INFLUENCE OF LEARNING MOTIVATION OF MAINLAND CHINESE STUDENTS TO UNIVERSITIES IN TAIWAN ON CAREER ADAPTABILITY: WITH FUTURE TIME PERSPECTIVE AS MEDIATOR

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ABSTRACT

This study takes Mainland Chinese exchange students from all Taiwan universities as its subjects. Eleven universities in different regions from north, central and south of Taiwan are selected from which Mainland Chinese exchange students of different grades are taken as participants. A questionnaire survey is employed herein. SPSS & AMOS is adopted for statistical analysis; the aim is to investigate the relationships among learning motivation, future time perspective and career adaptability of college students from Mainland China who go to Taiwan for exchange study. This research focuses on how learning motivation of Mainland Chinese exchange students to Taiwan universities influence their career adaptability by taking a future time perspective in seeking to provide a theoretical basis to cultivate practice related to university students' career adaptability from the viewpoint of learning motivation.

Keywords: Learning Motivation, Career Adaptability, Future Time Perspective

INTRODUCTION

With reform and opening up as factors in the economic rise in Mainland China for more than 30 years, the number of overseas Mainland students has rapidly expanded. It has become the fastest growing and largest group of students in the global higher education market. As Mainland China becomes the biggest international students exporting country, the conditions of their life and learning situations have gradually become the focus in the education field (Luo and Wang, 2013). Taiwan is adjacent to Mainland China, which makes communication and interaction inevitable. According to the data from Taiwan Ministry of Education, the amount of Mainland Chinese students in Taiwan universities becomes rising year by year, from 204 in 2004 to 25,824 in 2017. Scholars are increasingly concerned about the study status and academic achievements of short-term exchange students from Chinese Mainland (Chen, 2006; Xu, 2016).

By consulting the extant literature, it is found that in the research on students of different ages, many scholars (Jeffrey, 2010; Peter,2001; Makayla, 2013 ; Rottinghaus, Day and Borgen, 2005) take learning motivation and career adaptability as variables in the field of education; future time perspective has been widely adopted by researchers (Eccles and Wigfield, 2002; Lens, 2001) as mediator. Three variables: learning motivation, future time perspective and career adaptability, are adopted more frequently in the field of education, but they are rarely considered together. From this perspective, this study is of value and significant. Through the analysis of the relationships among the three variables, this study explores how learning motivation of Mainland Chinese college students who go to Taiwan for exchange study influences their career adaptability by taking a future view perspective, and thus to provide theoretical and empirical references for future research in the related field.

LITERATURE REVIEW

Motivation, which is generated by the needs of human nature, is a kind of human performance, a need, a behavior. Garrison (1997) argues that the intrinsic needs of individuals reflect the importance and value of specific learning objectives, which also conforms to the self-actualization needs in Maslow's (1943) needs-fulfillment theory.

With the deepening internationalization of university education, many researchers (William, 2015; David, 2014; Peng, 2012) have taken notice of the differences between overseas students and inside colleges. Deyon (2014) found in his research that college students who take part in short-term overseas study have better self-development than those do not. Peter (2001) carried out a survey on the inner learning motivation of American college students and the results show that learning motivation has a positive effect on learning confidence. Scholars (Rottinghaus, Day and Borgen, 2005) find that it is necessary to emphasize individuals meeting the needs of various professional environments by using purposeful flexible and effective methods or strategies. It can be seen that career adaptability is more appropriate to explain the development process of an individual's life (Yang et al., 2015; Rottinghaus, Day and Borgen, 2005; Savickas, 2005), which plays an important role in the whole course of personal career development(Ginsberg et al., 1951; Super, 1980).

Gotfried (1990) point out that learning motivation has a significant influence on academic achievement, it can improve the degree of academic confidence and career confidence. Makayla’s (2013) research on course learning motivation during the whole academic career shows that college students who have stronger learning motivation tend to have better career development and stronger career confidence. Dong-Ho Kang’s research (1999) on foreign language learning motivation and its change in EFL contexts shows that college students with stronger motivation tend to set clearer objectives and expectations; thus, they can achieve better learning results, which has a positive impact on their future development. As Miller & Brickman (2004) point out, individuals' expectation of future will be affected by experience and social culture, which means that education intervention may further expand one's future time perspective.

