kyriacou, 2009; Kaya & Rice, 2010; Liou & Liu, 2015; Mokshein, 2002). There is growing evidence that positive strengths of students are crucial to student's success. Among these students' level factors, this study investigated the effects of students' psychological capital on their academic performance. It is broadly accepted that the human capital is most significant predictor of performance (Becker,1964; Lucas, 1988; Romer, 1990). For a person to be productive and perform well, they need to have a certain amount of social capital, which includes relationships, networks, and friendship (Nahapiet & Ghoshal, 1998; Brown and Ashman, 1996; Knack and Keefer, 1997). More recently, the researchers turn to

investigating on Psychological Capital for human resources development to get competitive advantages. The role of psychological capital in organization and work related performance outcome has gained enormous attention since the publication of seminal work by Luthans et al. (2004), which emphasizes on the person's strength and decent potentials.

Existing literature has constantly linked Psychological Capital to managerial, organizational and work related outcomes. However, there is no study that measures and analyzes the role of psychological capital in students related performance outcome especially for Pakistani cultural setting. Moreover there is hardly any study that explored the effect of Psychological Capital on master level Student of education. Based on above, the primary objective of this study is to fill the gap in empirical research. Hence, this consequent study is an attempt to investigate the Effect of Psychological Capital on Academic Performance of the students of education in Pakistani cultural setting.

Material and Methods

This study is based on the cross-sectional quantitative approach for empirical analysis which is primarily non-experimental in nature.

Sampling Technique

This study used the simple random sampling technique to get the representative sample from the accessible population and it was conducted in two phases. During the first phase, 500 students of Education University from four campuses were selected through the simple random sampling technique. We have selected the final year students of each program namely M.A Education and B.Ed Hons by using the random number generator. During the second phase the researcher collected the academic result of selected students from their respective departments. Data collection process was carried out by the researcher herself and was completed in two months. The researcher visited the three campuses of University of Education located in Lahore for this purpose. Respondents were encouraged to answer the questionnaire as honestly as possible they were feeling at that time by motivating them and giving them sweets. The total 500 questionnaires were distributed, out of which 450 were found to be properly filled while rest of 50 were discarded due to incomplete information.

Instrument

The widely recognized Psychological Capital Questionnaire (PCQ-24) developed by Luthan et al. (2007) is used to measure Psychological Capital for this study. The Psychological Capital questionnaire has shown high reliability and constructs validity in previous studies (Luthans et al., 2012). To find out the reliability of Psychological Capital 24-item questionnaire (PCQ) in Pakistani context, Cronbach's Alpha was conducted. A six-point Likert scale was used to measure its items. Hence, sample of 50 students was drawn from the accessible population through simple random sampling technique from outside the research sample to know how respondents will respond before administering the whole survey. The value of Cronbach's alpha comes as 0.93, thus the instrument was considered reliable for this study.

Regression Analysis

The main objective of this study was to investigate the effects of psychological capital on the academic performance of master level students of education. As correlation is simple linear association between two variables and does not necessary applies causation hence along with the correlation, we have also used the regression analysis. If dependent variable is continuous i.e. measured on the ratio scale than the linear regression is most relevant and Ordinary Least Square (OLS) estimation provide the reliable results (Stock

&Watson, 2005). However, if the dependent variable is binary or measured on nominal scale then Logit and Probit is more reliable estimation technique (Stock &Watson, 2005).

The following is the regression equation to investigate the casual effect

$$AP_i = \beta_0 + \beta_1 PsyCap_i + \varepsilon \quad (1)$$

Where, AP_i is academic performance of i^{th} individual while $PsyCap_i$ is the index of psychological capital and β_0 is constant. In the line of Maccon et al. (1990), Greaney & Hegarty (1987) and Abuya et al. (2013), we have incorporated the time management, leisure-time reading habits and mother education as control variables. After incorporating the control variables our baseline model in the equation (1) becomes

$$AP_i = \beta_0 + \beta_1 PsyCap_i + \beta_2 MEdu_i + \beta_3 TM_i + \beta_4 RH_i + \varepsilon \quad (2)$$

Where, $MEdu_i$ is mother's education of i^{th} individual While TM_i and RH_i are respectively time management and leisure-time reading habits.

Variables Description

The variables of the study can be described as follows

1) Academic Performance.

   This study used the CGPA as proxy for the academic performance.

2) Psychological Capital

Psychological Capital comprises of four psychological constructs of efficacy, hope, and resilience and optimism. Each of the four dimensions of students Psychological Capital comprised six items, rated from 1 (strongly disagree) to 6 (strongly agree) in a 6 point Likert scale.

