The Application of the Hierarchical Model of Intrinsic Motivation in a Korean EFL University Classroom

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Abstract

As a part of self-determination theory (SDT), the hierarchical model of intrinsic motivation proposes that the satisfaction of three psychological needs of competence, autonomy, and relatedness is necessary to support student classroom intrinsic motivation. This study examines the relationship between these variables among a class of 38 Korean university students studying in an EFL reading class. Three research questions are addressed to assess the level of the three psychological needs of these students, what is the level of their intrinsic motivation (IM), and what is the correlation among these three variables and IM. Two survey instruments were administered to these students to determine these relationships. Findings indicated the levels of perceived competence and autonomy for these students were above average, but below average for relatedness. The variables were positively correlated, and their level of IM was at a relatively high level, but again with the exception of relatedness. The study concluded with discussion of classroom implications and study limitations.

Keywords: self-determination, theory/hierarchical model of intrinsic motivation/Korean university EFL students/competence, autonomy, relatedness/intrinsic classroom motivation

1. Introduction

The purpose of this study is to examine the hierarchical model of intrinsic motivation in terms of its applicability to a class of Korean university EFL students engaged in learning the skill of reading.

Scholars within traditional psychology, educational psychology and, more specifically, second language learning (SLL) are generally in agreement as to the importance of motivation in understanding human activity in many different domains, such as health and well-being, education, business management, politics, sports, and medicine[11].

For educational psychologists, research on this concept is focused on how students’ learn in educational contexts, and how research results can be applied to practical applications for the classroom. Thus, the study of motivation in education has developed into a separate area with

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its own research questions and research methods. It is not merely an application of principles developed through scholarship within traditional psychology[2]. However, SLL is still interdisciplinary in approach and it uses many concepts from traditional psychology and other areas of research such as sociology and anthropology. This study uses the theoretical framework of self-determination theory (SDT) to examine the intrinsic classroom motivation of Korean EFL students. SDT was initially proposed by psychologists Deci (1975) and Deci and Ryan (1985).

Researchers within SLL have continued to emphasize the importance of student motivation in the learning of foreign or second languages[3][13][14][28][29][32][38]. One noted applied linguist suggested that "given motivation, it is inevitable that a human being will learn a second language if he is exposed to the language data" [9].

Despite this fairly unanimous consensus as to the critical importance of the right kind of motivation for successfully learning a second language, motivation is also defined as a concept which explains the initiation, intensity, and persistence of human behavior[2]. For Pintrich and Schunk the word "motivation" is derived from the Latin verb move which indicates the idea of movement or "something that gets us going, keeps us moving, and helps us to complete tasks"[29]. Other scholars within SLL also make clear that it is still important to find out what the concept of motivation really is, where it comes from, and how it does its job[37].

For Dörnyei (2001), the term motivation is complex and elusive, but Dörnyei suggests that most researchers would agree that motivation is concerned with the following key components:

Why people decide to do something
How long they are willing to sustain the activity
How hard they are going to pursue it[12]

Dörnyei further indicates that the issue of motivation is an essential part of our everyday lives. Also, few would disagree as to the important role motivation plays in human affairs in general, and in education and language learning in particular.

2. Literature Review

2.1 The Theoretical Framework for This Study

There have been several significant theoretical contributions to understanding SLL over the
past several decades[15][16][20][21][22]. One of the more compelling and useful theoretical frameworks for seeking to understand the concept of motivation has proven to be self-determination theory (SDT). SDT has proven to be a consistent foundation for explaining many different motivational orientations and accounting for learner variations in motivation[11]. SDT has proved to be empirically testable, allowing for clear predictions in the application of the theory in the language classroom[27]. Many scholars have used SDT as a theoretical framework for studying student motivation[1][12][26].

SDT theorizes a six part continuum for describing the various types of motivation. These parts include four stages of extrinsic motivation, intrinsic motivation and amotivation. It is not within the scope of this paper for a precise discussion of each of these levels of motivation, but the focus will be upon intrinsic motivation and its relationship to Korean students studying English as a foreign language (EFL) in a university classroom. This continuum is depicted in Table 1 below, showing the state of amotivation on the left which represents the lack of any intention to act. In the middle of the continuum are the four levels of extrinsic motivation, external, introjected, identified, integrated, and on the right is IM.

