

A study on inclusive classroom teachers' attitudes and students' social participation according to characteristics of students with intellectual disabilities*

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《 Abstract 》

This study examined the relationships with the attitude of teachers toward students with intellectual disabilities and social participation of students by their characteristics. Participants were 118 teachers and students with intellectual disabilities at inclusive classrooms. For this study, Social Participation Questionnaire (SPQ; Koster et al., 2008) and a nomination form regarding teachers' attitudes toward their included students with disabilities (Cook, 2001) were adjusted and used. Results revealed that characteristics of students with intellectual disabilities including communication skills, academic backgrounds, appearance, were highly related with teachers' attitudes, and also teachers' attitudes influenced students' social participation. Additionally, results indicated that the three characteristics of students were significant factors having an effect on their social participation. However, it was found that the appearance of students was not related with the attitude of teachers.

주제어 : inclusive education, attitude, social participation

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I . Introduction

1. The necessity of the present study

Positive relationship with peers at school settings played a key role in students' social and emotional development, academic outcomes, as well as it improved the quality of life. And the quantity and quality of peer relationships was a significant factor to develop a quality of life(Prinstein & Dodge, 2008). Therefore, one of the schools' primary purpose was to provide students with various opportunities for social interaction, in order to support the peer relationship. Currently inclusive education was suggested as a greatly desirable educational form because of active interaction with peers at schools (Turnbull et al., 2004). The rate of students at inclusive settings in South Korea had gradually risen. A critical purpose of inclusive education by the change of paradigm for inclusive education was to improve individualized education and social interaction in macro perspectives and subjectivity(Min, 1997).

According to the report of the ministry of education(2010), science and technology, there were 42,021 students at special classes of general schools, and 13,746 students at general classrooms. It meant that more 70% of students with disabilities were educated in inclusive school settings in South Korea. Although the number of included students with disabilities has gradually increased, there were limited empirical studies on the efficacy of inclusive education.

Some results of research revealed negative effects of inclusive education on social, emotional, educational development of students with disabilities. For instance, Oh(2010) found that included students with disabilities were more exposed to verbal and emotional abuse than peers. In addition, Pijl, Frostad and Flem(2008) indicated that students with disabilities were in the lower social position than non-disabled students in general schools, and also they took a negative attitude in school activities. And students with intellectual disabilities experienced lower level of social recognition compared to their peers(Min, 2010). Moreover, the percentage of students with disabilities to total students was low, and teachers of general classes made little efforts

to students with disabilities because students were also on the special classes for some hours(Carter, et al., 2008). Wagner et al(2004) indicated that students with intellectual disabilities were especially lower peer relationships than students with other kinds of disabilities. Also included students with disabilities preferred interact with peers with same disabilities, otherwise they tended to be want be alone (Lee & Park, 2002; Lee, 2004; Dore et al., 2002).

In addition, the teachers' recognition of relationship with students with disabilities had great influence on social participation of students. As described by Lee(2007), the relationship on trust was a prerequisite for successful education. When a teacher trusted a student, a student was able to have a sense of stability and take a positive view, and it led increased participation of students on school activities. In other words, the relationship between teachers and students was significant factors on social, emotional, and academic development. The understanding of teachers to disabled students differed as characteristics of students, and the different realization influenced participation of included students. According to the study of Oh and Jeong (2010), the level of communication and academic performance and students' appearance was positively related to students' social participation. Marston, Perry and Roy (1997) indicated that low communication skills of students with intellectual disabilities was a major cause of aggressive behaviors. That is, students with intellectual disabilities had difficulties to express their feelings verbally such as in convenience, anxiety, or tension. And students by the pressed feelings exhibited aggressive and violent behaviors. Furthermore, Baumeister, Storch and Geffken(2008) presented that students with learning disabilities were likely to be victims of peer bullying. It meant that academic ability could be an important factors for social participation of students in classrooms. The study of Ritts, Patterson and Tubbs(1992) found that teachers' expectation was related with students' physical attractiveness. Additionally, teachers believed that physically attractive students were more intelligent, sociable, as well as they had high self-esteem(Maag et al., 1991).

