

A Correlation Study of English Learning Motivation and Learning Strategies of Student Pilots

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Abstract: *English language ability plays the significant role in the career development of pilots. English learning motivation and strategy determine the effectiveness of language learning. This paper mainly explores the characteristics of student pilots' learning motivation and learning strategies under the current environment, and the possible correlation between them. Subjects are 260 undergraduate student pilots of Civil Aviation University of China. The research findings may help the aviation English teachers be aware of the characteristics of their students' learning motivation and learning strategies so that they could adjust teaching methods accordingly to help their students get better results of English learning. The result of study shows that English learning motivation and learning strategies are in positive correlations.*

Keywords: *English learning motivation, English learning strategy, correlation, student pilots*

1. Introduction

Learning motivation and learning strategies play important roles in the process of English learning. Pilots who have a good language proficiency may get a good development in their career and could also ensure the flight safety. Under the current situation, it is essential for the teachers to know about the English learning status of their students and adjust their teaching methods accordingly.

The purpose of the study is to find out the status of student pilots' learning motivation, learning strategies and the possible relationship between them. The findings of the study may help the teachers be aware of their students' learning motivation and learning strategies so that they could adjust teaching methods to help their students get better effect of English learning. In addition, exploring the new characteristic of English learning motivation and learning strategies of student pilots can also help the researchers enrich the study of this direction.

2. Theoretical Framework

2.1 Definition and classification of learning motivation.

English learning is a very complex process. Learning motivation is an internal power which motivates students to study. It is a need for study and this need reflects the wish of study. Over a long period, many researchers have tried to give a specific definition of motivation. In the aspect of literature, Brown stated that motivation just likes a general concept that makes the explanation of a task (Brown, 1994). In educational psychology, it is defined much more simply: "to be motivated is to be moved to do something" (Ryan and Deci, 2000).

One significant classification of motivation made by the foreign psychologist are instrumental motivation and integrative motivation, which was proposed from the angle of sociolinguistics (Gardner and Lambert, 1959). Integrative motivation means the learners have special interest on the culture of target language. Learners hope that they can communicate, make friends with local people and really integrate into the local life. While the learners who have instrumental motivation always have some specific purpose such as getting better jobs, higher salary, and good economic rewards. According to Gardner and Lambert, if people have integrative motivation, they can get better effect of English learning and keep positive attitude towards the difficulties they will meet in the process of learning. The ability of listening, reading, speaking and writing can also be cultivated at the same time. People may focus on the writing and reading for a short time as a target and later move their attention to the speaking and listening. What they do is imbalanced, they cannot get full development. What's more,

this kind of motivation is short and fragile. Once the goal is accomplished, the motivation of learning will disappear.

In the self-determination theory, intrinsic motivation and extrinsic motivation are two general types of motivation (Deci, 1993). Intrinsic motivation is motivated by people themselves, which is an internal stimulation. Learners with intrinsic motivation will learn without any other complex purposes. They learn for themselves and enjoy the process. Sometimes, people ignore or even forget the time because they really have strong interest and can have a lot of fun when they do something from the bottom of their heart. While when it comes to extrinsic motivation, it mixes with grades, points and other rewards for learning. Without any inherent interest, extrinsic motivation cannot meet the need of long term English study.

Taking classic and extensive model of theoretical framework, Gao Yihong divided motivation into three types which are instrumental motivation, cultural motivation and learning situation motivation (Gao Yihong, 2003). Instrumental motivation means people do something from some specific purpose such as getting better jobs, higher salary, and good economic rewards. Cultural motivation is associated with people's own interest and intrinsic thinking. Learning situation motivation is one that can embody the micro learning situation effects on learners.

2.2 Definition and classification of learning strategies

Learning strategies can also be called learning methods. Though the researches of learning strategies began very early, scholars still cannot reach an agreement on the definition of it. Rubin defined English learning strategies as "the specific devices or techniques that learners may use to acquire knowledge" (Rubin, 1975). O'Malley and Chamot defined it as different thoughts, which people have to help them understand the new information (O'Malley, 1990).

Just like the different definitions of learning strategies, there are also various ways of classifying learning strategies. Oxford divided learning strategy into direct strategies and indirect strategies. Under the direct learning motivation, there are memory strategy, cognitive strategy and compensation strategy. This kind of classification has been called the most complex classification of learning strategies (Ellis, 2009). Therefore, this paper uses the classification of Oxford.

