

# What Factors Contributed to the Adaptation Gap during School Transition in Japan?

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**Abstract**—The present study was aimed to examine the structure of children's adaptation during school transition and to identify a commonality and dissimilarity at the elementary and junior high school. 1,983 students in the 6th grade and 2,051 students in the 7th grade were extracted by stratified two-stage random sampling and completed the ASSESS that evaluated the school adaptation from the view point of 'general satisfaction', 'teachers' support', 'friends' support', 'anti-bullying relationship', 'prosocial skills', and 'academic adaptation'. The 7th graders tend to be worse adaptation than the 6th graders. A structural equation modeling showed the goodness of fit for each grades. Both models were very similar but the 7th graders' model showed a lower coefficient at the pass from 'teachers' support' to 'friends' support'. The role of 'teachers' support' was decreased to keep a good relation in junior high school. We also discussed how we provide a continuous assistance for prevention of the 7th graders' gap.

**Keywords**—School transition, social support, psychological adaptation, K-12.

## I. INTRODUCTION

FOR building the system with consistency such as K-12, a great reforming the current compulsory educational system is being carried out in Japan. Specifically, the adaptation gap between 6th grade and 7th grade is called for "the 7th graders' gap", and is gathering the most public attention at the moment [1]-[3]. This phenomenon is considered as a symbol of the failure of K-12. During this school transition, an incidence rate of bullying increases threefold, even if they enter into the junior high school on the same district. In the past, many trial have been accomplished to overcome this gap, which success motivating a student to study, strengthening a self-esteem of students, decreasing a school absenteeism and so on [1]-[3]. Japanese Ministry of Education, Culture, Sports, Science and Technology and the Central Council of Education declared to encourage a unified lower and upper secondary school education system immediately and now there is a great concern to identify a commonality and dissimilarity of the adaptation system of the elementary and junior high school [4].

Up to the present time, there has been some information available on prevention for this adaptation gap. For example, the school maladjustment of 7th graders had been influenced by anticipatory anxiety at 6th graders in the preceding year [5]. It is assumed that the anticipatory anxiety at the 6th graders is composed of many psycho-social variables, such as the social

skills, social support, and cognition to teacher [6]-[8]. Nakamura and Koshikawa [9] were to develop a school-based program for preventing bullying for junior high school students, and to evaluate its effectiveness among 519 junior high school students. This study indicated that students' self-efficacy for behavior to prevent bullying and norms regarding abusive behavior increased, whereas potential participation in abuse significantly decreased. It would be supported by much evidence that the social skills give a strong effect to school adaptation. Especially, it would be functioned as a mediator which suppresses the occurring of bullying among children. In addition, social skills contribute to promote the social support among students in the school environment. Hosoda and Tajima [10] were a leading study of companionship on junior high students in Japan, and their results revealed that the support from a friend was related to self-affirmation, and in the instrumental support from a teacher, the interaction between self-affirmation and gender was appeared significantly.

From the above, necessary and sufficient information are fulfilled and the opportunity has come for us to verify the comprehensive model of the adaptation gap during school transition [11]-[13]. We tried to clarify causes to bring an exponential increase of maladaptation by using SEM analysis at both grade, and provide some necessary information for understanding this adaptation gap.

## II. METHODS

### A. Participants and Procedure

The participants for this study consisted of 6th graders and 7th graders in public elementary and junior high schools at Hokkaido in Japan. Stratified random sampling method was used to obtain the samples without selection bias. The first stage involved random selection of 58 elementary schools and 53 junior high schools at Hokkaido prefecture, Japan. A total of 1,983 6th graders and 2,051 7th graders were subjected to the present study. The survey was carried out in these schools on October to obtain the data using the self-administered questionnaire. This study was approved by the local ethical committee.

### B. Questionnaire

Adaptation Scale for School Environments on Six Spheres (ASSESS; Yamada & Yonezawa) [14]:

The ASSESS is a 30-item self-administered questionnaire that measures children's school adaptation. Respondents rate each items on five-point Likert scale ranging from 1 (disagree)

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to 5 (agree). Factor analysis has identified 6 subscales: “General Satisfaction”, “Teachers’ Support”, “Friends’ Support”, “Anti-bullying Relationship”, “Prosocial Skills”, and “Academic Adaptation”. All of subscale scores negatively correlated with a total score of “A-State” from the Japanese version of State-Trait Anxiety Inventory (STAI; Shimizu & Imae) [15].

#### Anxiety in the Junior High School:

Respondents rate each items on five-point Likert scale ranging from 1 (disagree) to 5 (agree). Questionnaire consisted of 10 items asking concerns about 1) study, 2) career after graduation, 3) upper-class students, 4) classmates, 5) teachers, 6) club activities, 7) school events, 8) school regulations, 9) practices, and 10) school attendance.