Finally, it was predicted that communication skills, academic level, and appearance were highly related with both social participations and teachers' attitudes. However, there was few researches completed in South Korea and also few empirical results concerning social participation of included students with intellectual disabilities.

2. The purpose of this study

The purpose of the current study was (a) to predict that teachers' attitudes and students' social participation were influenced by communication skills; (b) teachers' attitudes and students' social participation were related with an academic performance level; and (c) appearance of students with intellectual disabilities had a effect on teachers' attitudes and students' social participation.

II. Method

1. Participants

Participants in the study consisted of 118 inclusive classroom teachers of students with intellectual disabilities from five cities in South Korea. They completed questionnaires based on their observation with regard to their students with intellectual disabilities and peers. Students with intellectual disabilities were 118 including 66(55.9%) males and 52(44.1%) females. With regard to grade breakdown, 19(16.1%) students were first and second graders, 18(15.3%) students were third and fourth graders, and 81(68.6%) students were fifth and sixth graders.

There were different variables with regard to students, but three quantitative variables were selected for analysis of structural equation model. These were academic performance level(Oh, 2006; Jacobson, 1988), communication skills(Axelrod, 1982; Gerber & Zinkgraf, 1982), appearance of students with intellectual disabilities(Oh, 2008; Sweeting & West, 2001).

Academic performance level was measured based on total scores of reading and math test with a five point scale. Each point was added and total scores were used as the extent of academic performance. And communication skills were evaluated by two scales, a four point scale about expression of his intention and a four point scale about understanding of others' intention. Each point was added and total scores were considered

as the extent of communication skills. And students' appearance was measured by responding to the statements divided across two scales as follows: appearance and cleanness of students, and a four point scale was used. Also each subscale had a 5-point Likert-type response format ranging from 1 to 5.

2. Instruments

For the purpose of this study, teachers' attitudes questionnaire and social participation questionnaire were used to analyze attitudes and social participation of students with intellectual disabilities.

1) Nomination form for teachers' attitudes

A nomination form developed by Cook(2001) was used to examine teachers' attitudes toward their included students with intellectual disabilities. In this study, the form was modified and used as a 5-point type scale.

Principle component analysis was applied to analyze construct validity. The result showed $KMO=.656$, $\chi^2(6)=108.01$, $p=.000$, identified as an appropriate for factor analysis.

<Table 1> specific description of instruments for teachers' attitude

Variable	Description	Items	Reliability	Descriptive statistic		Scores
				M	SD	
Teacher attitudes	the recognition of teachers' attachment, concern, indifference, rejection toward a student with a disabilities	3	.762	10.46	2.33	5-point Likert-scale, Median: 9, Lowest: 3, highest: 15

2) Social Participation Questionnaire

Social Participation Questionnaire(SPQ) for teachers that developed by

Koster (2008) was used to examine the extent of social participation of students with intellectual in inclusive settings. Additionally, exploratory factor analysis was applied to construct validity of SPQ, and Cronbach α was applied to reliability of items. As <Table 2> was shown, the items were relatively reliable.

<Table 2> specific description of instruments for social participation

Subscale	Description	Items	Reliability	Descriptive statistic		Scores
				M	SD	
care of friends with disabilities	the extent of classmates' willingness to adapt rules or contents of activities for students with disabilities	5	.854	13.87	3.52	5-point Likert-scale, Median: 15, Lowest: 5, highest: 25
feelings of belonging	the extent of having fun with classmate	5	.822	17.11	3.25	5-point Likert-scale, Median: 15, Lowest: 5, highest: 25
acceptance by classmates	the extent of invitations to play or activities	5	.828	12.23	3.45	5-point Likert-scale, Median: 15, Lowest: 5, highest: 25
feelings of loneliness	the extent of exclusion from activities by classmate or feelings of loneliness	2	.664	5.60	1.50	5-point Likert-scale, Median: 6, Lowest: 2, highest: 10
bullying	the extent of bullying or provocation by classmates	3	.694	5.52	1.86	5-point Likert-scale, Median: 9, Lowest: 3, highest: 15
social participation	the extent of participation of academic or physical activities	3	.733	10.66	2.32	5-point Likert-scale, Median: 9, Lowest: 3, highest: 15
Total		23	.799			

