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**Korean Preservice Teachers' Perception of Parent-Teacher Partnership: The Effects of
Motivation and Teaching Beliefs**

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Abstract

This study examined early childhood preservice teachers' perceptions of the parent-teacher partnership, especially for the interaction effect between motivation and teaching beliefs on the parent-teacher partnership among Korean early childhood preservice teachers. The participants for this study included 265 preservice teachers in two different types of childhood teacher education programs (early childhood education and elementary education) in Seoul, Kyunggi, and Busan in Korea. The results from *t*-tests and ANOVA showed that preservice teachers' perceptions of the parent-teacher partnership were differentiated by student status in the teacher education program with discrete differences depending on sub-factors. Constructivist teaching beliefs were the most significant variable to predict the preservice teachers' perceptions of the parent-teacher partnership. Even though there were no statistically meaningful interaction effects between intrinsic motivation and constructivist teaching beliefs, two-way interaction plots implied interaction effects between these two predictors. Based on the results, we discussed the implications of the results in regard to curriculum development and educational policy for future endeavors to enhance teacher education quality and educational effectiveness.

Keywords: parent-teacher partnership, motivation, teaching beliefs, preservice teacher

Korean Preservice Teachers' Perception of Parent-Teacher Partnership: The Effects of Motivation and Teaching Beliefs

Parent involvement has been studied for its effects on children's development and school learning in terms of academic success (e.g. Cox, 2005; Fishel & Ramirez, 2005; Sheldon, 2007). In contrast to its positive effects, Korean parents' concern for their children's education has been viewed negatively due to side effects such as excessive educational zeal, students' psychological instability, and expansion of private education in Korean society.

In contrast to general perspectives and attitudes toward parent involvement in children's education in Korea, many western countries, including the United States, encourage parent involvement through positive partnerships among parents, teachers, and organizations (Committee of Educational Reform, 2004; Englund, Luckner, Whaley, & Egeland, 2004; Epstein & Salinas, 2004; Lim, 2011; Zaoura & Aubrey, 2011).

In fact, perceptions of parent-teacher partnership and the methods and extent of parent involvement are various in terms of social perception and tradition (Boethel, 2003; Bourdieu, 1986; Desimone, 1999; Kim & Kim, 2004; OECD, 2006). Despite the differences in attitude, method, and extension, a considerable body of research encourages active involvement in that parent involvement in children's education has a positive influence on students' development and learning (Christenson, Rounds, & Gorney, 1992; Christenson & Sheridan, 2001; Epstein, 1991; Lee, 2001; Miedel & Reynolds, 1999). As a result, national educational policies are designed to enhance parent-teacher partnership. For example, in the case of the United States, parent involvement in education has been encouraged for a long time, to the extent that parent involvement is listed as one of the goals of national education (National Education Goals Panel,

1999). In the case of Korea, parents' educational zeal, which is called "*chima-baram*", is known to many researchers in other countries (Chang & Song, 2010; Yang & McMullen, 2003). The attitudes toward and direction of parent involvement in education in Korea should be reconceptualized systematically because parent involvement is often represented in terms of educational zeal and obsessive interest in early childhood education and exceptional education for gifted children. In particular, recent educational problems caused by school bullying or violence and private education (shadow education) should be improved through positive and proactive partnerships between parents and teachers. Parents should trust their teachers and play a critical role in building a healthy partnership during their children's early childhood and elementary school education; also, teachers should make every effort to encourage positive parent involvement. Teacher motivation and teaching beliefs are the major psychological factors that affect teachers' qualification to perform their roles professionally (Dowson & McInerney, 2003; Lee, 2009; Maxwell, McWilliam, Hemmer, Ault, & Schuster, 2001; Ramsey, 2000). These factors have an effect on perceptions of the parent-teacher partnership, which requires teachers' practical effort (Patrick, Hisley, & Kempler, 2000; Woodruff & O'Brien, 2005; Yang & Cho, 2006). However, there has been a lack of studies examining how Korean preservice teachers' attitudes toward and perceptions of the parent-teacher partnership are affected by what they learned in teacher education programs. Thus, the goal of this study was to examine the effect of motivation and teaching beliefs on the parent-teacher partnership among Korean early childhood preservice teachers and how teachers' formation of parent-teacher relationships is affected by changes in values. Although much existing research recognizes teachers' roles in the positive effects of the parent-teacher partnership and the formation of cooperative relationships, the effort is not sufficient to understand future teachers' perceptions of parent involvement and establish