With time perspective development up to now, most scholars focus on future-oriented time and develop the concept of future time perspective which is widely adopted in educational field. A number of researchers (Peetsma, 2000; Peetsma and van der Veen, 2011; Phan, 2015) point out that students with future time perspective will invest more in their academic efforts to achieve academic excellence, and thus enhance their confidence in career development. Bembenutty and Karabenick (2004) consider that future time perspective enables achievement of future goals, which can enhance their confidence in the future career. Eccles and Wigfield (2002) and Feather (1990) all mention in their research that when individuals have stronger future time perspective, they tend to have clearer understanding of present learning, which will be helpful to achieve their goals; in this case, people tend to immerse themselves in their current job and to realize their career control and enhance their confidence. And in many research (Xu, 2016; Eccles and Wigfield, 2002; Lens, 2001), future time perspective plays a role of mediator.

Based on the above, this study proposes the following hypotheses, which were then verified one by one through statistical analysis.

H1: The learning motivation of college students from Mainland China who go to Taiwan universities for exchange has a significant positive influence on their career adaptability.

H2: The learning motivation of college students from Mainland China who go to Taiwan universities for exchange has a significant positive influence on their future time perspective.

H3: The future time perspective of college students from Mainland China who go to Taiwan universities for exchange has a significant positive influence on their career adaptability.

H4: The future time perspective of college students from Mainland China who go to Taiwan universities for exchange plays a mediating effect between learning motivation and career adaptability.

METHODOLOGY

This study discusses the differences in learning motivation, future time perspective and career adaptability among college students from Mainland China who go to Taiwan for exchange, and whether future time perspective plays a mediating role in this predicting situations. The research framework is shown in Figure 1.

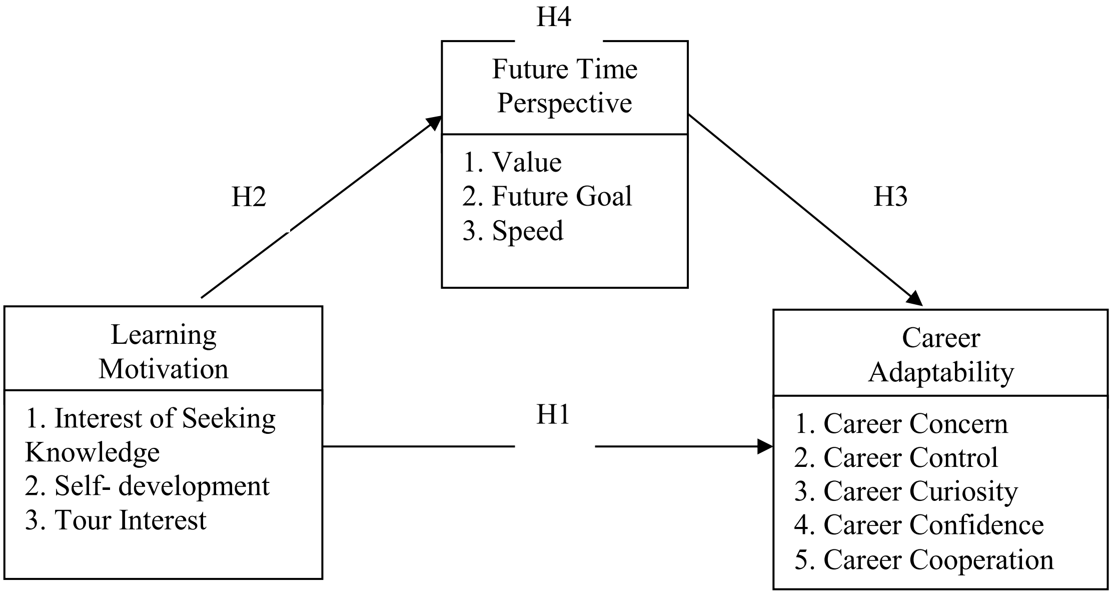


Figure1. Research Framework

Taking the Mainland Chinese exchange students enrolled in all Taiwan universities in September 2018 as the case subjects, this study selected the exchange students from Chinese Mainland of different grades in 11 universities in different regions from northern, central and southern Taiwan as participants by the method of convenient sampling. 450 questionnaire copies were issued; after removing 22 invalid copies which were incomplete and non-compliance, 428 valid ones are finally obtained with a 95.11% proportion of effective questionnaire. Among the valid samples (N=428), 200 (46.70%) are males and 228 (53.30%) are females. In terms of grade, there are 27 freshmen (6.30%), 93 sophomores (21.70%), 227 juniors (64.70%) and 31 seniors (7.20%).