2.3 Related studies

From now on, foreign scholars have done a lot of researches on the relationship between learning motivation and learning strategies. At first, Oxford and Nyikos made a large-scale questionnaire to investigate among university students. According to their findings, students' self-rating of motivation intensity affected the use of use of frequency of strategy and highly motivated students frequently use more strategies (Oxford and Nyiko, 1989). After that, in 1990, Ehrman investigated the adult students at the US Foreign Service Institute. He found that learners who have instrumental motivation are more likely to use communicative-oriented strategies (Ehrman, 1990). When it comes to china, in 2001, Wen Qiufang conducted a research among English majors on the correlation among motivation, belief, and strategies (Wen Qiufang, 2001). The study showed that there were stable relations among these three factors. And in 2002, Qin Xiaoqing stated that motivation had direct influences on strategy frequency (Qin Xiaoqing, 2002).

3. Research questions

The research is designed to answer the following three questions:

- 1) What are new characteristics of student pilots' learning motivation?
- 2) What are new characteristics of student pilots' learning strategies?
- 3) What is the correlation between student pilots' learning motivation and learning strategies? How does English learning motivation influence the learning strategies?

4. Methodology

The subjects for this research are 260 undergraduate student pilots of Civil Aviation University of China. The questionnaire contains two parts. The first one is an investigation about the learning

motivation, which includes 21 items. It is modified by Gao Yihong's College Learning Motivation Questionnaire. This questionnaire is divided into three parts: instrumental motivation (items1-10), including learning achievement, information medium and personal development; cultural motivation (items11-17), which contains intrinsic interest and social responsibility; learning situation-related motivation (items18-21). The second part is about learning strategies text, including 31 items. According to Oxford's (1990) Strategy Inventory for Language Learning (SILL), it includes six categories memory strategies, cognitive strategies, compensation strategies, meta-cognitive strategies, affective strategies and social strategies. Questionnaires were all written in standard Chinese for students so that they can easily understand.

All the students who attended to fill in this questionnaire are told to write carefully, without discussing with their neighbors. 260 questionnaires were delivered to the students and all the questionnaires were returned. The author inputted all the 260 data to SPSS to process the data analysis. In order to have a better analysis, the 52 items are required to answer on the Likert scale ranging from one to five. "1" refers to "never or almost never true of me", "2" refers to "generally not true of me", "3" refers to "somewhat true of me", "4" refers to "general true of me", "5" refers to "always or almost true of me".

5. Research Findings

5.1 Data analysis

5.1.1 Results of student pilots' learning motivation

Table 1 The general situation of ELM

VAR00005		Instrumental Motivation	Cultural Motivation	Learning Situation-related Motivation
Science	Mean	3.61	2.93	2.66
	N	140	140	140
	Deviation	.628	.818	.938
Arts	Mean	3.64	2.86	2.57
	N	120	120	120
	Deviation	.633	.363	1.089
Total	Mean	3.63	2.90	2.70
	N	260	260	260
	Deviation	.610	.730	.962

This table clearly shows that instrumental motivation (M=3.63) has the highest mean. Cultural motivation (M=2.90) is the second and then is the learning situation motivation. Because the mean of instrumental motivation is the highest, the further analysis of it must be done.

Table 2 The descriptive statics of instrumental motivation

VAR00005		Learning Achievement	Information Medium	Personal Development
Science	Mean	3.51	3.29	3.39
	N	140	140	140
	Deviation	1.003	1.123	.972
Arts	Mean	3.79	3.29	3.50
	N	120	120	120
	Deviation	.699	1.139	.941
Total	Mean	3.57	3.38	3.43
	N	260	260	260
	Deviation	.909	1.121	.927

According to the table 2, learning achievement (M=3.57) ranks the highest of the instrumental motivation, and then is personal development (M=3.43), information medium (M=3.38). Based on the

data, learning achievement and personal development are at a high degree. The information medium is at a medium degree.

Table 3 The descriptive statics of cultural motivation

VAR00005		Intrinsic Interest	Social Responsibility
Science	Mean	2.63	3.27
	N	41	41
	Deviation	1.090	1.119
Arts	Mean	3.00	2.79
	N	14	14
	Deviation	.877	.802
Total	Mean	2.75	3.13
	N	60	60
	Deviation	1.052	1.033

In Table 3, it clearly shows that the mean of social responsibility(M=3.13) is higher than that of intrinsic interest(M=2.75).