<table>
<thead>
<tr>
<th>Amotivation</th>
<th>Extrinsic Motivation</th>
<th>Intrinsic Motivation</th>
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<tbody>
<tr>
<td>Non-Regulation</td>
<td>External Regulation</td>
<td>Introjected Regulation</td>
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<td></td>
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<td>Identified Regulation</td>
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<td>Integrated Regulation</td>
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<td>Non-Internalized</td>
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<td></td>
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<td>Fully-Internalized</td>
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SDT suggests that the development of student intrinsic motivation is an essential component in helping to promote classroom achievement. SDT further states that three basic psychological needs have to be satisfied for student intrinsic motivation to develop. These three needs are:

A feeling of competence
A perception of autonomy
A sense of relatedness or connection to classmates and teachers

A feeling of competence involves feeling effective in one's behavior and strong in overcoming challenging tasks. A sense of competence can be encouraged by teachers who provide challenging and interesting tasks, as students will only engage in and value tasks that they can readily understand and master. Teachers need to provide students with effective
feedback to promote student success and feelings of efficacy[36].

The need for autonomy involves being able to regulate one's behavior with a high degree of volition and to feel a sense of freedom of action. Student autonomy can be enhanced by teachers eliminating any sense of coercion in the classroom, and allowing students to have a voice in choosing the classroom activities in which they are engaged[36].

The need for relatedness occurs when one feels secure, connected to, and understood by others in the same social milieu. Students are likely to internalize the values of people with whom they feel most connected. Also, they learn the values from particular contexts where they feel a sense of belonging. This reaction can also be supported by the teacher who genuinely likes, respects and values the students in their classrooms[19][25].

22 Intrinsic Motivation

It is clearly evident that most humans tend to be naturally curious and self-motivated. However, it is equally clear that this human spirit can sometimes be diminished or extinguished, and some individuals reject opportunities for growth [30]. Intrinsic motivation (IM) is the most autonomous and self-determined form of behavior and has been described as acting mainly without external rewards to accomplish a task, and is simply engaging in an activity out of pure enjoyment or curiosity. It is seen as an opportunity to explore, learn and achieve one's potential [7]. Intrinsic motivation refers to the reason people take part in certain activities for the inherent satisfaction and pleasure of doing so[4].

However, some scholars have pointed out that intrinsic motivation (IM) alone may not be sufficient to drive classroom motivation, and a sense of value of an activity may also be required[18]. Van Lier (1996) further indicates that most teachers and parents realize that many students will not move with sufficient enthusiasm toward achieving outstanding academic achievement, if only guided by IM. Van Lier further suggests that some form of external rewards such as praise, tangible rewards, coercion or punishment may be necessary to transform basic intrinsic drives into motivational goals for some students in the classroom.

Unfortunately, there are many distractions and obstacles which may have a negative impact on student classroom IM. In both early and late adolescence students have shown a general decline in motivation to achieve in the classroom [23]. This is often due to the introduction by teachers of extrinsic elements with a heavy emphasis on measurement of performance and testing and grades[38]. In this situation, students may become amotivated and "feelings of enthusiasm and interest are in danger of being replaced by experiences of anxiety, boredom
and alienation"[25].

Brophy (1999) agrees that just relying on appealing to a student's intrinsic interests will not always be effective. Brophy also introduces some elements of caution when dealing with student IM. The first of these constraints is to deemphasize the idea that intrinsic learning is always "fun". Classroom learning experiences can be rewarding in many ways, but they are not generally considered by most students as being "fun" in the same way that games and roller coaster rides are fun. Brophy also suggests that teachers should deemphasize the fun idea in intrinsically motivated learning, and that other terms such as meaningful, satisfying, or worthwhile would be more preferable.

A second limitation is that the focus of learning usually goes to what students are already interested in and they find to be enjoyable. Brophy cautions that teachers need to try to be change agents, developing students' interests in other domains of learning and not simply supporting students' current interests.