We used the simple calculus technique to construct the psychological capital index. First, index is computed by utilizing methodology of Jamieson (2004), Jakobsson and Westergren (2004) and Haq et al. (2015) which used the following formula;

$$(PsyCap) = \frac{\sum_{i=1}^{n}(response\ score\ on\ questioni)}{\sum_{i=1}^{n}(maximum\ score\ on\ questioni)} \times 100$$

Where i = 1, 2…n (where 'i' indicates the number of question) and n is the total number of questions asked in a particular index.

3) Mother's Education is measured as number of years of schooling

4) Father's Education is measured as number of years of schooling

5) Time Management: In the line of Haq et al. (2015), we have constructed an index of time management by using the formula $TM = \frac{\sum_{i=1}^{n}(response\ score\ on\ questioni)}{\sum_{i=1}^{n}(maximum\ score\ on\ questioni)} \times 100$

6) Reading Habits: In the line of Haq et al. (2015), we have constructed an index of time management by using the formula $RH = \frac{\sum_{i=1}^{n}(response\ score\ on\ questioni)}{\sum_{i=1}^{n}(maximum\ score\ on\ questioni)} \times 100$

Data Analysis and Interpretation

Demographic information of respondents is presented in the descriptive statistics portion with the help of graphs and tables in term of percentage and frequency. Regression analysis was applied to identify the effect of psychological Capital (independent variable) on the academic achievement (dependent variable) of selected students.

Descriptive Statistics

Descriptive statistics is used to draw demographic characteristics of the respondents. Demographic statistics consisted of gender of the students, their respective campuses, or respondents of different master level programs.

Results and Discussion

Table 1
Demographic Characteristics of Respondents (N=450)

Variables		Frequency (f)	Percentage (%)
Respondents' Gender	Male Students	66	14.7
	Female Students	384	85.3

Table 1 showed the demographic characteristics of the participants. The table revealed that students sample consisted of 384 (85.3 %) female respondents' students and 66 (14.7 %) respondents are male students. This is primarily due to the nature of population as educational programs mostly attract female students in Pakistani cultural context. For example, there are only 11 male students in the Township campus in selected programs while there are 41female students. Moreover there are only female students in the Bank Road campus.

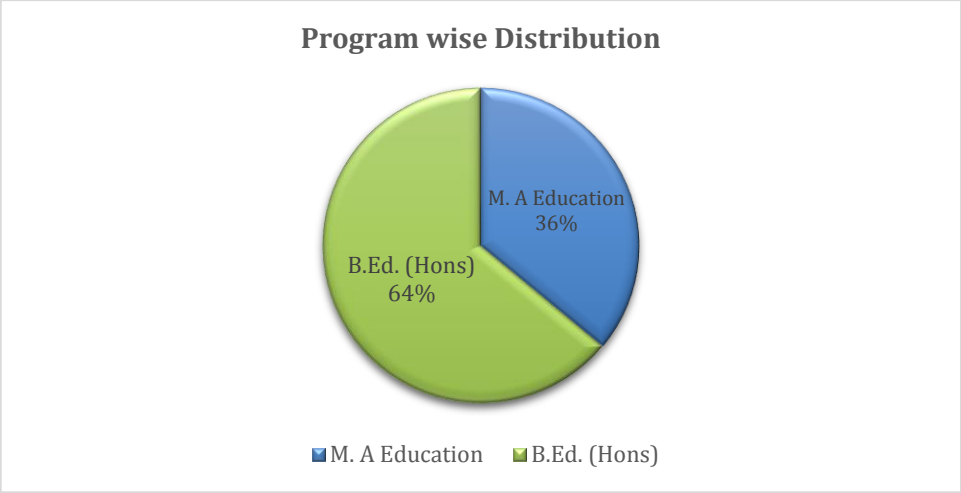

Figure 1 Programs Wise Distribution of Sample

Figure 1 revealed that 64 % respondents are students of M.A education, and remaining 36% belongs to B.Ed (Hons) program.

