THE ENHANCEMENT OF INTRINSIC MOTIVATION AND WILLINGNESS TO COMMUNICATE THROUGH A MUSICAL PROJECT IN YOUNG JAPANESE EFL LEARNERS

American Association of Applied Linguistics (AAAL)
Denver, Colorado
March 21-24, 2009

Rieko NISHIDA
Graduate School, Kansai University

Dr. Tomoko YASHIMA
Kansai University
TOPICS

- Young learners context in Japan
- Literature Review
- Present Research
- Making the Musical: Video
- Quantitative Analysis: t-tests and SEM
- Qualitative Analysis: video observations, ethnographical notes and parental comments
- Discussion
In January 2008, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) announced a new educational guideline, according to which foreign language (FL) activity in public elementary schools in Japan was introduced.

The main purpose of this activity is to lay the basis of communication ability by enhancing students’ understandings of language and culture, foster a positive attitude toward communication, make students familiar with phonetic sound and basic expression, and enhance the perception of foreign language activity as enjoyable.
The empirical research concerning young learners in a FL context in Japan is scarce, as most of the studies on second-language (L2) learning targeted to adolescents and adults.

Individual differences in L2 learning, the content of English activities and language accomplishment need to be examined because they provide better understanding of young learners in an FL context and promise benefits for teaching practice.
Theoretical Backgrounds: 
Self-Determination Theory (SDT)

The self-determination theory (SDT) focuses on intrinsic and extrinsic motivation and was conceptualized by Deci and Ryan (1985, 2002).

Deci and Ryan (2000) discuss the SDT concepts of psychological needs: needs for autonomy, competence and relatedness. Intrinsic motivation is enhanced when these three psychological needs are fulfilled.
Theoretical Backgrounds: Willingness to Communicate

- In recent years, WTC, defined as “the intention to initiate communicate, given a choice” (MacIntyre et al, 2001, p.369), was added to affective variables concerning L2.

- The WTC model proposed by MacIntyre et al. (1998) postulates that individual differences variables including WTC and motivation as well as intergroup and situational variables influence individuals tendency to use an L2.
Previous Research employing SDT in Japan

- In the Japanese context, several studies targeting adults and adolescents have applied SDT (e.g. Hiromori, 2003, 2004, 2006; Hayashi, 2005; Tanaka and Hiromori, 2007).

- Hiromori and Tanaka (2006) examined whether the three psychological needs (for competence, relatedness and autonomy) could be enhanced by instrumental intervention. “A task-based activity called Group Presentation Activity” (Hiromori and Tanaka, 2006, p.111) was considered to potentially fulfill the three psychological needs. These researchers argued that a group presentation activity did enhance fulfillment of students’ three psychological needs as well as their intrinsic motivation.
Objectives of this study

The objectives of the present study were two-fold:

1. to investigate how young EFL learners who participate in a musical project increase their intrinsic motivation through the enhancement of the three psychological needs and WTC;

2. to understand how interactions among teachers and students in a classroom situation change over time.
The Study Context:

Curricula

- For the third- to the sixth-graders, between 9 and 12 years old, the contents included animals, countries of the world, school, and what you can do (abilities).

- During the 2007 school year, around May, and the musical project was suggested for the fifth graders because these students love to sing songs and play roles in front of their parents.
The Study Context:

Teachers

- A home room teacher (HRT) is allocated in every home room, and they teach most subjects and are responsible for daily duties.
- Assistant language teachers (ALTs), who are native speakers of English, assist teaching language in schools including elementary, junior high and high schools.
- Japanese teachers of English (JTE) are language specialists who are employed by the city.
- The HRT and JTE were team-teaching in this project.
The fifth graders had the special musical script that consisted of 8 scenes with dialogues and 4 advanced songs in English based on a famous American movie.
**Hours of English Lessons for the Musical Project**