A third caveat by Brophy relates to the connection and potential conflict between a student's need for autonomy and need for relatedness. Students may experience difficulty in dealing with tasks they may wish to complete for the sake of achieving autonomy and those tasks they may feel necessary for purposes of satisfying their need for relatedness. For instance, tasks assigned by teachers may be done for reasons relating to pleasing the teacher and not out of need for self-autonomy.

2.3 The Hierarchical Model of Intrinsic Motivation

The three factors of competence, autonomy and relatedness are shown below in Figure 1 as drivers for IM which, in turn, influences student persistence for test completion and performance. However, this clear outline of factor relationships has not always been so well-defined in some other studies.
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There have been many studies to test the underlying framework of SDT, and various attempts have been made to investigate SDT within educational frameworks, including the hierarchical model of IM [17,31,34]. However, these studies have been scarce, and findings as to how the components interact with each other and operate are not well-defined. Chen and Jang (2010) examined how the model operates in an online environment, and found that satisfaction of the three psychological needs did tend to support student IM, but did not contribute toward better classroom performance. Veronneau et al. (2005) also reported that there was a positive relationship between satisfaction of the three basic needs and the development of IM and feelings of well-being among a group of children and adolescent learners.

Studies with Korean students using the Hierarchial Model of IM and SDT have been relatively few. The article by Jang et al. (2009), included four separate reviews of several hundred high school students from a large, middle class, urban high school in Seoul, Korea. This study concluded that, even in this collectivist setting, these students reacted to the satisfaction of the three basic needs of competence, autonomy and relatedness the same way as students in western classroom contexts. Satisfaction of these needs enhanced Korean students' IM and learning outcomes. A sense of low autonomy and low competence for these students resulted in less IM and less satisfying learning experiences. The authors also concluded that these findings tended to lend support to the notion of the universality of the theory.

Another study examined 559 university students from four countries, including 111 students in Korea. These Korean participants were from an urban area and were from diverse
economic backgrounds. The main focus of this study was to measure the functional significance of student classroom autonomy on their well-being and motivation. Results of the study supported the positive relationship between student autonomy and their IM[6].

2.4 Purpose of This Study

The goal for this study is to examine the hierarchical model of IM in terms of its applicability to a class of university Korean EFL students engaged in learning the skill of reading. With this study purpose in mind, the following three research questions are addressed:

1. What is the level of these students’ perception of their competence, autonomy and relatedness in this EFL reading class?
2. What level of IM do the students in this class display?
3. What, if any, is the correlation among these variables and these students’ IM?

3. Method

3.1 Participants

Participants in this study consisted of 38 Korean university EFL students, 22 females and 16 males, studying the skill of reading. These students had various majors, including engineering, design, English, French, Japanese and economics and were in their first or third year of study. The age of these participants ranged from 19-25. They all had the usual basic English learning through Korean high school, and 10 of them had additional overseas English learning experience in English-speaking countries. Their English proficiency was similar at an intermediate level, and was sufficient to be able to understand the reading texts for this class.

The participants were assigned to read three of Hemingway’s short stories during the class, Indian Camp, The Doctor and the Doctor’s Wife, The End of Something. These students also used a reading textbook titled Skills for Success, Series #3. The three short stories were subjected to analysis and discussion from the standpoint of new vocabulary, linguistic and syntactical values, understanding meaning and some differing cultural aspects revealed in the stories.

3.2 Instruments

Two SDT survey questionnaires were administered to the study participants. The first scale,
titled Basic Need Satisfaction in General, measured the degree of satisfaction of the three basic psychological needs for these students, namely perceived competence, autonomy and relatedness while engaged in this class. The scale consisted of 22 items, but for purposes of this study nine items were selected, with three statements referring to each of the three needs. Participants were asked to respond on seven-point Likert scale, ranging from 1 not at all true, to 7 very true. The survey was given during the last week of the class. Cronbach alpha for this scale was 0.77, indicating a fairly high degree of reliability. Samples of items from this questionnaire are (1) I get along very well with teachers and classmates (2) These days I have a sense of accomplishment in this class.