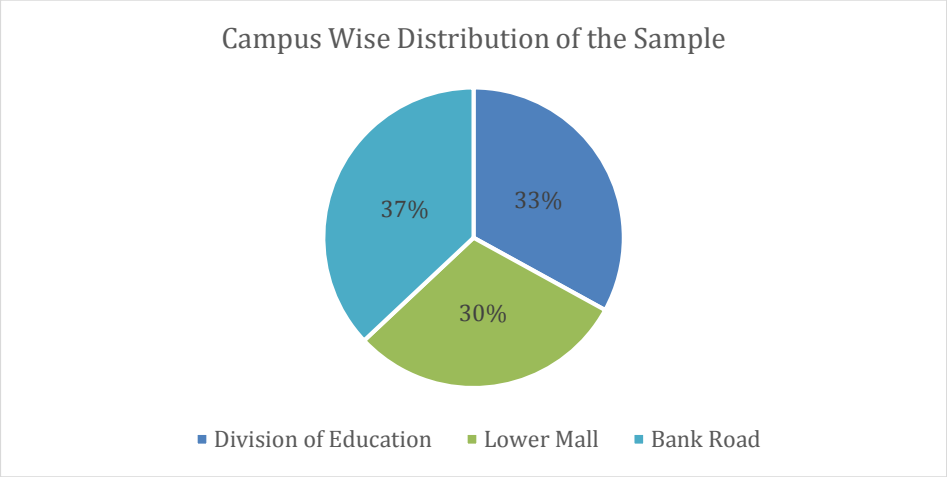

Figure 2 Campus wise Distribution of the Sample

Figure 2 shows that 37% respondents belong to Bank Road campus, 33% students belong to Division of Education, and 30% students are from Lower Mall campus, respectively.

Table 2
Mean and Standard Deviations of the Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Actual CGPA	450	2.40	3.92	3.356	0.308
Psy Cap	450	31.25	100	77.03	12.63
TM	450	20.00	95	69.51	25.43
Mother Edu	450	5.00	16	12.00	4.00

Table 2 summarizes the descriptive statistics for the CGPA and Psychological Capital Questionnaire by providing the maximum, minimum, standard deviation, and mean for the constructs under study.

The effect of psychological capital of master level students on their academic achievement has been analyzed by using the regression analysis. The basic issue in the regression analysis is misspecification the model. To avoid any misspecification, we estimate different models from simpler to general and then choose the most appropriate models. The R^2 and adjusted R^2 measure the goodness of fit of model and also known as model selection criterion. The problem with R^2 is that it always increases and never decreases with inclusion of additional predictor in the model. However, adjusted R^2 is better criterion as it adjusts the additional parameter with the degree of freedom. The regression models summary is presented in the table 3

Table 3
Regression Models Summary (Dependent Variable: CGPA)

Model	R^2	Adjusted R^2	Std. Error
Predictors: PsyCap	0.519	0.518	0.2141
Predictors: Psy Cap; Reading Hab; MotherEdu; Gender	0.595	0.591	0.1970
Predictors: Psy Cap; Reading Hab; Father Edu; Mother Edu	0.595	0.590	0.1972
Predictors: Psy Cap; Reading Hab; Mother Edu	0.596	0.593	0.1974

Predictors: Psy Cap; Reading Hab; Mother Edu; TM	0.603	0.600	0.1951

The above results show that most simple model in which the PsyCap is the only predictor of the academic achievement can explain only 51% variation in the dependent variable. When we includes the additional predictors such as reading habit and mother education both R^2 and adjusted R^2increases. However, when we include the father education with the PsyCap, reading habit and mother education adjusted R^2 decreases. It shows that father education is not too much relevant with student academic achievement. For further confirmation, when we exclude the father education, adjusted R^2 increases from 0.590 to 0.593. Finally, when we include the Time Management (TM) of students the adjusted R^2 increases significantly. We have reported the results of most simple model with PsyCap as single predictor and also model with highest adjusted R^2 which includes additional predictors along with the PsyCap.

The results of most parsimonious model with reading habits (RH), mother education (MEdu), and Time Management (TM) as control variables and PsyCap as variable of interest are reported in the table 4. As Gender and father education was statistically insignificant, so we have excluded them from the final model. Results show that PsyCap is again statistically significant ($p<0.01$, $t>2$), with expected positive sign. All other control variables like reading habit (RH), mother's education, and TM are statistically significant and with expected positive sign. Similarly, mother education is also statistically significant ($p<0.05$).

Table 4
Regression Results (Dependent Variable: Cumulative Grade Point Average)

	Coefficients(β)	SE	t	P
PsyCap	0.454	0.001	11.06	0.000
RH	0.270	0.001	6.694	0.000
MEdu	0.081	0.008	2.118	0.035
TM	0.115	0.045	3.129	0.002
R-Square	0.603			
Adjusted R-Square	0.600			
F-Statistics	169.122			0.000

Overall it was found that regression model explain a significant amount of the variance in the dependent variable which is academic achievement ($F(4, 445) = 169.122$, $p < .001$, $R^2 = 0.603$, Adjusted $R^2 = 0.600$).

The overall significance of the regression model is reported in the table 4, which shows that overall model is highly significant, as $F(4,445)=169.122$ and $P<0.001$.

