A Scale Measuring Traits on the Integration of Impulsivity and Positive Mood to University Students Majoring in Business English

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Abstract: Higher education is a demanding context in which college students have to face multiple stressors. Students' inability to cope with stress may cause their low engagement, which would bring poor academic performance and ineffectiveness of higher education. Therefore, this study focuses on university students majoring in business English and investigates the effect of psychological capital on their learning engagement and academic performance. Based on broaden-and-build theory, this study formulates the hypotheses. Survey data was distributed among university students in central and southern part of China. 306 valid questionnaires were returned. Partial least square structural equation modeling was used for data analysis. The results confirmed that psychological capital is positively related to learning engagement and academic performance; however, the mediating effect of learning engagement between psychological capital and academic performance is insignificant. Based on the results, some practical suggestions are provided.

1. Introduction

1.1 Research Background

Higher education is a demanding context in which college students have to face many challenges and stressors, such as keeping up with their classwork, obtaining degrees, conforming to the fierce job market, and preparing for postgraduate entrance examination. Students' inability to cope with all of these stressors may cause them to be less engaged in their academic study. Low engagement in their studies will in turn result in poor academic performance and ineffectiveness of higher education, which is not expected by their families or the universities. Therefore, learning engagement of university students is worth concerning.

1.2 Research questions

In recent years, under the influence of positive psychology, scholars at home and abroad have focused their research on understanding how to limit individuals' negative attitudes and behaviors while promoting individuals' positive or optimal development. Among the many factors that would facilitate learning engagement, this study focuses on the concept of psychological capital (PsyCap). This is define as, those positive emotions and qualities that enable an individual to proactively handle stressful situations. Initially, previous research on this topic found that PsyCap led to desirable outcomes in organizations, including employee commitment, organizational change, and favorable organization atmosphere (Simon's et.al, 2013). Then, the research on beneficial effect of PsyCap was expanded to academic settings both in China and foreign countries. A number of prior studies reported that PsyCap significant influenced learning empowerment, learning emotions, and academic performance. In China, two studies (Li et al., 2018; Tian and Li, 2017) found that the relationship between PsyCap and learning engagement, scarce research has focused on the students majoring in business English. However, to date, no study has focused on the effect of PsyCap on Students majoring in business Eacademic performance in terms of TEM 4, a standard test for English majors.

1.3 Psychological Capital

In 2004, the famous American scholar Luthans(2004)put forward the concept of psychological Capital Appreciation, commonly known as psychological capital(PsyCap). PsyCap refers to a kind

of mental state that an individual shows in the process of growth and development (Luthans, 2004). It is a core psychological element that transcends human capital and social capital. It is a psychological resource to promote personal growth and performance improvement. People have different pressures in different circumstances; the study of PsyCap about how to create a positive, healthy and sunny mental state, so as to promote the positive or optimal development of individuals, rather than trying to solve the psychological problems after the occurrence of individuals. PsyCap four core elements: hope, efficacy, resilience, and optimism. The first letters of these four words together are HERO. A person who has a high level of PsyCap can be labeled as a hero.

1.3.1 Hope

Rick Snyder (2004) believes that hope is a positive motivational state, formed on the basis of the experience generated by the interaction of the motivation for success (the level of energy directed towards the goal) and the path (the plan to achieve the goal). That is to say, when an individual has a goal, he will make a plan to achieve the goal. When he meets some factors that affect the implementation of the plan and hinder his ability to achieve the goal, he will not give up. Instead, he will find another way to adjust the plan appropriately and finally achieve the goal. Hope is the will and the way. A hopeful person is often able to think independently, has a strong need for growth, and has strong creativity. A person who lacks hope does not have a clear path to reach his goal. Although he seems working hard, he is actually less motivated, let alone a better performance.

1.3.2 Efficacy

Efficacy, also named as self-efficacy, is the confidence that individuals have to accomplish a challenging work. Five characteristics of efficacy have been founded: First, efficacy is related to specific field. An individual will be very confident when he is in a field that he is familiar with. Second, efficacy is established on repeated practice or mastery experience. Third, there is always a room for improvement in efficacy when an individual is facing some difficult work in a familiar field. Fourth, efficacy is influenced by the evaluation provided by respected others. Fifth, efficacy can be developed when individuals observe the people who are similar to them achieve the same goal set as theirs. People with high levels of efficacy tend to take difficult, challenging tasks. When in the face of difficulties, they are willing to put in necessary effort and persevere in order to achieve their goals. Consequently, they grow more powerful gradually due to their strong self-motivation.