A second SDT instrument, titled Text Material Questionnaire, measured the participants degree of IM upon completion of the class. This survey was also given during the last week of the class, and consisted of nine items asking students to respond to nine items on a 7-point Likert scale from 1 not at all true, to 7 very true. Student responses to items on this scale were based on their experience reading the English texts. Cronbach alpha for this survey instrument was 0.80, indicating an acceptable level of reliability. Samples of items from this questionnaire: (1) I would describe this material as very interesting (2) I do not feel at all nervous while reading.

Both of these survey instruments were taken from Ryan and Deci’s Intrinsic Motivation Inventory validated by McCauley, Duncan, and Tammen (1989).

4. Analysis and Results

Psychometric data for each of the three research questions were developed as follows:

With regard to research question #1, the level of perceived competence of these students in this EFL reading class was 4.90, out of a possible 7, as shown below in Table 2. This level is considered as slightly above average on the seven-point Likert scale. Students’ level of autonomy in this class was rated at 4.75 out of a possible 7, as shown below in Table 2. This level is considered above average on the seven-point Likert scale. Students’ level of feelings of relatedness was rated as 3.2 out of a possible 7, as shown below in Table 2. This level is considered as below average on the seven-point Likert scale.

With regard to research question #2, the level of IM for these students in this EFL reading class was at 5.06 out of a possible 7, as shown below in Table 2. This level is considered as above average on the seven-point Likert scale.

With regard to research question #3, correlations among the three basic needs scores,
competence, autonomy and relatedness, and IM for these students, was found to be as shown in Table 2.

There was a significant positive relationship between a student’s feeling of competence in the classroom and his/her IM, r = .68 (p<.01).

Student classroom autonomy was found to be correlated with IM at r = .62 (p<.01).

Students’ feelings of classroom relatedness were found to be correlated with IM at r = .35 (p<.01).

Intercorrelations between the three psychological needs show student perceived competence correlated with autonomy at .64 (p<.01) and with relatedness at .25 (p<.01). Student autonomy was correlated with relatedness at .25 (p<.01).

[Table 2] Descriptive Statistics and Intercorrelations for the Three Basic Psychological Needs and Student Intrinsic Motivations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Competence</td>
<td>4.90</td>
<td>1.07</td>
<td>-</td>
<td>.64**</td>
<td>.53**</td>
<td>.68**</td>
</tr>
<tr>
<td>2. Autonomy</td>
<td>4.75</td>
<td>1.13</td>
<td>-</td>
<td>-</td>
<td>.25**</td>
<td>.62**</td>
</tr>
<tr>
<td>3. Relatedness</td>
<td>3.20</td>
<td>1.16</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.35**</td>
</tr>
<tr>
<td>4. IM</td>
<td>5.06</td>
<td>1.11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

N=38
**Correlation is significant at the 0.01 level

5. Discussion and Conclusion

The focus of this paper was to examine how the satisfaction of the three basic psychological needs of competence, autonomy, feelings of relatedness may be related to a student’s IM. Study participants were Korean university students engaged in an EFL reading class. This study was theoretically based on the SDT framework of the Hierarchical Model of IM [36], which suggests that meeting these three needs in the classroom may have a positive effect on student motivation and eventually on their persistence and performance in the task. Three research questions were addressed:

1. What is the level of these students’ perception of their competence, autonomy, and relatedness in this EFL reading class?
2. What level of IM do the students in this class display?
3. What, if any, is the correlation among these students’ perception of their competence, autonomy, and relatedness and their IM?

As indicated in the Literature Review section, most previous studies have been able to show
a positive association between these three psychological needs and IM, but other scholars have found that this relationship is not so well-defined and have suggested further research is necessary to obtain a more definitive picture [25][39].

Some researchers[6] have raised the possibility that a collectivist educational context may have a moderating effect on the operation of this basic needs theory in the classroom. It is suggested that the variable of student autonomy may be particularly affected in such a setting. Collectivist-oriented students may be reluctant or unable to fully adapt themselves to becoming more autonomous in a more individualistic manner. However, Chirkov et al. and Jang et al. concluded that the operation of the theory is the same in collectivist or individualistic settings, and the variable of student autonomy works the same in both contexts.