**Table 1: Timeline until the Musical Presentation (Parents Day)**

<table>
<thead>
<tr>
<th>Phase 1: Classroom Practice (7 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dates</strong></td>
</tr>
<tr>
<td><strong>Scenes</strong></td>
</tr>
<tr>
<td>Day1 September 11, 2007</td>
</tr>
<tr>
<td>Day2 October 9, 2007</td>
</tr>
<tr>
<td>Day3 October 31, 2007</td>
</tr>
<tr>
<td>Day4 November 26, 2007</td>
</tr>
<tr>
<td>Day5 December 13, 2007</td>
</tr>
</tbody>
</table>

*HRTs discussed and the scenes were decided for each class. So each class only practiced scenes.*

<table>
<thead>
<tr>
<th>Phase 2: Practice at Gym (11 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dates</strong></td>
</tr>
<tr>
<td>All 4 classes practiced together</td>
</tr>
<tr>
<td>Day6 January 18, 2008</td>
</tr>
<tr>
<td>Day7 January 24, 2008</td>
</tr>
</tbody>
</table>

*Note 1) A musical script consisted of 8 scenes  
*Note 2) Students were learning 4 advanced songs*
Investigation 1: Quantitative Analysis

Participants

One hundred sixteen students, including 54 boys and 62 girls, participated in the study. (One hundred and twenty six students, including 59 boys and 67 girls, between 10 and 11 years old, were to participate in this study originally, but the number was reduced by ten students due to absences.)

In previous years, students’ exposure to English lessons was rather limited: twice in the third grade and seven times in the fourth grade. Before commencing the musical project between April 2007 and July 2007, students received 5 English lessons.
Investigation 1: Procedure

- A questionnaire was distributed to the students in September 2007, right before commencement of the project, and in February 2008, right after completion of the project.
Investigation 1: Materials

- **Self-determination theory: psychological needs.** Fifteen items related to three psychological needs (for autonomy, competency and relatedness) based on SDT were taken from Hiromori and Tanaka (2006).

- **Intrinsic Motivation.** Three items representing intrinsic motivation were adapted from Nishida (2007), and Tanaka and Hiromori (2006).

- **WTC.** The current study referred to the WTC scale in Yashima (2002).

- **Open-ended questions.** An open-ended question was included in the post-test, indicated by the words “if you have a comment, please write it down”.

- Cronbach’s alpha were between .77-.92. All wordings were changed because it was difficult for students to read and understand so they were modified by the researcher and confirmed by the city board of education, the school principle and homeroom teachers.
Investigation 1: Analysis and Results

Graph 1: Mean scores of motivation, autonomy, competency, relatedness and WTC at pre-tests and post-tests

<table>
<thead>
<tr>
<th></th>
<th>Motivation</th>
<th>Autonomy</th>
<th>Competency</th>
<th>Relatedness</th>
<th>WTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-tests</td>
<td>3.203</td>
<td>2.608</td>
<td>2.796</td>
<td>3.188</td>
<td>3.465</td>
</tr>
<tr>
<td>post-tests</td>
<td>3.316</td>
<td>2.956</td>
<td>3.078</td>
<td>3.200</td>
<td>3.822</td>
</tr>
</tbody>
</table>
### Investigation 1: Results

#### Table 1: Mean, standard deviation, the results of paired t-tests

<table>
<thead>
<tr>
<th></th>
<th>M (SD)</th>
<th>Pre-tests</th>
<th>Post-tests</th>
<th>Variation</th>
<th>t</th>
<th>p</th>
<th>Eta squared</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>3.203</td>
<td>3.316</td>
<td>0.113</td>
<td>-1.103</td>
<td>0.272</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.989)</td>
<td>(0.994)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Autonomy</strong></td>
<td>2.608</td>
<td>2.956</td>
<td>0.348</td>
<td>-3.938</td>
<td>0.001</td>
<td>0.119</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.887)</td>
<td>(0.938)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Competency</strong></td>
<td>2.796</td>
<td>3.078</td>
<td>0.282</td>
<td>-3.029</td>
<td>0.003</td>
<td>0.074</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.851)</td>
<td>(0.929)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relatedness</strong></td>
<td>3.188</td>
<td>3.200</td>
<td>0.012</td>
<td>-0.144</td>
<td>0.886</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.829)</td>
<td>(0.726)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WTC</strong></td>
<td>3.465</td>
<td>3.822</td>
<td>0.357</td>
<td>-2.203</td>
<td>0.030</td>
<td>0.041</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.123)</td>
<td>(1.196)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1) p*: Bonferroni adjustment was applied to determine the α level.
2) Missing data was controlled by listwise deletion.
Investigation 1: Results