1.3.3 Resilience

Resilience refers to individuals' ability to handle successfully when being confronted with adversity. Resilience is recovery and transcendence. In today's environment, with fierce competition and increasing pressure, people tend to have negative emotions when facing difficulties. It's a very hostile environment for those who can only react negatively. Resilient people, on the other hand, are able to sharpen themselves through chaos, learn and grow in difficult situations, or even become better than they used to be. According to Reivich, K. & Shatte (2002), resilience helps people to overcome difficulties and adapt to new situations. Moreover, resilience allows people to use difficulties as "springboards" to achieve higher goals.

1.3.4 Optimism

Optimism is positive attribution to present and future success. Optimism is a style of interpretation. People being optimistic tend to attribute positive events to their own, enduring, and common causes rather than to external, temporary and situational factors. Optimism is realistic and flexible. Put in another way, optimism should not be a form of narcissism or unrealistic ego expansion. Optimistic people do not attribute success only to their own account, or shirk responsibility while facing failure. Highly optimistic people are grateful. While stuck in adversity, optimistic people are able to explore objectively the reasons that brought setbacks, learn from mistakes, accept what they cannot change, and move on. Optimism represents the experience of self-discipline, dissecting the past, contingency planning, and planning for a rainy day. Realistic and flexible optimists can find full enjoyment in both positive and negative events, and learn from those experiences to greatest extent.

To sum up, PsyCap is an enduring psychological strength. Past studies have found that PsyCap led to many desired outcomes among students. For example, the study of Ji Won You (2016) reports that PsyCap has a positive influence on learning empowerment of students from Korea; the study of Isabel Mart ńez et.al (2019) discovers that PsyCap is conducive to academic performance from Spain and Portugal.

2. Literature review

2.1 Learning engagement

Learning engagement is defined as a positive and fulfilling mental state related to learning, which includes three dimensions: vitality, dedication and concentration (Fredricks. et.al, 2004). Vitality means that students who invest in learning will be full of energy and full of vitality. They will face difficulties head-on and not be easily discouraged. Dedication means that a person who is engaged in learning feel connected to learning and passionate about learning. They care about the problems they encounter and try to find meaning in learning. They are willing to contribute to learning and proud of learning. Concentration means that a person who is engaged in learning is completely immersed in their learning. When they are learning, they are willing to give their full attention, find learning challenging and enjoyable.

2.2 PsyCap and learning engagement

PsyCap is a kind of positive psychological strength and allows individuals to experience positive emotions. Put in detail, the dimension of hope makes individuals to have the will to achieve the goal and never give up when their encounter difficulties; the dimension of efficacy makes individuals have the confidence to complete a challenging task; the dimension of resilience makes individuals consider negative events as the chances for them to temper their own, thus recovering quickly and even becoming better than before. The dimension of optimism makes individuals always look the bright side of the circumstances, explore the essence of the events and learn from the experiences. According to broaden-and-build theory, positive emotions help individuals to expand thought and action pool and establish personal resources, for example, the proactive coping style under stressful situations. Therefore, PsyCap would drive individuals to become vigorous in the face of difficulties, devoted to the challenging work, and fully immersed in the activities they are undertaking. Prior study of Simon's .et.al (2013) has found a positive relationship between PsyCap and work engagement of the employees in South Africa; the study of Ji Won You (2016) also reported that PsyCap has positive impact on engagement of students in Gachon university of Korea. Based on the sound theoretical frame and previous empirical studies, this research predict that PsyCap tends to be positively related to learning engagement of college students majoring business English. Thus, the first hypothesis is generated as following:

H1 the level of PsyCap is positively related to learning engagement of Chinese college students majoring business English.

2.3 PsyCap and academic performance

According to broaden-and-build theory, positive emotions help individuals enhance personal resource, such as initiative, flexible problem-solving ability. Therefore, students with high PsyCap tend to be more creative while facing problems during learning activities, and more effective in academic achievements. Prior study of Newmann (1992) discovers that learning engagement predicts better academic performance of students in American secondary schools. Thus, it can be predicted that the college students majoring in business English who possess high level of PsyCap are more likely to get better academic performance. The second hypothesis is made as follows:

H2 the level of PsyCap is positively related to academic performance of college students majoring in business English.

3. Methodology

3.1 Sampling and data collection

This study focused on 621 college students majoring in business English. The sampling frame of the potential respondents is mainly located in the universities in Central part of Southern part of China for the third year students. Considering the characteristics of sampling frame and current research, the convenient sampling---a nonprobability sampling technique---was used. This is because it would make data collection more efficient and effective. By using convenient sampling, the self-administered questionnaire was distributed to the potential respondents.