To meet desired objectives, this study selected the sample of 450 students from four campuses of the University of Education in Lahore using random sampling technique. The Psychological Capital questionnaire has shown high reliability and constructs validity for educational outcomes in previous studies (Luthans et al., 2012). Overall results substantiate the fact that Psychological Capital has positive and significant effect on student's academic performance. These results are in line with the existing literature that corroborate the fact that psychological capital is positively associated with academic performance. For instances, Luthans et al., (2012) find the evidence for the positive contribution of psychological capital to the academic achievement of business school students in United States. More recently, Datu et al. (2018), and Ortega-Maldonado & Salanova (2018) corroborate the hypothesis that psychological capital positively contributes to the academic achievement.

Along with the psychological capital our control variables such as time management, reading habits, and mother education are significant with expected positive sign. These

results are in line with the existing literature. For instance, Maccon et al. (1990), Pehlivan (2013), Dalli (2014), and Hamzah et al (2014) support the claim that time management significantly affect the students' academic achievements. Similarly, Greaney & Hegarty (1987), Paulson (2006), Shen (2006), Camp (2007), and Egong (2014) find evidence for the positive association between the reading habits and academic achievements of students. In similar line, existing literature also documents the evidence for the positive association between the mother education and students academic achievement (for instance, see, Abuya et al., 2013; Awan & Kauser, 2015; Driessen et al., 2005; Parveen & Alam, 2008).

Conclusion

The key objective of this study was to conceptualize the effect of Psychological Capital on academic performance of students of education. The study found positive effect of the Psychological capital on students' academic performance in context of sampled public university. Moreover, our results support the claim that there exist strong causal link between the Psychological capital and academic performance. The control variables such as mother's education, leisure-time reading habits and time management are also positively related to the students' academic performance. These findings have implication for policy makers, researchers and pedagogy. Since students' psychological capital is causing their academic performance, it is suggested that educational institutions should take initiative to develop the Psychological Capital of the students through relatively short training interventions, pedagogy and curricula. It is further suggested that future research should be conducted using experimentation to measure the effect of psychological capital on the students' academic achievement.

References

Abuya, B. A., Oketch, M., Mutisya, M., Ngware, M., & Ciera, J. (2013). Influence of mothers' education on children's maths achievement in Kenya. *Education 3-13*, *41*(6), 633-646.

Akram, M., & Shah, A. A. (2018). Predicting Student Achievement through Organizational Learning Culture. *Journal of Education & Social Sciences, 6(2), 15-26.*

Awan, A. G., & Kauser, D. (2015). Impact of Educated Mother on Academic Achievement of Her Children: A Case Study of District Lodhran-Pakistan. *Journal of Literature, Languages and Linguistics*, *12*, 57-65.

Baek, S. G., & Choi, H. J. (2002). The relationship between students' perceptions of classroom environment and their academic achievement in Korea. *Asia Pacific Education Review*, *3*(1), 125-135.

Becker, G. S. (1964). *Human capital theory.* Columbia, New York.

Brown, L. D., & Ashman, D. (1996). Participation, social capital, and intersectoral problem solving: African and Asian cases. *World development*, *24*(9), 1467-1479.

Camp, D. (2007). Who's reading and why: Reading habits of 1st grade through graduate students. *Reading Horizons*, *47*(3), 251.

Dalli, M. (2014). The university students time management skills in terms of their academic life satisfaction and academic achievement levels. *Educational Research and reviews*, *9*(20), 1090-1096.

Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education policy analysis archives*, *8* (1). 1-44.

Datu, J. A. D., King, R. B., & Valdez, J. P. M. (2018). Psychological capital bolsters motivation, engagement, and achievement: Cross-sectional and longitudinal studies. *The Journal of Positive Psychology*, *13*(3), 260-270.

Driessen, G., Smit, F., & Sleegers, P. (2005). Parental involvement and educational achievement. *British educational research journal*, *31*(4), 509-532.

Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P. & Sexton, H. (2007). School readiness and later achievement. *Developmental psychology*, *43*(6), 1428.

Egong, A. I. (2014). Reading culture and academic achievement among secondary school students. *Journal of Education and Practice*, *5*(3), 132-136.

Greaney, V., & Hegarty, M. (1987). Correlates of leisure-time reading. *Journal of Research in Reading*, *10*(1), 3-20.

Hamzah, A. R., Lucky, E. O. I., & Joarder, M. H. R. (2014). Time Management, External Motivation, and Students' Academic Performance: Evidence from a Malaysian Public University. *Asian Social Science*, *10*(13), 55.