3. Procedures

To develop instruments, Social Participation Questionnaire(Koster, 2008) and a nomination form(Cook, 2001) were translated into Korean and revised by one doctoral student majoring special education in the United States and two researchers having a doctorate. In addition, one university professor verified the content validity.

The questionnaire with a Likert-type response format was completed by teachers as printed, and the average completion time was 20 minutes.

4. Analyses

The structural equation models were created and solved with AMOS 18.0, and descriptive statistics, analyses of variance were produced with SPSS 18.0. Confirmatory factor analysis and Cronbach α were applied to evaluate the model's statistical reliability. Structural analysis and path analysis was completed to analyze the relation by variables.

III. Results

This study was to analyze the degree of attitudes and social participation by variables related to characteristics of students including communication skills, academic performance, and appearance. Specific results were as follows.

1. An analysis of teachers' attitudes and social participation by communication skills

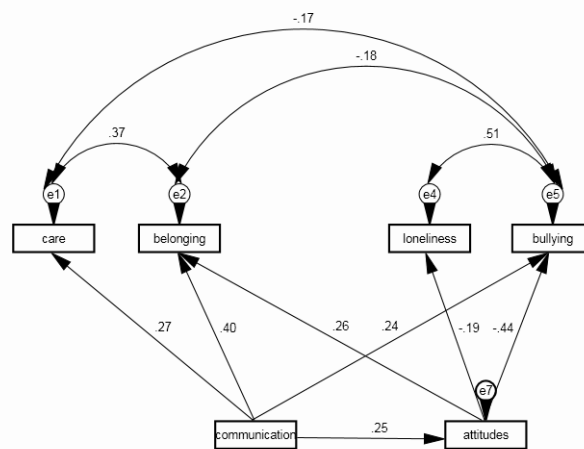
Model goodness of fit for attitudes and social participation by communication skills was presented below.

<Table 3> Model Goodness of Fit Index for attitudes and social participation by communication skills

<i>Chi-Square Test</i>			GFI	AGFI	NFI	RMSEA
<i>Chi-Square</i>	<i>df</i>	<i>sig</i>				
.521	4	.971	.999	.992	.996	.000

Goodness of fit statistics were consistent with the proposed model when assessed using the following standards for acceptable fit: $\chi^2(4)=.521$, $p=.971$, goodness of fit index (GFI) ($>.9$)=.999, normed fit index (NFI) ($>.9$)=.996, root mean square error of approximation (RMSEA) ($<.1$)=.000(No, 2011).

The results on structural model of attitudes and social participation by communication skills were presented in <Figure 1>.



<Figure 1> Structural model predicting social participation from communication skills and teachers' attitudes

Communication ability of students with disabilities had positive impact on teachers' favorable attitudes. It seems likely that inclusive teachers preferred students with which they could verbally communicate.

Furthermore, the higher ability of communication was associated with higher school belonging and acceptance by classmates. Whereas, communication skills were positively related to school bullying.

As considered communication skills had positive relationship with teachers' favorable attitudes, negative relationship between teachers' attitudes and school bullying was inconsistent of positive relationship between communication skills and characteristics of school bullying.