With regard to research question #1, as shown in Table 2, findings of this study would suggest that the participants in this case had a higher than average sense of their own competence, a higher than average sense of their own classroom autonomy, and a lower than average feeling of relatedness to other students and teachers.

With regard to research question #2, these students’ level of IM was at 5.06, also considered above average. This relatively modest level of IM, could have been negatively impacted by the lower sense of relatedness.

With regard to research question #3, students’ competence, autonomy, and relatedness were positively correlated with their IM at .68, .62, and .35, respectively. These correlations were found to be statistically significant. Correlation between competence and autonomy was at .64, between competence and relatedness was at .53, between autonomy and relatedness was at .25.

It is perhaps worth noting that while these positive relationships existed, they were not sufficient to push IM levels beyond above average. This could have been because student feelings of classroom relatedness were at a fairly low level, and a higher rating of this factor may have resulted in a greater level of IM. Also, the lower correlation between student feelings of autonomy and relatedness may be due to a conflict between the two factors among Korean students. As part of a collectivist society in which relationships are very important, Korean students may not want to act in an autonomous manner when it may interfere with interrelationships with other students, teachers or parents. With that in mind, the factor of relatedness may even become a factor in hindering development of IM for these students in some cases.

In summary, these findings would seem to support the notion that satisfaction of the three psychological needs in the classroom would lead to enhancement of student IM, in accordance with the Hierarchical Model of IM. Although not a part of this present study, other researchers
have found that higher levels of IM may also serve to encourage and foster persistence in task completion and student classroom performance[36].

6. Classroom Implications

Teachers need to ensure that each of the three psychological needs are nurtured in the classroom. Niemiec and Ryan (2009) suggest that strategies to support students’ competence can occur by "introducing learning activities that are optimally challenging" (p. 139) and activities which are also personally valued by students and which they fully understand and are able to master. Teachers also need to provide appropriate feedback in such a way as to promote student perceptions of their own competence. It may also be important to limit testing, grades and other types of student evaluations which may serve to decrease motivation[25]. Student feelings of autonomy can be supported by allowing them to have some choice in selecting activities and providing meaningful reasons for such learning tasks.

Teacher strategies for enhancing students’ sense of classroom relatedness should include provision for a warm and inviting classroom atmosphere, and the showing of care and respect to students.

Another important development for classroom practice is the recent introduction of new learning technologies and how their use may aid teachers in enhancing student interest and motivation to learn. These new technologies include greater use of computers for web-based learning, including access to search engines and large electronic databases. Most students these days are very information technology oriented, and show great interest in actively engaging in these types of assignments which involve use of this type of technology. This heightened interest by students may have the effect of elevating their perceptions of satisfaction of the three basic psychological needs of competence, autonomy, and relatedness and also their IM in the classroom.

7. Study Limitations

This study represents a one-time snapshot of the status of these student variables, but it must be recognized that each of these concepts have a temporal dynamic and may change depending on context and the nature of the learning tasks. Intuitively, students working on repetitive tasks tend to become bored and develop negative attitudes and loss of IM, and a similar decrease in the levels of each of the three psychological needs may also occur. This
situation is the reality of most classroom environments, and over time and depending on the nature of the tasks student interest and motivation can change. This temporal dynamic is also supported empirically, when students have an initial high level of IM when learning tasks are new and challenging. This motivational stance can quickly change when tasks become repetitive and not so challenging[11][38].

Thus, because this temporal issue exists with classroom motivation, a one-time examination such as presented in this study may not be an accurate reflection of the situation over a period of time, and when learning contexts and tasks may change. More research of a longitudinal nature would be necessary in order to confirm these changes.

Another limiting factor for this study lies in the fact that only student perceptions of their classroom competence, autonomy, and relatedness are measured. There is no exploration of these students’ actual satisfaction of these three needs. As in human activity in general, perception is not always an accurate reflection of reality. Are these students’ actual needs being met? It might be useful if further research in this area would also evaluate the actual need fulfillment of these students along with their perceptions of need fulfillment and the correlation of the two types of need satisfaction. This kind of simultaneous analysis may provide a more complete portrayal of these concepts and their impact on student motivation.

References


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