positive relationships between parents and teachers. In addition, although there are many studies showing the positive effect of teacher motivation and teaching beliefs on performance, nevertheless it is not revealed how these factors affect the parent-teacher partnership.

The Present Study

This study examined preservice teachers' perceptions of the parent-teacher partnership according to teacher education program type, status in the program (grade), and the relationship between teacher motivation, teaching beliefs, and parent-teacher partnership, as perceived by preservice teachers. Also, it examined how the interaction between teacher motivation and teaching beliefs affects parent-teacher partnership and how to foster preservice teachers' perception of this partnership. Specific aims were to investigate: (1) whether preservice teachers' perceptions of the parent-teacher partnership differ by program location, teacher education program type, and preservice teachers' status (grade) in their program; (2) to what extent teacher motivation and teaching beliefs impact preservice teachers' perceptions of the parent-teacher partnership; (3) to what extent the interaction effect between motivation and constructivist teaching beliefs influences the predictability of both on the parent-teacher partnership among early childhood preservice teachers.

This study shows the results of the research on the basis of these research questions and discusses implications of the results for teacher education.

Literature Review

Parent-Teacher Partnership

Teachers' perceptions of the parent-teacher partnership and their general perspectives on

education are connected (Epstein, 1991; Lee, 2001). Positive and active behaviors and teaching strategies in relation to their teaching practices are directly and indirectly influenced by intrinsic teacher motivation (Yang & Cho, 2006). Also, constructivist teaching beliefs encourage positive communication and cooperation between parents and teachers, and teaching methods based on constructivism have an impact upon intrinsic motivation, teachers' role, and students' learning as well as students' sociality and academic performance (Patrick, Hisley, & Kempler, 2000; Yang & Cho, 2006).

Hujala, Turjab, Gasparc, Veissond, and Waniganayake (2009) indicated 'shared responsibilities in education', 'parent involvement', 'family-centered professionalism', and 'parenting competence' as important factors in parent-teacher partnership formation. Considering their comprehensive definition, this study defines that the "parent-teacher partnership is complementary cooperation between parents and teachers on students' overall learning, including field experience, school management, studying at home, and tutoring". While many studies used two terms of parent involvement and parent-teacher partnership without differentiation (e.g., Cooper, Chavira, & Dolores, 2005; Epstein, 1992; Hein, 2003; Knopf & Swick, 2007), this study distinguishes 'parent-teacher partnership' from 'parent involvement', which is one of the sub-factors. The meaning of parent involvement is restricted to one subordinate area of complementary cooperation between parents and teachers in this study.

Teacher Motivation and Parent-Teacher Partnership

Teacher motivation is an important factor influencing teachers' sense of values and successful work performance (Malmberg, 2006; Roth, Assor, Kanat-Maymon, & Kaplan, 2007). According to many researchers, autonomous motivation is an important psychological variable affecting teachers' effective performance in their roles through enhancing preservice teachers' partnerships with parents (Klassen, Tze, Betts, & Gordon, 2011; Pelletier, Séguin-Lévesque, & Legault, 2002; Tschannen-Moran & Hoy, 2001).