In this study, SPSS & AMOS was used to test the reliability and validity of the questionnaire and the mediation structure model. The scales, as research measurement, including learning motivation scale, career adaptability scale, future time perspective scale and internal-external locus of control scale, were revised by referring to relevant scales adopted by the former researchers. The learning motivation scale, which contains three dimensions: interest of seeking knowledge, tour interest and self-development, was prepared by referring to the motivation theories of Maslow (1943), McClelland (1961) and Vroom (1964). The career adaptability scale for Chinese compiled by Tian (2010) were adopted which contains five subscales of career curiosity, career concern, career confidence, career control and career cooperation. The future time perspective scale was formed after considering the points of view of DeVolder and Lens(1982), Gjesme (1979), Seijts (1998), and referring to the scale of Shell & Husman (2001) and Zhou (2007). The three dimensions are future goal, value and speed. Through confirmatory factor analysis (CFA), items with factor loading less than 0.45 were deleted. The results of CFA are shown in Table 1.

Table 1. Summary of confirmatory factor analysis

Scale	Dimension	Factor Loading of Items	Cronbach's α	C.R.	AVE
Learning Motivation	Interest of Seeking Knowledge	0.59-0.77	0.84	0.79	0.49
	Self-development	0.51-0.74	0.84	0.73	0.48
	Tour Interest	0.61-0.80	0.84	0.75	0.50
Future Time Perspective	Value	0.55-0.72	0.85	0.73	0.40
	Future Goal	0.57-0.82	0.85	0.74	0.49
	Speed	0.47-0.74	0.85	0.65	0.40
Career Adaptability	Career Concern	0.56-0.67	0.80	0.71	0.38
	Career Control	0.53-0.63	0.79	0.64	0.31
	Career Curiosity	0.57-0.65	0.80	0.75	0.38
	Career Confidence	0.56-0.69	0.79	0.78	0.41
	Career Cooperation	0.53-0.77	0.81	0.74	0.42

According to the claims of many scholars (Cooper, 1998; DeVellis, 2003; Hair et al., 2006; Henson, 2001; Nunnally, 1978), Cronbach's alpha coefficient value above 0.70 is reliable. Fornell and Larcker (1981) suggest a CR-value above 0.60 for the latent variables. According to the relationship between sample size and factor loading proposed by Hair et al. (1998), if the samples reach more than 350, the AVE value of about 0.40 is acceptable (Fornell and Larcker, 1981). Therefore, the scales in this study met the standards and were suitable for subsequent analysis.