3.2 Measurements

This study used existing scales which have been developed by other scholars to measure the variables included in this research. One important reason to use existing scales is that the reliability and validity of the scales have been repeatedly tested.

To measure PsyCap, 24-item self-reported PsyCap Questionnaire (PCQ) developed by Luthans (2007) was used. This 24-item scale comprises 4-dimensinonal subscales; each subscale has 6 items to measure hope, efficacy, resilience, and optimism respectively. All items were assessed by using 5-point Linker Scale, with response options ranging from 1(strongly disagree) to 5(strongly agree).

To measure learning engagement, 9-item version of the Utrecht Work Engagement Scale (UWES) was utilized. This scale is made up of 3-dimmensional subscales; each subscale has 3 items to measure vigor, dedication, and absorption. All items were measured by using 5-point Linker Scale, with choices ranging from 1(never) to 5(always).

To measure academic performance, the continuous variable code was used. No score of TEM 4 was coded as 0, the score ranging from 0-69 was coded as 1, the score between70-79 was coded as 2, and the score of 80 and above was coded as 3.

3.3 Control variables

Referring to the previous research, some demographic features of college students will be included in this study as control variables. They are age, gender, Year, and whether they are the only child of the family. In addition, based on prior studies, some other variables are included as control variables. They are the leadership experience during period of higher education, and the experience whether having a scholarship or not.

Among these control variables, age was measured by the actual age. Gender was measured in a nominal scale, with male being coded as 0 and female coded as 1. Grade was measures in a nominal scale the freshman was coded as 1, the sophomore was coded as 2 the junior was coded as 3, and the senior was coded as 4 Moreover, the leadership experience during the period of higher education was measured in nominal scale. No such experience was coded as 1, while having such experience was coded as 0 In addition, scholarship experience during the period of higher education was measured with a scale No such experience was coded as 1 while having such experience was coded as 0.

3.4 Estimation method

This study used a Partial Least Square (PLS) regression to analyze the collected data and test the proposed hypotheses. There are several advantages to use PLS. Firstly, the PLS analysis enables the researcher to analyze multiple hypotheses simultaneously. Secondly, the PLS analysis does not necessarily require that data to be normally distributed. Thirdly, the PLS analysis demands smaller sample size than other Structural Equation Modeling technique. The software of WarpPLS 7.0 was used in this study to perform PLS estimation.

4. Result

4.1 Data

The questionnaire was distributed to the possible respondents by sharing with them QR code at the platform of school website. It took about 14 days to complete data collection. In total, 621 have

been collected back, but only 306 were valid, with the response rate 49.28%.

4.2 Characteristics of the samples

The information about demographic features and other experiences related to academic and non-academic activities of the college students majoring in business English are shown in Table 1 to Table 2.

The average age of the 306 respondents was 22.5. Among them, the youngest one was 18, while the eldest one was 36.

Table 1. Ages of College students.

Variable	Min	Max	Mean	Standard Deviation
Age(year)	18	36	22.5	5.35

Among 306 respondents, there are 153 male students (50%) and the same number of female students (50%). As for grade, there are 13 freshmen, accounting for 4%; there are 31 sophomores, accounting for 10%; there are 28 juniors, accounting for 9%, and there are 182 seniors, accounting for 60%. As for leadership experience, 205 students have got such experience (67%), while 101 students have not got such experience (33%). As for scholarship experience, 230 students have got scholarship (75%), and 76 students have not got scholarship (25%). As for only child, there are 194 students who are only child (57%), and 149 students are not only child (43%).

Table 2. Other characteristics.

Variable	Categories	Frequency	Percentage
Gender	Male	153	50%
	Female	153	50%
	1	13	4%
	2	31	10%
Grade	3	28	9%
	4	182	60%
	Graduated	52	17%
	With the experience	205	67%
	Without the experience	101	33%
	Yes	230	75%
	No	76	25%
	Yes	194	57%
	No	149	43%

4.3 Normal distribution test

The normal distribution test was conducted to check whether the data are normally distributed. Two tests were performed, which are Jarque-Bera test of normality (Normal-JB) and Robust-Bera test of normality (Normal RJB). The results of these two tests are provided in the form of message saying "Yes" or "No". To interpret, "Yes" stands for normal distribution of data, whereas "No" implies the absence of normal distribution of data. As shown in Table 4, the results of Normal-JB and Normal-RJB of all variables are "NO", thus indicating that the data are not normally distributed. Therefore, using PLS analysis is suited to the current study.