Preservice teachers decide to be teachers for several reasons. Deci and Ryan (2000) divided teacher motivation into extrinsic motivation and intrinsic motivation. Extrinsic motivation is classified into external motivation, introjected motivation, and identified motivation. External motivation means to behave by extraneous impulsion, such as pecuniary reward or external pressure, and is regarded as the least autonomous form of motivation. Introjected motivation is behavior arising from internal pressure, such as a sense of duty or feelings of guilt or anxiety, and is more internalized than external motivation. However, introjected motivation is still not regarded as inducing the behavior associated with individual values, and preservice teachers who decide to teach due to introjected motivation have a low level of autonomous motivation in their jobs and responsibilities. Identified motivation, as the third type of extrinsic motivation, is behavior based on values of self-judgment and autonomous and determined philosophy, unlike the other two types of extrinsic motivation with their basis in external values and criteria. In sum, while external motivation and introjected motivation are controlled types of motivations, identified motivation and intrinsic motivation are autonomous.

Sheldon and Elliot (1998) argued that autonomous motivations, such as intrinsic motivation and identified motivation, are positively related to desirable behavior and performance, compared to controlled motivations. According to them, those who have autonomous motivation have a high level of accomplishment and positive relationships because they tend to fulfill their obligations and faithfully implement their tasks. The research on autonomous motivation and its effect, which was mainly conducted with inservice teachers as the participants, reported that autonomous teacher motivation has a positive influence on teaching methods and student achievement (Malmberg, 2006; Roth, *et al.*, 2007). Also, according to Malmberg's (2006) study focusing on preservice teachers, those who with high intrinsic teacher motivation have a high level of goal-orientation, compared to preservice teachers with high extrinsic teacher motivation. In other words, preservice teachers with high autonomous teacher motivation show more adaptive teaching strategies and effective teaching performance than other groups of preservice teachers (Malmberg, 2006; Roth, *et al.*, 2007).

Intrinsic motivation plays a key role in leading students to take an interest in learning by improving teachers' performance in their role and related work (Reeve, Bolt, & Cai, 1999; Wild, Enzle, Nix, & Deci, 1997). Therefore, we endorse the view that preservice teachers with intrinsic motivation better understand the various positions in regard to learning, create an effective atmosphere for learning, and induce parent involvement, thus accomplishing their job. In other words, we assume that the more intrinsic motivation preservice teachers possess, the higher the level of parent-teacher partnership they present.

Teaching Beliefs, Teacher Education Programs, and the Parent-Teacher Partnership

The second psychological factor that has an influence on preservice teachers' partnerships with parents is teaching beliefs. The constructivist perspective on education and development has gained prominence in early childhood education since 1987 (Bredekamp & Copple, 1997; Copple & Bredekamp, 2009). Since then, constructivist teaching beliefs have often been contrasted to traditional teaching beliefs.

Constructivist teaching beliefs are well presented in the position statements of the National Association for the Education of Young Children (NAEYC), where it is better known as Developmentally Appropriate Practice (DAP). Since the first DAP book was released, its factors of culture and play in education have been emphasized through reforms, and the third DAP reform is now used as an evaluation standard for American preschool and early childhood education programs. The educational foundation of DAP is also regarded as the educational and philosophical basis of teacher education. In Korea, NAEYC's DAP was introduced in the early 1990s and has since become a prominent instructional resource for the education of two to four-year-old children, and is currently encouraged in the field of two to eight-year-old education as well. On the contrary, several researchers, including Cannella (2002), have warned that a uniformed and standardized approach is dangerous without consideration of social and cultural characteristics of individuals or of social relationships, with a skeptical view about the actualization in classrooms of DAP's child-centered educational idea (Ayers, 2002; Cannella, 2002; Grieshaber, 2008; MacNaughton, 2001).

