

The Relationships Among Learning Support Needs, Self-Regulated Learning Strategies, Study Time, and Test Scores in Learning Chinese

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Abstract

The purpose of this study was to examine relationships among basic psychological needs, learning support needs, self-regulated learning strategies, study time, and test scores in Japanese learners of Chinese. Self-determination theory posits four psychological needs: “curiosity”, “autonomy”, “competence”, and “relatedness”. This study explored the relationships among the four psychological needs’ satisfaction, learning support needs’ satisfaction in Chinese classes, Chinese learning strategies, and performance based on self-determination theory and self-regulated learning theory.

First year and second year Japanese university students ($N = 219$) completed questionnaires regarding studying the Chinese language and took examinations in Chinese. Learning support needs contained six subscales: “conversation”, “vocabulary”, “culture and history”, “cooperative approach”, “communicative approach”, and “grammatical approach”. Language learning strategies contained six subscales: “remembering”, “cognitive”, “compensating”, “metacognitive”, “affective”, and “social”.

The results showed that “communicative approach” and “grammatical approach” were positively related to study time and test scores. Three psychological needs, “curiosity”, “autonomy”, and “competence”, were positively related to study time and test scores. Five learning strategies, “remembering”, “cognitive”, “compensating”, “metacognitive”, and “affective”, were positively related to study time. Just one learning strategy, “cognitive”, was positively related to test scores. A relationship between study time and test score was not found. These findings clarified significant motivational factors in learning Chinese. Implications for educational practice were discussed from the view of self-regulated learning and self-determination theory.

Keywords: basic psychological needs, learning support needs, learning strategies, learning Chinese

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Introduction

The purpose of this study was to examine causal relationships between learning support needs, basic psychological needs, self-regulated learning strategies, study time, and test scores in Japanese learners of Chinese. A few studies have examined Chinese learning in Japanese students, based on the Self-Determination Theory (Ryan & Deci, 2000) and Self-Regulated Learning Theory. Self-Regulated Learning (Schunk & Zimmerman, 2008) has stressed the importance of autonomous motivation and learning strategies. This study postulates causal relationships among autonomous motivation, learning strategies, and academic performance.

International educational research has increasingly been using the concept of “Self-Regulated Learning” (Zimmerman & Schunk, 2001). Zimmerman (1989) stated, “in general, students can be described as self-regulated to the degree that they are metacognitively, motivationally, and behaviorally active participants in their own learning process”. Metacognitively, self-regulated learners are people who plan, self-monitor, and self-evaluate at various stages during the learning process. Motivationally, self-regulated learners perceive themselves as competent, self-efficacious, and autonomous. Behaviorally, self-regulated learners select, structure, and create social and physical environments that optimize learning.

Zimmerman (1989) stressed the importance of three elements in self-regulated learning: self-regulated learning strategies; self-efficacy; and commitment to academic goals. Self-regulated learners use self-regulated learning strategies for reaching academic goals. As a result, if they perform better, they display higher self-efficacy. Self-efficacy increases their motivation for learning, and learners continue using self-regulated learning strategies for acquiring more knowledge and skills.

In addition, Self-Determination Theory has stressed the importance of four elements in academic motivation; curiosity, autonomy, competence, relatedness. The influences of these basic psychological needs’ satisfaction should be examined in detail. The research on self-regulated learning and self-determination theory has been examined in various subjects: mathematics, science, social studies, and verbal subjects. But research on second languages isn’t sufficient, especially in Japan. One purpose of this study is to examine the mechanisms of self-regulated learning in learning a second language.

In addition, previous studies on self-regulated learning had only investigated motivation and learning strategies. But, the learning support needs must play an important role in self-regulated learning of a second language. Analyzing the relationships among learning support needs, basic psychological needs, and learning strategies, performance will produce meaningful suggestions for language learning. In addition, this study has focused on two aspects of learning support needs, i.e. “contents of the lessons” and “instructional strategies”. Previous research found that “contents of the lessons” consisted of three learning support needs: “conversation”, “vocabulary”, “culture and history”. Chinese education in Japan has used various instructional strategies. For example, there are the “cooperative approach”, “communicative approach”, and “grammatical approach”. It is necessary to examine what kinds of needs students have and they are motivated through these needs’ satisfaction.

Clarifying the relationships among two aspects of learning support needs, basic psychological needs, and learning strategies, study time, and test scores will produce meaningful suggestions for language learning and instruction.

Method

Participants

First year and second year Japanese university students ($N = 219$) completed questionnaires regarding studying the Chinese language and took examinations in Chinese.

Procedure

All students were asked by their teachers to complete a questionnaire in Japanese. The students who agreed to participate completed the questionnaires and took Chinese examinations. Chinese examinations took five minutes, and after that the students completed the questionnaires for about fifteen minutes in each group.

Measures

Learning support needs' satisfaction: "Contents of the lessons". This scale contained three subscales: included "Conversation"(e.g., "I could learn tips about the rhythms of speaking."; 5 items), "Vocabulary" (e.g., "I could learn new words in each category, and each kind of parts of speech."; 6 items), "Culture and history" (e.g., "I could learn Chinese history and geography."; 5 items). For each subscale, students rated items on a 5-point scale ranging from 0 (*not at all true of me*) to 4 (*very true of me*).