- As you can see in Graph 1 and Table 1 in previous PPTs, although relatedness did not show any increase, the other variables showed a significant increase in the post-test. In particular, students' competence and autonomy showed a significant increase in the post-test, while WTC showed a tendency to increase, although it did not reach a significant level after Bonferroni's adjustment.
Investigation 1: Structural Equation Modeling

Chi squared=177.460, df=98, GFI=.831, CFI=.913, RMSEA=.084
AU=autonomy, CO=competency, RE=relatedness, MO=motivation
Investigation 1: Result

- As a result of SEM in the post-test analysis, the paths from autonomy and competency to intrinsic motivation were fairly strong. This means that students who were higher in competency and autonomy were also high in intrinsic motivation.

- Regarding relatedness, the path from relatedness to intrinsic motivation was not significant.
Investigation 2: Qualitative Analysis

Video-recording

- **Participants**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom interaction was video-recorded on the following dates.</td>
<td>32</td>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>

**Procedures 1: Video-recording**

<table>
<thead>
<tr>
<th>Dates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Day1</td>
<td>September 11, 2007</td>
</tr>
<tr>
<td>Day2</td>
<td>October 9, 2007</td>
</tr>
<tr>
<td>Day3</td>
<td>October 31, 2007</td>
</tr>
<tr>
<td>Day4</td>
<td>November 13, 2007</td>
</tr>
<tr>
<td>Day5</td>
<td>December 13, 2007</td>
</tr>
<tr>
<td>Day6</td>
<td>January 18, 2008</td>
</tr>
<tr>
<td>Day7</td>
<td>January 24, 2008</td>
</tr>
</tbody>
</table>
Investigation 2: Qualitative Study

Ethnographical Notes and Questions to the Parents

Procedures 2: Ethnographical Notes

- Between September 2007 and February 2008, JTEs’ ethnographical notes were obtained. These ethnographic notes based on seven days of classroom exercises and five days of practices at the gym. The JTEs, in particular an assistant JTE, described students’ activities in detail and also recorded information gained from teachers.

Procedures 3: Questions to the Parents

- After the musical day, some questions were asked of students’ parents, including “Did you see your son and/or daughter practice the music at home?” A total of 111 parents responded to this question.
All classroom exercises were video-recorded, and the data were transcribed into a written format from original video recordings. How the teachers and students interacted in the classroom discourse was open-coded and closely examined. The data were organized into some units of ideas from the preliminary codes and similar ideas were grouped together and abstracted into higher-order categories that represent interactional patterns.
Investigation 2: Results

**Major Teacher-Student Interactional Patterns Observed**

- **Modeling and Repetition Pair**: Teachers modeled and students repeated until the students were able to say and/or sing by themselves.

- **Group-Focused Scaffoldings (Teacher Scaffolding)**: When students had enough modeling-repetition, teachers tried to ask if class as a whole had some questions, and if students had questions, teachers explained, translated and instructed using both Japanese and English for the class as necessary.

- **Individual Focused Scaffolding Episode (Scaffolding Episode)**: Teachers provided the necessary scaffoldings to individual students to say the word and/or sentences. For example, they stood behind students to whisper dialogs so that students were able to say the words and sentences.

- **Praise**: Teachers provided positive feedback to students during the classroom exercises when students were able to say the words, sentences and/or songs.