5.1.2 Results of student pilots' learning strategies

Table 4 The general situation of student pilots' learning strategies

VAR00005		Memory Strategies	Cognitive Strategies	Compensation Strategies	Meta-cognitive Strategies
Science	Mean	3.37	2.85	3.51	2.83
	N	140	140	140	140
	Deviation	.767	1.174	.675	1.116
Arts	Mean	3.43	2.71	3.43	2.43
	N	120	120	120	120
	Deviation	.756	.914	.756	.756
Total	Mean	3.33	2.80	3.43	2.70
	N	260	260	260	260
	Deviation	.752	1.070	.722	1.046

VAR00005		Affective Strategies	Social Strategies
Science	Mean	2.90	2.80
	N	140	140
	Deviation	.917	1.145
Arts	Mean	2.57	3.21
	N	120	120
	Deviation	.646	.893
Total	Mean	2.80	2.85
	N	260	260
	Deviation	.860	1.102

Table 4 illustrates the general situation of learning strategies by student pilots. The research of learning strategies of the author use Oxford(1990)'s scale language learning strategies(SILL), which represents the mean of each single strategy shows the using frequency. If it gets 3.5-5.0, it means a high degree of strategy using. If it gets 2.5-3.4, it means a medium degree of strategy using. What's more, mean 1.0-2.4 shows a low degree of strategy using. In table 4, the mean of compensation strategy is the highest (M=3.43) and then is memory strategies (M=3.33), social strategies (M=2.85). The mean of cognitive strategies is same with the affective strategies. The last is meta-cognitive strategies.

Table 5 The correlation between learning motivation and learning strategies

		Memory Strategies	Cognitive Strategies	Compensation Strategies	Meta-cognitive Strategies	Affective Strategies	Social Strategies
Instrumental Motivation	r	.271	.483	.059	.356	.375	.219
	sig	.036	.000	.654	.005	.003	.092
	df	58	58	58	58	58	58
Cultural Motivation	r	.093	.365	.116	.404	.589	.403
	sig	.481	.004	.378	.001	.000	.001
	df	58	58	58	58	58	58
Learning Situation-related Motivation	r	.094	.253	.288	.077	.213	-.043
	sig	.476	.051	.026	.556	.102	.743
	df	58	58	58	58	58	58

In table 5, it is not difficult to see that learning motivation and learning strategies are in positively correlated relationship. Cultural motivation has a stronger correlation with learning strategies. While learning situation-related motivation is the weakest, which appears negative value($r=-.043$).

In terms of instrumental motivation, it has a positive correlation with all the six learning strategies. The correlation between instrumental motivation and cognitive strategies is the strongest($r=.483$) while the lowest correlation($r=.219$) appears between instrumental motivation and social strategies. It can be inferred that students prefer to use cognitive strategies when they have instrumental motivation. In order to get good grades and make preparation for the future personal development, students would like to use different way to exercise such as taking notes, imitating the tone of native speakers and learning authentic English from original book and so on.

As for learning situation-related motivation, it shows a low degree in relationship with learning strategies. Even there is negative correlation($r=-.043$) between social strategies and learning situation motivation. In the table, it clearly shows that learning situational motivation has a higher correlation($r=.288$) with compensation strategies than the other factors. Though the relationship between learning situational motivation and learning strategies is not apparent, students' choice of learning strategies is still influenced by the situational motivation to some extent.

When it comes to cultural motivation, what has the highest correlation with it is affective strategies($r=.589$), and then is meta-cognitive strategies($r=.404$), social strategies($r=.403$), cognitive strategies($r=.365$), compensation strategies($r=.116$). The lowest is memory strategies($r=.093$).

Table 6 The correlation between cultural motivation and learning strategies

		Memory Strategies	Cognitive Strategies	Compensation Strategies	Meta-cognitive Strategies	Affective Strategies	Social Strategies
Cultural Motivation	R	0.093	0.365	0.116	0.404	0.589	0.403
	Sig	0.481	0.004	0.378	0.001	0	0.001
	Df	58	58	58	58	58	58
Intrinsic Interest	R	0.193	0.256	0.078	0.239	0.45	0.303
	Sig	0.14	0.048	0.553	0.066	0	0.018
	Df	58	58	58	58	58	58
Social Responsibility	R	0.095	0.316	0.126	0.163	0.317	0.003
	Sig	0.472	0.014	0.338	0.213	0.014	0.982
	Df	58	58	58	58	58	58

In table 6, it clearly shows that there are positive correlations between cultural motivation and six learning strategies. First of all, the highest is affective strategies($r=0.45$), and then is social strategies($r=0.303$), cognitive strategies($r=0.256$), meta-cognitive strategies($r=0.239$), memory strategies($r=0.139$) and the last is compensation strategies($r=0.078$).