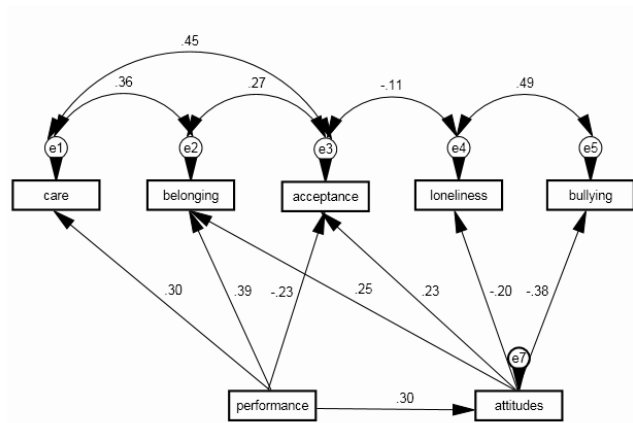
2. An analysis of teachers' attitudes and social participation by academic performance

Model goodness of fit for attitudes and social participation by academic achievement level was presented below.

<Table 4> Model Goodness of Fit Index for attitudes and social participation by academic outcomes

<i>Chi-Square Test</i>			GFI	AGFI	NFI	RMSEA
<i>Chi-Square</i>	<i>df</i>	<i>sig</i>				
6.691	8	.570	.984	.946	.962	.000

The results indicated an accepted model fit, $\chi^2(8)=6.691$, $p=.570$, GFI(>.9)=.984, adjusted goodness of fit index (AGFI)=.946, NFI(>.9)=.962, RMSEA(<.1)=.000, using both chi-square and incremental fit indices (No, 2011).



<Figure 2> Structural model predicting social participation from academic achievement level and teachers' attitudes

As <Figure 2> shows, students' academic achievement level was associated positively with teachers' attitudes. In other words, teachers had favorable attitudes to students with intellectual disabilities having basic knowledge of letters and numbers. Students' academic performance had a positive impact on feelings of belonging in the classroom, care of friends with disabilities, but was related negatively with acceptance of students with a disability by classmates. But academic level influenced teachers' attitudes. Therefore, the teachers' attitude had indirectly effect on acceptance of students.

3. An analysis of teachers' attitudes and social participation by students' appearance

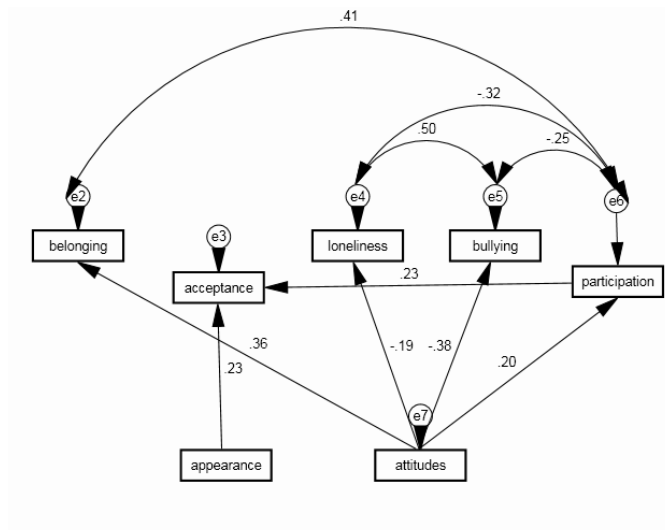
Model goodness of fit for attitudes and social participation by students' appearance was presented below.

<Table 5> Model Goodness of Fit Index for attitudes and social participation by students' appearance

<i>Chi-Square Test</i>			GFI	AGFI	NFI	RMSEA
<i>Chi-Square</i>	<i>df</i>	<i>sig</i>				
10.867	11	.454	.974	.934	.924	.000

The results revealed it was the best fitting model, $x^2(11)=10.867$, $p=.454$, $GFI(>.9)=.974$, $NFI(>.9)=.924$, $RMSEA(<.1)=.000$ (No, 2011).

The results on structural model of attitudes and social participation by appearance were presented in <Figure 3>.