- **Language Achievement**: Students were able to say the words, sentences and/or songs without teacher scaffoldings.
This Table describes how teacher-students’ interactional patterns changed between Day 1 and Day 7. All teacher-students’ interactional patterns were counted and described in percentages, and all patterns in a day were summated as a total of 100%.
Investigation 2: Results

Video Analysis

- On Days between Day 1 and Day 5, over 30% of classroom exercises were modeling and repetition as teachers provided a great amount of modeling and repetition and scaffolding.

- On Day 6 and 7, a larger amount of language achievement was observed, as students learned to produce words and/or dialogues by themselves.
A schematic diagram to show how the teacher-student interactional patterns develop in classroom practices.
Although emphasis of the practice change depending on the phase of practice, consistent classroom practice cycles were observed as shown in the diagram. In every lesson, teachers and young learners in an FL context undergo this process, and eventually students learn to produce targeted words and sentences. When new linguistic materials and challenging tasks are introduced to students, a new cycle begins. This cycle was observed in everyday lessons.
Investigation 2: Results

Ethnographical Notes

January 18, 2008
According to HRTs, students are excited to perform their own musical as the day of the performance approaches (February 14, 2008).

February 6, 2008
At the gym, students sang very well from the beginning, and their voices were very strong and nice. Students seemed to immerse themselves in the world of songs and the place of the musical.
Investigation 2: Qualitative Study

Results: Questions to the Parents

Did you see your son and/or daughter practice the music at home?

- **Yes** (75%)
- **No** (25%)

Parents said..

- “I heard my son singing when he was taking a bath and right before he was going to bed”.
- “I wondered what sort of charm he was telling his brothers, now I know!”.
- “I was in tears. I was so moved.”
Conclusion

• Firstly, the musical project was successfully conducted with the fifth graders who had little exposure to English.
• Their perceived competence and autonomy showed a significant increase in the post-test.
• The results of structural equation modeling indicated that students who perceive their competency and autonomy higher, also had higher intrinsic motivation.
• With the successful conclusion of the musical project, children felt they were more autonomous and competent which, according to SDT, leads to the enhancement of intrinsic motivation.
• How their autonomy and competence developed was revealed in the qualitative study.
Conclusion

• Qualitative data interactional patterns in a classroom setting and students’ change outside the classroom. The changes in interactional patterns including modeling-repetition, teacher scaffolding, praise, scaffolding episodes, and language achievement were revealed. The sequences shown in the schematic diagram indicate how teacher-learner interactions helped students be able to say sentences and sing songs, and this probably enhanced learners’ sense of competency as they went through the practice sessions.

• At a final stage, teachers didn’t help students as much as they did in an earlier stage but only assisted when they needed help. In other words, the scaffolding was gradually lifted as students learned to perform independently. This probably helped them develop their sense of autonomy.
References


References

References


# Correlation Matrix

## Correlation Matrix for Pre-test

<table>
<thead>
<tr>
<th></th>
<th>Motivation</th>
<th>Autonomy</th>
<th>Competency</th>
<th>Relatedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.699**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competency</td>
<td>0.738**</td>
<td>0.762**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relatedness</td>
<td>0.467**</td>
<td>0.537**</td>
<td>0.503**</td>
<td></td>
</tr>
<tr>
<td>WTC</td>
<td>0.219*</td>
<td>0.321**</td>
<td>0.323**</td>
<td>0.407**</td>
</tr>
</tbody>
</table>

**<.001, *<.01  
N=115

Missing data was controlled by listwise deletion.

## Correlation Matrix for Post-test

<table>
<thead>
<tr>
<th></th>
<th>Motivation</th>
<th>Autonomy</th>
<th>Competency</th>
<th>Relatedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.633**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competency</td>
<td>0.635**</td>
<td>0.541**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relatedness</td>
<td>0.570**</td>
<td>0.548*</td>
<td>0.649**</td>
<td></td>
</tr>
<tr>
<td>WTC</td>
<td>0.112</td>
<td>0.261**</td>
<td>0.244**</td>
<td>0.209*</td>
</tr>
</tbody>
</table>

**<.001, *<.01  
N=116

Missing data was controlled by listwise deletion.