Table 3. Normal distribution.

	PSY	LE	AP	AGE	GEN	GRA	OC	LD	SE
Normal-JB	No	No	No	No	No	No	No	No	No
Normal-RJB	No	No	No	No	No	No	No	No	No

Notes: PSY=Psychological Capital, LE=Learning Engagement, AP=Academic Performance, AGE=Age, GEN=Gender, GRA=Grade, OC=only child, LD=Leadership experience, SE=Scholarship experience, Yes=dare are normally distributed, No=data are not normally distributed

4.4 Validity test

Performing validity test is fundamental because the validity test evaluates how well the constructs are measured. The good validity of the questionnaire implies that the constructs to be measured are exactly being measured. Two subtypes of validity test were performed: convergent validity test and discriminant validity test.

4.4.1 Convergent Validity test

Convergent validity test aims to check whether the items in the same constructs are related well with one another. The factor loading is used to examine the convergent validity in this study. The minimum value of 0.5 is adequate for the validity analysis. The results reveal that most of the items have a value over 0.5 except for three items of PsyCap which are PSY16=0.489, PSY18=0.476, and PSY22=0.489, whose values are below 0.5. Hence, these three items were deleted from the analysis.

Table 4. The Combined Factor Loading and Cross Loadings of All Latent Variables.

	PSY	LE
PSY1	(0.639)	-0.040
PSY2	(0.557)	-0.173
PSY3	(0.576)	-0.049
PSY4	(0.568)	0.064
PSY5	(0.591)	-0.124
PSY6	(0.571)	-0.132
PSY7	(0.624)	0.117
PSY8	(0.554)	-0.011
PSY9	(0.659)	-0.036
PSY10	(0.625)	-0.093
PSY11	(0.624)	0.093
PSY12	(0.680)	-0.204
PSY13	(0.569)	-0.038
PSY14	(0.647)	-0.047
PSY15	(0.632)	0.017
PSY17	(0.573)	0.067
PSY19	(0.557)	-0.097
PSY20	(0.574)	-0.006
PSY21	(0.637)	0.039
PSY23	(0.523)	0.298
PSY24	(0.629)	0.167
LE1	0.206	(0.664)
LE2	0.083	(0.685)
LE3	0.130	(0.591)
LE4	0.238	(0.610)
LE5	-0.196	(0.608)
LE6	-0.114	(0.638)
LE7	-0.133	(0.590)
LE8	-0.101	(0.715)
LE9	0.009	(0.573)

Notes: PSY=Psychological Capital, LE=Learning Engagement.

4.4.2 Discriminant Validity test

Discriminant validity test aims to detect whether the items under different constructs overlap with one another. It was performed by comparing the square root of average variance extracts (AVE) of each construct and the correlation of a specific latent variable to other variables. The requirement for discriminant validity test is that the square root of AVE of each construct should be higher than any correlation that it involved. After performing the discriminant validity test, the result was satisfactory. As displayed in Table 4.5, each indicator has greatest value on the variable it attempts to measure.

Table 5. The Correlations and Average Variance Extracted of All Latent Variables.

	PSY	LE	AP	AGE	GEN	GRA	OC	LD	SE
PSY	(.583)	.406	.165	-.051	-.057	.072	.142	.073	.204
LE	.	(.480)	.076	.050	.043	.024	.204	.170	.228
AP			(1)	-.123	-.076	.079	-.084	-.157	-.247
AGE				(1)	.104	.599	.064	.142	.326
GEN					(1)	.047	.057	.045	.151
GRA						(1)	-.028	.043	.060
OC							(1)	.378	.234
LD								(1)	.284
SE									(1)

Notes: PSY=Psychological Capital, LE=Learning Engagement, AP=Academic Performance, AGE=Age, GEN=Gender, GRA=Grade, OC=only child, LD=Leadership experience, SE=Scholarship experience

4.5 Reliability test

Reliability test aims to ensure that the scales are consistent to generate reliable results. Two reliability tests were conducted in this study, which are Cronbach's alpha coefficient and composite reliability.

4.5.1 Cronbach's alpha coefficient

Cronbach's alpha coefficient is generally used as an indicator to test the internal consistency of the scales. The suggested value of Cronbach's alpha coefficient should be equal to or above 0.70. As shown in Table 4.6, the values of Cronbach's alpha coefficient of PsyCap and learning engagement are close to 0.70, meeting the criterion.