#### Information Resources about Junior High School Life:

Respondents rate “Yes” or “No”. Questionnaire consisted of eight items asking whether you got information about junior high school life from 1) parents, 2) sister and brother, 3) grandparents, 4) the elementary school teachers, 5) the elementary school friends, 6) the junior high school teachers, 7) seniors of the junior high school, and 8) cram school teachers.

#### C. Data Analysis

The data were analyzed using IBM SPSS Statistics 20 and IBM SPSS Amos 20. Unpaired t-test was administered to examine the difference of school adaptation between 6th graders and 7th graders. To construct a pass model, structural equation modeling (SEM) was used.

### III. RESULTS

A total of 4,034 participants contributed to the all research agenda, as part of the survey using the questionnaire. As shown in Table I, the mean score and SD of the both 6th and 7th graders were calculated and confirmed it into the range of theoretical consistency.

Unpaired t-tests revealed the significant differences in the scores of all subscales except for “Anti-bullying Relationship” of ASSESS between 6th graders and 7th graders (see Table I). The scores of 7th graders tended to be lower than 6th graders’.

Structural equation modeling (SEM) revealed that the two pathways were indicated from “Teachers’ Support” to “General Satisfaction” indirectly. One way is mediating social functions, and the other way is mediating academic functions. Moreover, significant differences were revealed in the paths from “Teachers’ Support” to other variables between 6th graders and 7th graders by using unpaired t-test. These paths of 7th graders also tended to be lower than 6th graders’. All the fit of the hypothesis models can be considered as acceptable (see Figs. 1 and 2).

Unpaired t-tests revealed the significant differences in the scores of anxiety in the junior high school except for concern about “study” and “school attendance” between 6th graders and 7th graders (see Table II). The scores of 7th graders almost tended to be lower than 6th graders’, however, “career after graduation” of 7th graders tended to be higher than 6th graders.

TABLE I  
THE DIFFERENCE OF SCHOOL ADAPTATION DURING SCHOOL TRANSITION

Subscales	6th graders (n = 1,983)		7th graders (n = 2,051)		Unpaired t-test
	M	SD	M	SD	
General satisfaction	17.21	4.58	16.19	4.26	7.30**
Teachers' support	18.07	4.83	17.05	4.71	6.76**
Friends' support	18.96	4.65	18.63	4.37	2.34*
Anti-bullying relationship	17.52	5.26	17.36	4.93	0.99
Prosocial skills	18.24	3.86	17.93	3.51	2.60**
Academic adaptation	17.41	4.41	15.06	4.46	16.73**

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

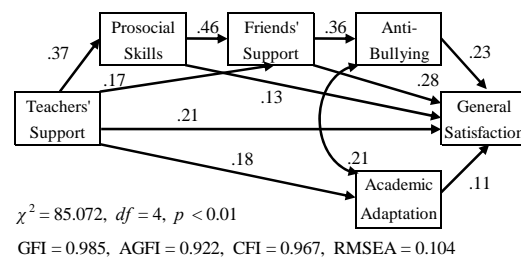


Fig. 1 Hierarchical structure of school adaptation in 6th graders

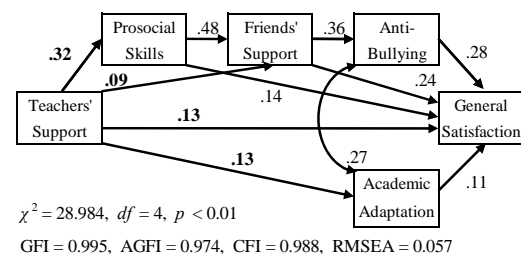


Fig. 2 Hierarchical structure of school adaptation in 7th graders

TABLE II  
THE DIFFERENCE OF ANXIETY IN JUNIOR HIGH SCHOOL DURING SCHOOL TRANSITION

Anxiety in junior high school	6th graders (n = 1,983)		7th graders (n = 2,051)		Unpaired t-test
	M	SD	M	SD	
Concern about Study	3.30	1.20	3.32	1.15	0.55
Career after graduation	3.17	1.28	3.49	1.21	8.15 **
Upper-class students	3.23	1.20	2.69	1.18	14.47 **
Classmates	2.31	1.19	2.22	1.15	2.36 *
Teachers	3.00	1.19	2.56	1.00	12.63 **
Club activities	2.33	1.32	2.10	1.21	5.73 **
School events	2.19	1.14	1.99	1.02	5.78 **
School regulations	3.15	0.92	2.94	0.82	7.82 **
Practices	3.03	1.02	2.72	1.00	9.76 **
School attendance	2.58	1.03	2.60	0.94	0.75

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Chi-square tests conducted to clarify the difference in information resources about junior high school life between 6th graders and 7th graders (see Table III). The results showed the smaller qualified persons gotten information from “grandparents” and “elementary school friends” in 7th graders, while the larger qualified person gotten information from “junior high school teachers”.