Traditional teaching beliefs and constructivist teaching beliefs are contrasted in terms of the teacher's role, the position of students, and problem-solving strategies. While traditional teaching beliefs emphasize the authoritative role of a teacher, and focus on training, education by topic, and moral education, constructivist teaching beliefs stress the teacher's role as a helper, and the process and autonomy of learning (Bryant, Clifford, & Peisner, 1991). In addition, while traditional teaching beliefs follow a top-down way of instruction in a teacher-centered methodology, constructivist teaching beliefs choose a bottom-up approach that considers student-centered teaching methods and classroom cultural background. Early childhood education, which places great importance on child-centered education, focuses on play (cultural product) and encourages constructivist teaching beliefs (DeVries, 2002). Also, the constructivist approach is not confined to preschool, but is encouraged in the field of education up to the 3rd grade of elementary school, because it attaches importance to the family-cultural environment and parent involvement as well as students' learning and academic achievement (McMullen, 1999). Actually, many studies have reported on the positive aspects of constructivist teaching and according to these, the constructivist approach is very effective for the development and learning not just of 2 to 8 year-old students, but also those from 3rd grade up to middle school (Guthrie, Wigfield, Barbosa, Perencevich, Taboada, Davis, Scaffiddi, & Tonks, 2004; Hmelo-Silver, Duncan, & Chinn, 2007; Kim, 2005).

Among the studies that examined the effects of constructivist teaching beliefs, Hmelo-Silver, Duncan, and Chinn (2007) asserted that teachers with constructivist teaching beliefs, which stress inquiry-based learning and the problem-centered approach, led more effective learning and enhanced academic achievement than the opposite group of teachers. According to this study, the inquiry-based model contributed to reducing the achievement gap, and was an efficient method for African American students with low academic achievement. In addition, in research on the improvement of reading skills of 3rd-grade students, constructivist teaching beliefs had a positive effect on cognitive strategies and learning motivation and were more effective than traditional teaching beliefs. These studies reported that the constructivist method is highly influential on the development and learning of students in 3rd grade and up to

the middle school level, not just two to eight-year-old students (Guthrie, *et al.*, 2004; Kim, 2005). The result of positive development and academic achievement is probably an affirmative by-product of school-family cooperation. Actually, much research has shown that frequent communication and cooperation between parents and teachers have a positive influence on sociality and general academic achievement (e.g., Jeynes, 2007; Lee & Bowen, 2006). The NAEYC guidelines, which encourage constructivist teaching beliefs, also emphasize the importance of the parent-teacher partnership, and many studies present the parent-teacher partnership as one of the essential topics of early childhood education, proposing that teachers with constructivist teaching beliefs have more parents participating in students' learning activities than other teachers (Ebbeck & Waniganayake, 2003; Woodruff & O'Brien, 2005). In other words, constructivist teaching beliefs are regarded as an important factor of the parent-teacher partnership.

Preservice teachers obtain several theoretical advantages and approaches to constructivist teaching beliefs through teacher education programs. In addition, they experience changes of educational perspectives and teaching beliefs through learning various teaching methods and educational philosophies. Therefore, it is necessary to examine preservice teachers' educational philosophies and perspectives according to their teacher education program. This study predicts that preservice teachers' perceptions of the parent-teacher partnership will differ by educational program and academic year and that teacher motivation and teaching beliefs also will mediate in preservice teachers' perceptions of the parent-teacher partnership.

To summarize the literature review, the constructivist teaching model, which emphasizes the teacher's role as a helper, student-centered education, and parent involvement as well as students' learning and academic achievement, is a critical factor that influences preservice teachers' perceptions of the parent-teacher partnership.

Method

Sample

The participants for this study included 265 preservice teachers enrolled in two different types of childhood teacher education programs (early childhood education (n =115) and elementary education (n = 150) at four-year universities in Seoul, Kyunggi, and Busan in South Korea. This study conducted a convenience sampling method to collect data during the fall semester of 2011 and spring semester of 2012.

Among the subjects, 17.9% were freshmen; 18.3% were sophomores; 21.4% were juniors; and 42.4% were seniors in either early childhood education or elementary education in teacher education program. The average age of the participants was 21.43 years ($SD = 2.17$, range = 18-49 years); 88.7% female, 9.8% male, and 1.5 % of undefined sex were included.