4.5.2 Composite reliability

Composite reliability was conducted to ensure the internal consistency of latent variables. The minimum acceptable value of composite reliability is 0.70. As presented in Table 4.6, the values of composite reliability of both latent variables are above 0.70. Thus, the results show that a satisfactory reliability of the scales used in this study.

Table 6. Cronbach's Alpha Coefficient and Composite Reliability of the Variables.

	PSY	LE
Cronbach's alpha(α)	.701	.713
Composite reliability	.719	.728

Notes: PSY=Psychological Capital, LE=Learning Engagement

4.6 Multicollinearity

Multicollinearity is a statistical phenomenon that two or more variables in a conceptual model are highly correlated. The variance inflation factor (VIF) is used as an indicator to measure the multicollinearity. A full collinearity VIF test was performed in this study to detect collinearity issue because it examines both vertical and lateral collinearity simultaneously. The threshold of full collinearity VIF is suggested to be lower than 3.3. As shown in Table 4.7, the values of all latent variables in the model range from 1.047 to 1.709, indicating that multicollinearity is not a serious concern in the analysis.

Table 7. Full VIF of all variables.

	PSY	LE	AP	AGE	GEN	GRA	OC	LD	SE
Full VIF	1.697	1.606	1.197	1.921	1.047	1.709	1.219	1.254	1.416

Notes: PSY=Psychological Capital, LE=Learning Engagement, AP=Academic Performance,

AGE=Age, GEN=Gender, GRA=Grade, OC=only child, LD=Leadership experience, SE=Scholarship experience

4.7 Structural regression model

4.7.1 Hypotheses test

In this study, three hypotheses with linear relationship were proposed. The results of hypotheses testing can be interpreted by several measurement terms. First, the path analysis reports the strength of correlation between variables. The smaller p-value, the stronger the strength of evidence against null hypothesis is. The p-value is suggested to be above 0.05.Put in another way, if the p-value is lower than 0.05, it indicates a meaningful rejection of null hypothesis, which tells a significant claim to support the alternative hypothesis. Conversely, if the p-value is higher than 0.05, it eliminates the likelihood to reject null hypothesis. Therefore, the hypothesis will be statistically significant. Third, the coefficient of determination, namely r-squared coefficient, represents the proportion of the variation in a dependent variable that can be explained by the independent variable. The higher the coefficient of determination, the larger the predictive power of the overall model has. The result from PLS-SEM analysis is shown in Figure 1.
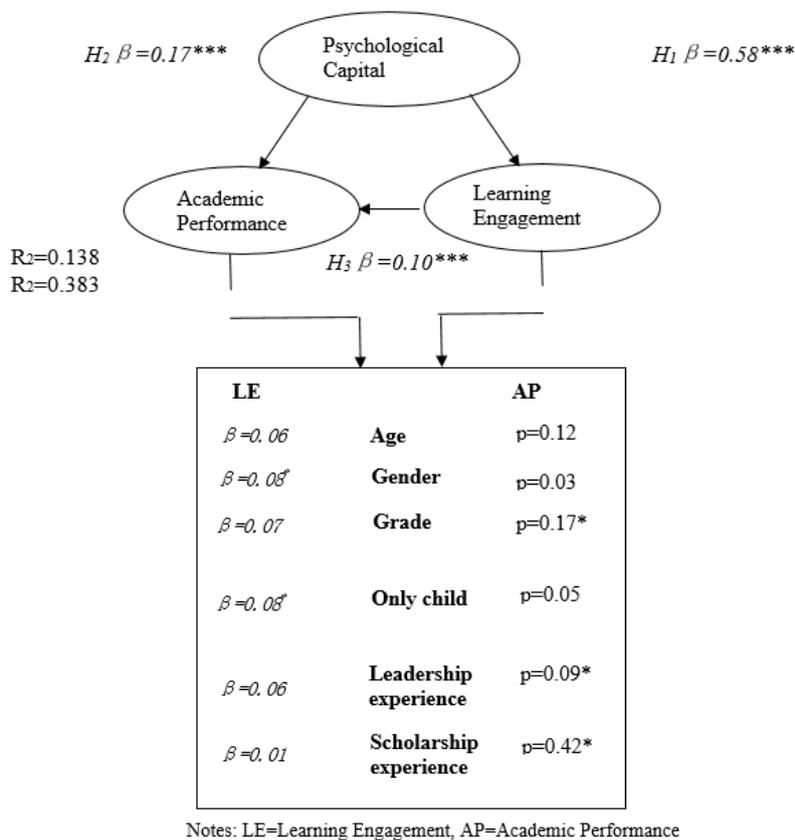

Figure 1. The result of PLS analysis.