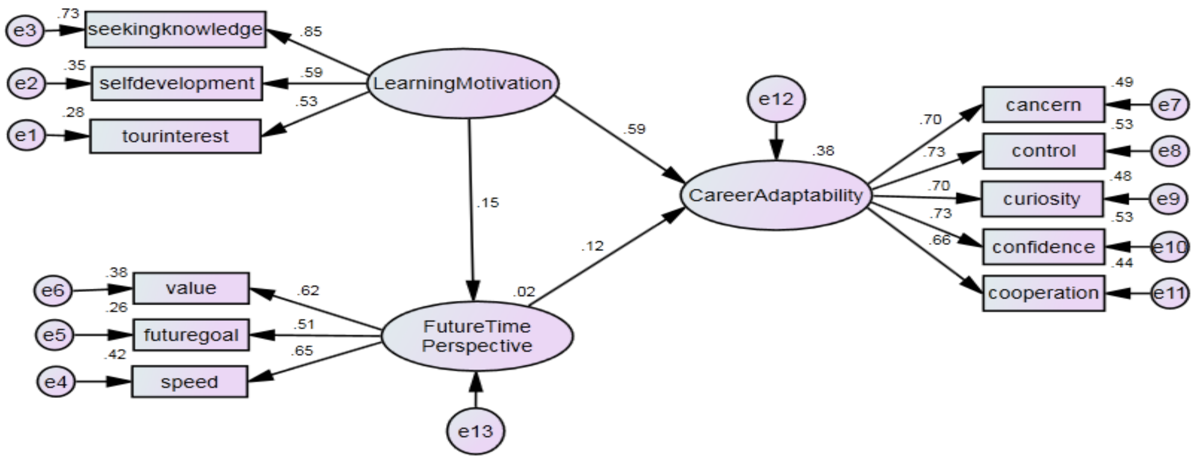
MEDIATION MODEL TEST

Before the mediation model verification, the correlation analysis of variables was carried out, and found significant positive, medium and low correlation between learning motivation, future time perspective and career adaptability with correlation coefficients of 0.13**,0.17** and 0.48**, respectively. Skewness, kurtosis and Mardia-coefficients of all observed variables all met the requirements of normal distribution proposed by Kline (1998), showing that subsequent analysis could be performed.

In this study, the direct effect of learning motivation on career adjustment ability was first carried out and obtained the influence coefficient of 0.60 (CR=7.96***). The linear structural model was then adopted to verify the mediating effect of future time perspective through AMOS. The overall model fitness is shown in Figure 2 and Table 2.

As can be seen from the table, all the indices meet the standard except $\chi 2$ which is always influenced by sample size and can be adopted as a reference (Raykov and Marcoulides, 2002; Schumacker and Lomax, 2004); therefore, it shows good model fitness.

According to the results of the internal structural fitness test of the CFA model of learning motivation, future time perspective and career adaptability of college students from Mainland China who go to Taiwan universities for exchange, good fitness in the internal structure of the model is presented with factor loading between 0.51-0.85, reliability coefficient between 0.26-0.73 and significant t-value.


e3
.73
seekingknowledge
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selfdevelopment
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tourinterest
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LearningMotivation
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CareerAdaptability
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value
e5
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futuregoal
e4
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speed
.62
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.65
FutureTime Perspective
e13

Figure 2. Cause-and-effect model of learning motivation, future time perspective and career adaptability

Table 2. Overall model fitness summary

Indices		**Fit Criteria**	**Result**	**Fitness Judgment**
Absolute Fit Indices	$\chi2$	the smaller the better (p >0.05)	80.307 (p=0.000)（df=41）	No
	$\chi2$/df	1-3	1.96	Yes
	GFI	>0.90	0.97	Yes
	AGFI	>0.90	0.95	Yes
	RMR	<0.05	0.01	Yes
	RMSEA	<0.08	0.05	Yes
Incremental Fit Indices	NFI	>0.90	0.94	Yes
	NNFI	>0.90	0.96	Yes
	CFI	>0.90	0.97	Yes
	RFI	>0.90	0.92	Yes
	IFI	>0.90	0.97	Yes
Parsimonious Fit Indices	PGFI	>0.50	0.60	Yes
	PNFI	>0.50	0.70	Yes
	CN	>200	303	Yes

Among them, the factor loadings of all the observed variables are greater than 0.45, indicating the existence of convergent validity (Bentler and Wu,1993 ; Jöreskog and Sörbom,1989). The results of the AVE test show that the Pearson correlation coefficients between variables are all less than the square root of AVE, indicating that discriminate validity exists (Fornell and Larcker, 1981). As shown in Table 3.

Table 3. Summary of AVE analysis

	Learning Motivation	**Future Time Perspective**	**Career Adaptability**
Learning Motivation	0.68		
Future Time Perspective	0.15	0.59	
Career Adaptability	0.59	0.12	0.68

Note: The diagonal value is square root of AVE, the values in the lower triangle are Pearson correlation coefficients.

In this study, the causal relationship between variables is investigated through SEM, and the result is shown in Table 4.

As can be seen from the table that learning motivation has a significant direct impact on career adaptability, and also on future time perspective; while future time perspective has a significant direct impact on career adaptability, which shows that future time perspective does play a mediating role between learning motivation and career adaptability. The above analysis can verify the hypothesis of H1, H2 and H3 proposed in this study.