5.2 Summary and discussion

In the research of learning motivation, most of students have a high proportion in instrumental motivation and then is cultural motivation. In table 2, the results show that most of the students are motivated by instrumental motivation. The next is cultural motivation and then is the learning situation related motivation. According to Dorney, learning situation involves the teaching materials, the teaching method, the learning task, the teacher's personality, behavior and teaching style (Dorney, 1998). Among instrumental motivation, learning achievement ranks the highest, which means a lot of students learn English are mostly encouraged by English grades. It is easy for us to see that though the

grade of English may decline in the coming reform, students are still influenced by the score. When it comes to the personal development, learning achievement is also a significant factor which affects the efficiency of students' English learning. Some of them want to be trained abroad and some want to have a good career development in the future. Meanwhile, the expectation of parents and teachers also influence the motivation, playing an utmost important role in the process of student's learning. Students work hard in order not to let their parents and teachers down. Intrinsic motivation, as for student pilots, is not very obvious. Under the pressure of numerous lessons and tests, students have little time to have leisure reading and watch authentic foreign movies. What they do is to pay too much attention to the exercises and the accuracy rate of the exams. The teacher and quality of English class determine a lot on students' learning. In a summary, the instrumental motivation affects the students obviously.

Learning strategies can "make learning easier, faster, more enjoyable, more self-directed, and more transferable to new situation"(Oxford,1989). Table 4 shows the general situation of English learning strategies. It is not difficult to see that the whole learning strategy is at medium which is not very popular in students. The compensation strategy indicates that students now prefer to guess and use other easy ways to figure out a new word or new passage, which means some of them show indolence in accepting the new knowledge of English learning. Though memory is the second way they choose, the situation is still serious. For a foreign language, memory is indeed a good way to get better learning effects. When it comes to the cognitive strategies and affective strategies, the mean is low. The author interviewed a few students and found that though a lot of them know the significance of learning English, they are not used to utilizing English as a tool to communicate, without talking to the other people. They even have a fear of English and don't rethink the knowledge they learned. What's more, Teachers should train on the students meta-cognitive strategies actively. Meta-cognitive strategies needs teacher to pay attention to the process of students' practice.

Table 5 proves that there exists correlation between English learning motivation and learning strategies and the cultural motivation plays an important role. Then table 6 shows the subcategory of it. From the close relationship between intrinsic interest and affective strategies, we can indicate that most of students want to learn English from their own special interest and accordingly they can adjust their attitude to the English study. They may try to relax and encourage themselves when they meet problems in the study of English even though some of them are afraid of making mistakes.

In the end, we can draw a conclusion that learning motivation and learning strategies do have a close relationship. In three categories of motivation, cultural motivation plays a significant role. While it is also obvious to see that memory strategies has the weakest correlation with the learning motivation which means that the students have certain laziness in English study and they don't realize the importance of repeating. What's more, students also don't know more about the methods of English learning such as using the new word in a sentence. Therefore, it is important for them to adjust their learning methods.

6. Conclusion

Learning motivation and learning strategies are two important factors which influence the effectiveness of English learning. With the use of two questionnaires, the study has summarized major findings. As for the learning motivation, all the three types of learning motivation are at a medium degree. In these three motivations, learning motivation is the highest, and then is cultural motivation and learning situational motivation. When it comes to instrumental motivation, the learning achievement ranks the first, followed by personal development and information medium. As for the learning strategies, most of students would like to choose compensation strategies, followed by memory strategies, social strategies, cognitive strategies and meta-cognitive strategies. Learning motivation and learning strategies are in positive correlations. What the most important is cultural motivation, which influences students' choices of learning strategies a lot. And then is instrumental motivation and learning situational motivation. This information here should be of relevance for English teachers, professionals and other school support staff, helping them understand how these two important factors 'Learning motivation and learning strategies' influence the English learning effectiveness of student pilots, making adjustment of teaching method accordingly.

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