Hypothesis 1: The level of PsyCap is positively related to learning engagement of Chinese college students majoring business English.

The result showed that these two variables are positively correlated, which indicates that the college students with a high level of PsyCap were likely to exhibit a high level of learning engagement. The result was also statistically significant (β=0.58; p<.001).Hence, hypothesis 1 is supported.

Hypothesis 2: The level of PsyCap is positively related to academic performance of college students majoring in business English.

The result revealed that these two variables are positively correlated, which indicates that the college students with a high level of PsyCap were likely to display a better academic performance. The result was also statistically significant (β=0.17; p<.001). Thus, hypothesis 2 is supported.

Hypothesis 3: Learning engagement mediates the effect of PsyCap on academic performance of

college students majoring in business English.

The result regarding the mediating effect of learning engagement on the correlation between PsyCap and academic performance is (β=0.10; p=0.22). It implied that although the mediating effect of learning engagement on the correlation between PsyCap and academic performance is positive as expected, this mediating effect is not statistically significant. Hence, hypothesis 3 is not supported.

4.7.2 Control variables

As for control variables, learning engagement was found to be positive related to age (β=0.06; p=0.12), gender (β=0.08; p=0.03), grade (β=0.07; p=0.17), only child (β=0.08; p=0.05), leadership experience (β=0.06; p=0.09), and scholarship experience (β=0.01;p=0.42).Based on the results, it can be predicted that elder college students tend to be more engaged in learning engagement than their younger counterparts and that the female college students are more likely to be more engaged in learning than their male counterparts. Moreover, the college students who are the only child in the family tend to be more engaged in learning than those who have brother(s) and/or sister(s) in the family. Furthermore, the results show that the college students who had leadership experience are more likely to be more engaged than those who did not have such experience, and that the college students who have got scholarship seem to be more engaged in those who did not have. However, only the variables of gender and only child are statistically significant indicators for learning engagement.

Meanwhile, academic performance was discovered to be positively related to age(β=0.07;p=0.12),gender(β=0.05;p=0.17),grade(β=0.13;p=0.02),only child(β=0.02; p=0.39),and leadership experience(β=0.09;p=0.05),as well as be negatively related to scholarship experience(β=-0.17;p=0.01).Based on the results, it can predict that the elder college students and female students tend to perform better academically than younger and male students, and that the students at higher grade are more likely to exhibit better academic performance. Additionally, the results tell that the students who are the only child in the family tend to achieve better academic performance, and that the students who had leadership experience are more likely to have better academic performance. Furthermore, the result shows that the students who have got scholarship are less likely to get higher mark in academic performance than those who did not get the scholarship. However, only the variables of grade, leadership experience and scholarship experience are statistically significant indicators for academic performance.

4.7.3 R-squared coefficient

R-squared coefficient, also called as multiple co-efficient of determination, represents the proportion of the variation in independent variables that can be explained by a linear model. It is employed as an indicator to examine how well the data fit the regression line. The value of R-square coefficient ranges between 0 and 1. It is suggested that the values of R-square coefficient with 0.25, 0.50, and 0.75 are the benchmarks for being acceptable at weak, moderate and substantial level respectively.

Based on the PLS analysis, the R-square coefficient of learning engagement is 0.383, which tells that the independent variable of PsyCap can explain or predict the occurrence of learning engagement by 38.3%. The remaining of 61.7% that might be explained or predicted by other variables is not included in this model. Moreover, the R-square coefficient of academic performance is 0.138, which indicates that the independent variable of PsyCap can explain or predict the occurrence of academic performance by 13.8%. The rest 87.2% that might be explained or predicted by other variables is not included in this model.

5. Discussion

5.1 Overall findings

When controlling for the effects of age, gender, grade, only child, leadership experience and scholarship experience, the results from PLS-SEM analysis showed that two hypotheses proposed in

this study are statistically supported, and that the third hypothesis is not statistically supported.

5.2 Discussions

The main objective of this study is to examine the direct effect of PsyCap on learning engagement and academic performance, and the indirect effect of PsyCap on academic performance through the possible mediating effect of learning engagement. Based on the results from PLS-SEM analysis, the discussion on the relevant variables will be given as follows.