Table 4. Summary of causal relationship between learning motivation, future time perspective and career adaptability

	Standardized regression coefficient	**S.E.**	**C.R.**
Learning Motivation --> Future Time Perspective	0.15	0.80	2.21*
Future Time Perspective -->Career Adaptability	0.12	0.62	1.97*
Learning Motivation --> Career Adaptability	0.59	0.88	7.53***

Note: *** $p<0.001$, * $p<0.05$.

The indirect effect was then further verified by Sobel (1982) test. It was found that the indirect effect is significant (p=0.40), verifying that the future time perspective has a partial mediating effect between learning motivation and career adaptability. And hypothesis H4 was verified.

CONCLUSION AND SUGGESTION

Based on the above analysis results, the following conclusions are drawn:

1. All dimensions of the three scales used in this study presented good reliability and validity. The structural equation model of learning motivation, future time view and career adjustment ability presents good fitness.
2. The learning motivation of college students from Mainland China who go to Taiwan universities for exchange has a significant positive impact on their career adaptability. This conclusion is consistent with the research results of Makayla (2013) and Gotfried (1990). It may be because the participants of the study are all college students that a relatively consistent conclusion emerges.
3. The learning motivation of college students from Mainland China who go to Taiwan universities for exchange has a significant positive impact on their future time perspective. This conclusion is the same as the research conclusions of Peetsma (2000) and Dong-Ho Kang (1999), which all reflect the positive influence of college students' learning motivation on their future time view.
4. The future time perspective of college students from Mainland China who go to Taiwan universities for exchange has a significant positive impact on their career adaptability. This is consistent with the research results on student groups by Bembenutty and Karabenick (2004) and Feather (1990).
5. The future time perspective of college students from Mainland China who go to Taiwan universities for exchange plays a mediating effect between learning motivation and career adaptability, but the effect is weak. It can be seen that the effect of their career adaptability mostly comes from learning motivation rather than future

time perspective. This conclusion is similar to the previous studies (Eccles and Wigfield, 2002; Lens, 2001) on the mediating effects of future time perspective, but it is somewhat weak. The reason may be the particularity of the participants and their different past experiences (Nuttin, 1985; Zimbardo and Boyd, 1999). Each person's personality will also influence his/her future time perspective to a certain extent (Bluedorn, 2002; Peetsma and van der Veen, 2011), which may also be a reason for this conclusion.

Based on the research conclusions, this study proposes suggestions for relevant education departments, schools and education managers regarding practical applications and future research as reference.

1. Educators should guide students of different ages purposefully to help them correctly understand their learning needs, thirst for knowledge, cognition of time and determination of future goals, thereby laying a good foundation for the development of their career adaptability.
2. In view of the weak mediating effect of future time perspective, the improvement of students' career adaptability mainly comes from learning motivation. It is suggested that universities should carry out a variety of study tours and short-term research activities, encourage college students to pursue knowledge from multiple perspectives and through multiple channels, and promote their career adaptability by improving their learning motivation. At the same time, it is suggested that parents and students should actively participate in seeking various kinds of knowledge to cultivate their enthusiasm for knowledge and enhance their desire to study; thus achieving the effect of subtly improving their career adaptability by enhancing students' learning motivation.
3. This study explored the relationships among learning motivation, future time perspective and career adaptability of exchange students from Mainland China to Taiwan, and found that the model fitness is quite good. Therefore, it is suggested that relevant research based on this model can be carried out in the future. No background variables have been added in this study, and it is suggested that researchers continue to explore relevant research after adding different background variables in the future to further explain the relationships among the variables.
4. The AVE values of some dimensions of the variables in this study are a little bit low, which may be caused by sampling method, sample size, and particularity of participants and other reasons. It is suggested that in the future, researchers consider details more carefully or add other variables for joint discussion when carrying out relevant studies, which can also enrich research literature in this field.
5. This study is limited in human resources, material resources, time and other factors, and only takes exchange students from Mainland China to Taiwan universities as participants. It is suggested that researchers expand the research scope to other countries and regions in the future to derive a more comprehensive understanding of the relationships and influences of learning motivation, future time perspective and career adaptability of cross-regional exchange students.

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