### IV. DISCUSSION

Our research shows that the successful assessment of

comprehensive model for two grades during school transition could be available. Although there were many finding which were supplied for discussing about the school transition in the past, our comprehensive model succeed in involving almost theory and measurable various and is supplying new information for us.

TABLE III  
THE DIFFERENCE OF INFORMATION RESOURCES ABOUT JUNIOR HIGH SCHOOL  
LIFE DURING SCHOOL TRANSITION

Information resources	6th graders (n = 1,983)		7th graders (n = 2,051)		$\chi^2$
	N	%	N	%	
Parents	1302	65.9	1358	66.4	0.12
Sister and brother	766	42.7	850	44.9	1.74
Grandparents	608	31.0	494	24.4	22.02 **
Elementary school teacher	994	50.4	1039	50.9	0.08
Elementary school friends	1190	60.4	973	47.8	64.41 **
Junior high school teachers	379	19.6	526	25.9	22.25 **
Seniors of junior high school	885	45.5	869	42.8	0.23
Cram school teachers	370	21.0	375	19.8	3.02

Note. \*\*  $p < 0.01$ .

As a result of having compared the 6th with the 7th graders, we found that there were some differences in their SEM figures although these models were very similar. On the 7th graders' model showed a lower coefficient at the pass from "Teachers' Support" to "Friends' Support". "Teachers' Support" was not need to keep a good relation each other in junior high school contrary to expectations. The structure of student's adaptive behavior may shift to the direction depending on a peer relation than with their teachers. It was clear that "Teachers' Support" have limitations for students' satisfaction.

Nevertheless the lower school adaptation in 7th graders, their anxiety about the junior high school life has decreased. These results would suggest that solving their worry is an unpredictable factor to increase school adaptation of them. Moreover, though the gap of "Friends' Support" between two graders was exceedingly small size, the opportunities that they get information for school life and consult with their friends may be lost. Thus, making a classroom climate increasing students' help-seeking behavior would be necessary.

While it is tempting to promote adaptive condition of students using a lot of supportive methods such as peer-counseling or social skill training by teacher, there are some subtypes of students' teacher recognition in a junior high school student. The type of Acceptance, Affinity, Confidence, and Objectivity had a facilitative effect on the class norms regarding abuse and on the likelihood of feeling guilty [16]. These types of students' teacher recognition result in a suppression of the bullying among student. On the other hand, the Fear and Punishment type could be lead students to refuse the participation in preventive behavior. Although these tendency of students' teacher recognition and its functional results are a phenomenon to be seen equally at both grades and does not express decisive differences of them, teachers' support affecting on maladaptation of student might to be start to decrease its effectiveness at 7th grade [17]-[19]. It means that the instructive control for student by teacher in the junior high

school decrease its functional effects compared with in the elementary school [8].

Already similar results were described by [20], and his theory made reference to the simple issue that student had a trend of weakening the effect of support by teacher on the maladaptive affection according to rising their grade. It is assumed that the effect of support by teacher changed its role. However, our data indicated that an effect of "Teachers' Support" did not merely fade, rather more parameters started to strengthen their effect on students' "General Satisfaction". Especially, we could confirm that the acquired "Prosocial Skill" mediated "Friends' Support", and enhanced "Anti-Bullying" in both models. In this process, "Teachers' Support" is having important role and take responsibility for providing "Prosocial Skill" to all students.

Iida and Ishikuma [21] emphasized the different meaning to start the social skills training from the junior high school students to develop their career as well-balanced adolescent. On the other hand, recent evidence has suggested a relationship between the total numbers of maladaptive children from 4th graders to 6th graders and the incidence of the 7th graders' gap [2]. It is possible to predict the 7th graders' gap by the number of maladaptive children in the past several years. For the adaptation at the junior high school, it will be recommended that we start the social skills training from an elementary school stage.

## V. CONCLUSION

Our research shows two comprehensive adaptation models for 6th graders and 7th graders using SEM. Both models are similar, but there are some important differences. One of them is the effectiveness of "teachers' support" to "friends' support" and "general satisfaction" decreases from 6th graders to 7th graders. Instead of its decreasing, the influence of "prosocial skills" to "friends' support" increase among 7th graders. It is assumed that this difference would be the key point for building the system of prevention about school transition gap. School based social skills training should start from elementary school gradually and build up students' prosocial skills including academic and life skills for prevent the gap.

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