5.2.1 The contribution of PsyCap

Regarding to the contribution of PsyCap, this study proposed that PsyCap had a direct effect on learning engagement and academic performance. Based on the results, firstly, the proposed positive relationship between PsyCap and learning engagement of college students majoring in business English is supported. The result implies that the college students with high PsyCap are more likely to be engaged in learning activities. The finding is consistent with the prior study of Ding yi (2015) found that PsyCap of university students has a positive effect on learning investment. Secondly, the proposed positive relationship between PsyCap and academic performance of university students majoring in business English is supported. The result indicates that the college students with high PsyCap tend to achieve better academic performance. The finding is similar to the research of Wu Qingqing (2020) which found a negative correlation between PsyCap and English achievement of college students of science and technology.

5.2.2 Discussion on the control variable

With regard to the control variables, this study assumed that seven control variables, including age, gender, grade, only child, leadership experience and scholarship experience, might be related to learning engagement and academic performance of college students majoring in business English. Based on the results of PLS-SEM analysis, two control variables were found to be significantly related to learning engagement, and three control variables were found to be significantly related to academic performance. The contribution of these control variables will be discussed as follows.

Regarding the control variables related to learning engagement, the results showed that gender was positively related to learning engagement. Because male was coded as 0 and female was coded as 1, the result means that female students tended to be more engaged in learning than male students. Probably, this is because girls generally have more advantages than boys in language learning. Girls are more interested in learning English and are willing to invest time and energy in learning English. (Zhou Yun, 2015) The results also revealed that the variable of only child was positively related to learning engagement. This is can be explained by the research of Zhang and co-workers. (2019) who found that only child in the family may benefit from their parents' more caring, love and material resources. Therefore, they may not be distracted by financial concern and concentrate more on their learning than the students whose families have more than one child.

Regarding the control variables related to academic performance, the results showed that grade was positively related to academic performance. This is perhaps because with the promotion of grades, thinking will be developed, learning style will be more mature, and will have a better understanding of learning planning and professional knowledge, which is conducive to the improvement of academic performance. Moreover, the results found that leadership experience was positively related to academic performance. Studies have shown that the leadership experience was helpful to increase student's confidence, the ability to make full use of time (Yao et.al, 1995), and problem-solving capacity, which may cause better grades in their learning.

Finally, the results showed that scholarship experience was negatively related to academic performance. This is because scholarship evaluation has various dimensions, including not only academic performance, but also personal quality and so on. TEM-4 is just a way to show the professional ability of English majors.

6. Conclusion

6.1 Summary

The objective of this study was to test whether PsyCap of college students majoring in business English can generate beneficial influence over learning engagement and academic performance. The study drew conclusions that PsyCap was shown as a significant antecedent to predict learning engagement and academic performance.

6.2 Academic contribution

This study provided the empirical evidence to make extra contribution to the previous research of PsyCap. This research applies the knowledge from the perspective of build-and-broaden theory to iterate the beneficial effect that PsyCap could bring to learning engagement and academic performance of college students majoring in business English. This study bridges a gap in the literature by exploring the effect of PsyCap on the performance in the form of TEM 4.

6.3 Practical Contribution

Based on the results, this study offered some practical suggestions for the teachers and universities. Given the contribution of PsyCap on learning engagement and academic performance, the training of PsyCap should be considered by teachers and universities. Firstly, the psychological intervention and mental health education is recommended to be held regularly. Secondly, students should be guided to pay more attention to new information, accept new things and solve difficulties by using a variety of comprehensive methods. Thirdly, students should be encouraged to realize the significance of mastering professional knowledge, and cope with difficulties in learning positively. Finally, students should be encouraged to realize the significance of mastering professional knowledge, and cope with difficulties in learning positively. Besides, students should be encouraged to reflect on themselves, find their own interest and potential.

6.4 Limitations

Except for the contributions that this study made, there are several limitations. First, this research adopted cross-sectional approach, which finds it hard to claim the causal relations between variables. Second, this research collected data mainly from the universities located in central and Southern parts of China majoring in business English, the small sample size may limit the generalizability of the results generated from this study.

6.5 Further Research

There are some suggestions for the future research. First, the longitudinal approach can be adopted to make comparative study on the effect of PsyCap on learning engagement and academic performance. Second, some other relevant variables are suggested to be included in the model.

References

[1] Ana-Maria Cazan "Learning motivation, engagement and burnout among university Students" Procedia - Social and Behavioral Sciences Procedia 187, 2015, print.

[2] Barbara.Fredrickson *Positivity,* Vol.1 (9), 2010, Print.

[3] Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. "School Engagement: Potential of the Concept, State of the Evidence" Review of Educational Research, 74, 2004, Print.

[4] Fred Luthans Carolyn M.Youssef "Emerging Positive Organizational Behavior*"* Journal of Management, Vol. 33 No. 3, June 2007 321-349, Print.