<Figure 3> Structural model predicting social participation from appearance and teachers' attitudes

Appearance of students with intellectual disabilities was not associated with teachers' attitudes, but it affected acceptance of peers. Thus, teachers' attitudes was linked to communication and academic achievement, not students' appearance. From our model, one could also infer the link between increased social participation of students and acceptance by peers. Thus, students

gaining teachers' favor had good communication skills and academic outcomes at schools. Also it meant that among them, students having good attitude toward learning activities were accepted as a friend.

IV. Discussion

This study was designed to examine inclusive teachers' attitudes and students' social participation by characteristics of students with intellectual disabilities. Discussion was reviewed in terms of the methods and results of this study.

On the method of study, this study was completed by observing of teachers at inclusive school settings. It seemed that the data collecting of this study was appropriate because inclusive teachers have spent a considerable time with students with intellectual disabilities(Cullerton-Sen & Crick, 2005). Espelage and Swearer(2003) indicated direct behavioral observation in natural environments was an ideal method to collect data of students' daily life.

On the study result, attitudes of teacher toward students with intellectual disabilities differed from communication skills and academic skills of students, and also better academic skills and understanding about letters and numbers of students led teacher favorable. According to the result of this study, students with severe disabilities or with difficulties of communication could not exclude the possibility of negative relationship with teachers at inclusive classrooms. Oh (2010) indicated when teachers with included students had a hard time with their students, they tended to let them alone. Therefore, for successful inclusion, it was necessary to introduce the system of professional itinerant teacher by types of disabilities and the system of teachers' certificate for inclusive classrooms or expand teachers' training for the class(Oh & Jeong, 2010). Also, there was a close relationship between social participation and communication skills and academic skills. As considered that the communication skill was premise for interaction with peers, communication ability was a significant factor of successful inclusion.

At school settings, learning activities were basic elements, and so basic learning skills could be a critical factor for social participation and acceptance by peers at a class.

In this study, it revealed that social participation was related with acceptance as peers. In other words, when students with disabilities were clean, neat and attractive, they were likely to be accepted as peers easily. And also students with good manner at a class were likely to be accepted by peers. Therefore, it was necessary to provide students with disabilities with education for both development of self-help skills and improvement basic academic skills.

As a result, communication skills and academic achievement level of included students with intellectual disabilities were highly associated with social relationship with both non-disable students and teachers. Therefore, these two factors were identified as significant variables to predict social and academical development. Additionally, since the recognition of teachers toward students with intellectual disabilities acted as an important variable to social participation of students, teachers needed to continue effort to change the way they regard those with intellectual disabilities.

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통합학급 지적장애학생에 대한 교사의 호감도 및 사회적 참여 분석

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<요 약>

이 연구는 통합학급 지적장애학생에 대한 교사들의 호감도와 장애학생의 사회적 참여가 장애학생관련 변인에 따라 어떠한 관계가 있는 지 알아보기 위하여 수행되었다. 이 연구는 초등학교 통합학급에 재학하고 있는 지적장애학생 118명을 대상으로 하였으며, 자료의 수집은 통합학급 교사들의 관찰 자료를 근거로 하였다. 이 연구에서 활용된 도구는 Cook(2001)의 교사의 호감도 척도와 Koster 등(2008)의 장애학생의 사회적 참여 척도를 수정하여 활용하였다.

이 연구의 결과에 따르면 장애학생의 의사소통능력, 학력수준은 교사의 호감도와 정적 상관을 갖는 변수로 제시되었으며, 또한 교사의 호감도는 장애학생의 사회적 참여에 영향을 미치는 것으로 제시되었다. 그러나 장애학생의 외적특성은 교사의 호감도와 상관이 없는 것으로 제시되었다.

한편, 장애학생의 의사소통능력, 학력수준 그리고 외적 특성은 통합학급에서 장애학생의 사회적 참여에 영향을 미치는 중요한 변인으로 제시되었다.

주제어 : 통합교육, 호감도, 사회적 참여

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