Learning support needs' satisfaction: "Instructional strategies". This scale contained three subscales: "Cooperative approach"(e.g., "I could study practicing in a pair or small group."; 5 items), "Communicative approach"(e.g., "I could learn practical expressions and practice them."; 6 items), "Grammatical approach"(e.g., "I could study Chinese to understand grammar well enough."; 5 items). For each subscale, students rated items on a 5-point scale ranging from 0 (*not at all true of me*) to 4 (*very true of me*).

Basic psychological needs' satisfaction. This scale contained four subscales: "Curiosity"(e.g., "I think Chinese is interesting."; 5 items), "Autonomy"(e.g., "I think I could determine learning activities and procedures."; 5 items), "Competence"(e.g., "I think I could gain confidence to study Chinese."; 5 items), "Relatedness" (e.g., "I think I could make good relationships with my classmates."; 5 items). For each subscale, students rated items on a 5-point scale ranging from 0 (*not at all true of me*) to 4 (*very true of me*).

Chinese learning strategies. This scale contained six subscales: "Remembering Strategies"(e.g., "I remember Chinese by connecting what I already know to what I am trying to learn."; 3 items), "Cognitive Strategies"(e.g., "I say or write new Chinese words several times."; 3 items), "Compensating Strategies"(e.g., "To understand unfamiliar Chinese words, I make guesses."; 3 items), "Metacognitive Strategies"(e.g., "I think about my progress in learning Chinese."; 3 items), "Affective Strategies"(e.g., "I encourage myself to speak Chinese without worrying about mistakes."; 3 items),

“Social Strategies” 3 items (e.g., “I practice Chinese with my classmates.”; 3 items). For each subscale, students rated items on a 5-point scale ranging from 0 (*never*) to 4 (*always*).

Study time (Chinese). Students answered their average study time per week.

Chinese examinations. Fifteen questions about pronunciation, vocabulary, and grammar were taken from Chinese textbooks.

Results and Discussion

The results showed that “communicative approach” and “grammatical approach” were positively related to study time and test scores. “Cooperative approach” was not related to study time and test scores (Table 1). Recently language education in Japan has shifted from using a grammatical approach to a communicative or cooperative approach. The grammatical approach intends to improve reading and writing skills, on the other hand the communicative approach intends to improve speaking and listening skills. This study clarified the importance of learning support needs’ satisfaction: “communicative approach” and “grammatical approach”. However “cooperative approach” needs to accommodate complicated human relationships, so this needs’ satisfaction wasn’t associated with their performance.

There is another aspect of learning support needs, i.e. “contents of the lessons”. But the results showed that “conversation”, “vocabulary”, and “culture and history” were not related to study time and test scores. It may be assumed that learners of Chinese are motivated through these needs’ satisfaction in some way. There is a need for more studies further explicating these relationships.

Three psychological needs, “curiosity”, “autonomy”, and “competence”, were positively related to study time and test scores (Table 2). Self-Determination Theory has stressed the importance of these elements in academic motivation. These findings clarified these needs’ satisfaction promoted learning Chinese strongly. On the other hand “relatedness” was not related to study time and test scores. Making good relationships with classmates is a little different from academic learning goals. But it is important that students support each other through learning process. Chinese teachers have to help their students learn from each other.

Table 1

Correlations between two aspects of learning support needs, study time, and test scores

	Conversation	Vocabulary	Culture and History	Cooperative	Communicative	Grammatical
Study time	.06	.11	.06	.10	.15 *	.26 **
Chinese examinations	.09	.06	.02	.06	.16 *	.20 **

** $p < .01$, * $p < .05$, † $p < .10$

Table 2
Correlations between four basic psychological needs, study time, and test scores

	Curiosity	Autonomy	Competence	Relatedness
Study time	.17 *	.16 *	.18 **	.01
Chinese examinations	.26 **	.21 **	.23 **	.09

** $p < .01$, * $p < .05$, † $p < .10$

Five learning strategies, “remembering”, “cognitive”, “compensating”, “metacognitive”, and “affective”, were positively related to study time (Table 3). Learners who used five learning strategies studied for a longer period of time. However, just one learning strategy, “cognitive”, was positively related to test scores. Previous research indicates that cognitive learning strategies are significant determinants of the academic achievement (cf. Schunk & Zimmerman, 2008). These learning strategies tend to produce deep information processing through the self-regulated learning process. By the way, a relationship between study time and test score was not found. The quality and quantity of learning Chinese are different. Study time has these two aspects of learning. There is a need for more studies further explicating these complicated relationships. On the other hand, “social” learning strategy was not related to study time and test scores at all. Studying with classmates would have both positive and negative effects on the self-regulated learning process. Future research should explore both effects.

Table 3
Correlations between six learning strategies, study time, and test scores

	Remembering	Cognitive	Compensating	Metacognitive	Affective	Social
Study time	.18 *	.21 **	.21 **	.29 **	.20 **	.01
Chinese examinations	.10	.14 *	.11	.09	.04	.02

** $p < .01$, * $p < .05$, † $p < .10$

Conclusion

The current study has several implications. A few studies have focused on Chinese learning in Japanese students. These findings indicated that various kinds of learning support needs’ satisfaction would be significant motivational factors in learning Chinese. However, the study had limitations. These variables were measured at one time point in this study, so the causal relationships could not be identified. The examination of causal relationships requires a longitudinal design.

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