Haq, M., Khan, K., & Saddique, R. (2015). The effect of workers' ethical attributes on firms' productivity: Empirical evidence from Azad Jammu and Kashmir's (Pakistan) handicrafts industries. *Humanomics*, *31*(2), 224-239.

Hill, P. W., & Rowe, K. J. (1996). Multilevel modelling in school effectiveness research. *School effectiveness and school improvement*, *7*(1), 1-34.

Jamieson, S. (2004). Likert scales: how to (ab) use them. *Medical education*, *38*(12), 1217-1218.

Jakobsson, U., & Westergren, A. (2005). Statistical methods for assessing agreement for ordinal data. *Scandinavian journal of caring sciences*, *19*(4), 427-431.

Kaya, S., & Rice, D. C. (2010). Multilevel effects of student and classroom factors on elementary science achievement in five countries. *International Journal of Science Education*, *32*(10), 1337-1363.

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly journal of economics*, *112*(4), 1251-1288.

Kyriacou, C. (2009). *Effective teaching in schools theory and practice (3rd ed.)*. Nelson Thornes, United Kingdom.

Liou, P. Y., & Liu, E. Z. F. (2015). An analysis of the relationships between Taiwanese eighth and fourth graders' motivational beliefs and science achievement in TIMSS 2011. *Asia Pacific Education Review*, *16*(3), 433-445.

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of monetary economics*, *22*(1), 3-42.

Luthans, F., Luthans, K. W., & Luthans, B. C. (2004). Positive psychological capital: Beyond human and social capital. *Business horizons*, *47*(1), 45-50.

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel psychology*, *60*(3), 541-572.

Luthans, B. C., Luthans, K. W., & Jensen, S. M. (2012). The impact of business school students' psychological capital on academic performance. *Journal of Education for Business*, *87*(5), 253-259.

Ma X, Ma L, Bradley KD. 2008. Using multilevel modeling to investigate school effects. In Multilevel Modeling of Educational Data, ed. AA O'Connell, DB McCoach, pp. 59–110. Charlotte, NC: Inf. Age

Macan, T. H., Shahani, C., Dipboye, R. L., & Phillips, A. P. (1990). College students' time management: Correlations with academic performance and stress. *Journal of educational psychology*, *82*(4), 760.

Mokshein, S. E. (2002). Factors significantly related to science achievement of Malaysian middle school students: An analysis of TIMSS 1999 data. (Doctoral dissertation, The University of Iowa). (UMI No. 3073388).

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, *23*(2), 242-266.

Ortega-Maldonado, A., & Salanova, M. (2018). Psychological capital and performance among undergraduate students: the role of meaning-focused coping and satisfaction. *Teaching in Higher Education*, *23*(3), 390-402.

Ozel, M., Caglak, S., & Erdogan, M. (2013). Are affective factors a good predictor of science achievement? Examining the role of affective factors based on PISA 2006. *Learning and Individual Differences*, *24*, 73-82.

Park, I. (2005). Teacher commitment and its effects on student achievement in American high schools. *Educational Research and Evaluation*, *11*(5), 461-485.

Parveen, A., & Alam, M. T. (2008). Does mothers' education influence children's personality factors and academic achievement. *Bulletin of Education and Research*, *30*(2), 1-6.

Paulson, E. J. (2006). Self-selected reading for enjoyment as a college developmental reading approach. *Journal of College Reading and Learning*, *36*(2), 51-58.

Pehlivan, A. (2013). The effect of the time management skills of students taking a financial accounting course on their course grades and grade point averages. *International Journal of Business and Social Science*, *4*(5). 196-293.

Ray, C. E., & Elliott, S. N. (2006). Social adjustment and academic achievement: A predictive model for students with diverse academic and behavior competencies. *School Psychology Review*, *35*(3), 493.

Romer, P. M. (1990). Endogenous technological change. *Journal of political Economy*, *98*(5, Part 2), S71-S102.

Shen, L. (2006). Computer technology and college students' reading habits. *Chia-Nan Annual Bulletin*, *32*, 559-572.

Stock, J.H & Watson, M.W. (2005). *Introduction to Econometrics, Boston San Francisco*, New York

Uy, C., Manalo, R. A., & Cabauatan, R. R. (2015). Factors affecting university entrants' performance in high-stakes tests: a multiple regression analysis. *Asia Pacific Education Review*, *16*(4), 591-601.

Valentine, J. C., & DuBois, D. L. (2005). Effects of self-beliefs on academic achievement and vice versa. *The new frontiers of self research*, 53-77

Winheller, S., Hattie, J. A., & Brown, G. T. (2013). Factors influencing early adolescents' mathematics achievement: High-quality teaching rather than relationships. *Learning Environments Research*, *16*(1), 49-69.