[5] Fred rickson, B. L. "Positive emotions and upward spirals in organizations" In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), Positive organizational scholarship: 163-175. San Francisco: Berrett-Koehler. 2003, Print.

[6] Fred M.Newmann Student *Engagement and Achievement in American Secondary Schools* Teachers College, Columbia University 1992 Print.

[7] Isabel M. Mart ńez, Carolyn M. Youssef-Morgan, Maria J. Chambel and Alexandra Marques-Pinto "Antecedents of academic performance of university students: academic engagement and psychological capital resources" Educational Psychology, 39:8 2019, Print.

[8] Janet C.Simons ,Johanna H and Buitendach *"*Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa SA Tydskrif vir Bedry fsielkunde, 39(2), Art. #1071, 12 pages, 2013, Print.

[9] James B.Avey, Tara S. Wernsing and Fred Luthans "Can Positive Employees Help Positive Organizational Change? Impact of Psychological Capital and Emotions on Relevant Attitudes and Behaviors" The Journal of Applied Behavioral Science, Vol. 44 No. 1, March 2008 48-70, Print.

[10] Ji Won You "The relationship among college students' psychological capital, learning empowerment, and engagement*"* Learning and Individual Differences 49, 2016, 17–24, Print.

[11] Katariina Salmela-Aro and Sanna Read "*S*tudy engagement and burnout profiles among Finnish higher education students" Burnout Research, 7, 2017, 21–28, print.

[12] Luthans, F., Luthans, K.and Luthans, B."Positive psychological capital: Going beyond human and social capital."Business Horizons, 47(1) 2004, Print.

[13] Milan Larson-University of Northern Colorado Fred Luthans-University of Nebraska-Lincoln "Potential Added Value of Psychological Capital in Predicting Work Attitudes" Journal of Leadership and Organizational Studies, 2006, Vol. 13, No. 2, Print.

[14] Reivich, K., & Shatte, A. "The resilience factor: 7 essential skills for overcoming life's inevitable obstacles." New York: Random House.2002, Print.

[15] Snyder, C., and R. "Hope and the Other Strengths: Lessons from Animal Farm." Journal of Social & Clinical Psychology 23.5, 2004, Print.

[16] Chen Wei "A brief analysis of the ways to improve college students' psychological capital*"* Chinese and foreign entrepreneurs, 2019 Print.

[17] Ding Yi "The Influence of College Students Psychological Capital on Learning Investment: A Mediating Mechanism Based on Professional Commitment*"* Education and Teaching Research, 2015, Print.

[18] Liu Cuixia "On Psychological Quality Education in English Teaching Foreign Language Education" Research-Jilin Education No.16, 54, 2011, Print.

[19] Li Na "On the development and cultivation strategies of college students' positive psychological capital*"* Modern communication, 2019, Print.

[20] Li Xiaohong Sheng Yan and Li Juan "Study on the influence of college students' psychological capital on learning investment" The Chinese market, 2018, print.

[21] Sun Daokai He Zi Yu Ruying Zhao Shengyu and Liao Chuanjing "The Basic Characteristics of College Students' Psychological Quality and Its Relationship with Learning Engagement*"* Journal of Liupanshui Normal College 2019, Print.

[22] Song Zhaoyan Cheng Haidong "Study on the Characteristics and Promotion Strategies of College Students' Psychological Capital" The asia-pacific education, 2016 print.

[23] Tian Xingyu and Li Chuanjing "An Empirical Study on Learning Engagement of English Majors and Its Relationship with Academic Achievement*" J*ournal of Bengbu College, 2017 Print.

[24] Wu Qingqing "The Relationship between Psychological Capital, Foreign Language Learning Anxiety and English Achievement of College Students of Science and Technology" Diss. North

China University of Technology, 2020, Print.

[25] Wang Zhenghong Wang Yong Wang Lvjing and Lv Wei "The Promoting Effect of Positive Emotion on College Students' Mental Health" Chinese Journal of Mental Health, 2010, Print.

[26] Yao Yongping, He Sheng and Li Xu "Comparative analysis of student and student cadre's academic performance" Medical education 1995, Print.

[27] Zhou Yun "An Investigation on the Influence of Gender Difference on College Students Engagement in English Learning" Journal of Kaifeng Institute of Education, 2015 Print.

[28] Zhang Peng Miao Xin and Peng Kaiping "Working memory and academic achievement advantage among only children" The abstracts of the twenty-second national conference on psychology, 2019 print.