Procedure

To collect data, the potential participants were solicited to the survey via preservice teacher packets, which included an informational letter about the study, a consent form, a flier for the classroom visit, and the questionnaires. For the in-class survey, we contacted the instructors first and with their permissions, the research team visited and administered the survey using paper questionnaires after we explained our research and procedures.

Initially, we distributed approximately 280 survey questionnaires to preservice teachers in early childhood and elementary education programs through arrangements with the instructors. Subject access, selection, and recruitment were facilitated mainly through collaboration with class instructors in the three teacher education programs. As a result, a total of 265 questionnaires were collected from the preservice teachers and included in analyses. It took approximately 15-20 minutes for the preservice teachers to complete the questionnaires.

Instrumentations

Preservice teachers' perceptions of the parent-teacher partnership. To gauge preservice teachers' views, we used Hujala, Turjab, Gasparc, Veissond, and Waniganayakee (2009)'s survey questionnaire on the parent-teacher partnership. For the purpose of this study, we used four constructs, which included three constructs with 10 items each from the original survey questionnaires and one new additional construct developed for this study. These include (1) parent involvement, (2) family-centered professionalism, (3) parenting competence, and (4) perspectives on extra-curricular activities. The Cronbach's alpha values for these four subscales ranged from .61 through .76. Total parent-teacher partnership was .82, showing a high internal consistency among items (see Table 1). All items were rated by a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). We used the mean scores in subsequent analyses.

To test construct validity of the measure used, we performed a confirmatory factor analysis using LISREL 8.8. The model fit indices indicated a good fit to the model ($X^2= 132.66$ $df= 63$, $p < .001$, CFI = .96, NFI = .94, GFI = .93, RMSEA = .065, SRMR = .060) and validity for the sample (Kaplan, 2009; Kline, 2005).

[Insert Table 1 about here]

Motivation to Teach. In this study we used the modified version of the Work Tasks Motivation Scale for Teachers (Fernet, Senécal, Guay, Marsh, & Dowson, 2008) (WTMST) that Kim and Cho (2014) used for preservice teachers. The modified version for preservice teachers' motivation to teach were to assess the extent to which preservice teachers have autonomous motivation, ranging from intrinsic motivation, to identified motivation, introjected motivation, and external motivation.

Some sample question items are as follows: intrinsic motivation (e.g., “I find teaching interesting to do), extrinsic motivation (e.g., “I feel like I am obligated to be a teacher”), identified motivation (e.g., “Teaching is important to me”), and introjected motivation (“If I don’t become a teacher, I will feel bad”), and amotivation (e.g., “I don’t know why I decided to be a teacher”). Each construct comprised three items and all items were rated by a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha value for amotivation was .44. The Cronbach’s alpha values for the other four constructs ranged from .61 to .89. We used the mean scores in subsequent analyses.

Constructivist Beliefs. We used the Teacher Beliefs Survey (TBS) developed by Woolley, Benjamin and Woolley (2004). TBS contains two constructs: constructivist teaching beliefs and traditional teaching beliefs. To gauge the degree of preservice teachers’ constructivist teaching beliefs, we only used 12 items in the subscale of teaching beliefs. Sample items for this subscale are as follows: “I believe that expanding students’ ideas is an effective way to build my curriculum” (constructivist teaching beliefs), and “I base student grades primarily on homework, quizzes, and tests” (traditional teaching beliefs). All items were rated by a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach’s alpha value for constructivist teaching beliefs was .85 ($M = 5.04$, $SD = .77$). We used the mean scores in subsequent analyses.

Data Analysis

Using the SPSS.18 program, preliminary analyses were performed to check the internal consistency for each measurement, the normal distributions of variables, and violation of

multicollinearity. We performed a confirmatory factor analysis to evaluate the construct validity of the parent-teacher partnership measure using LIREL8.8.

We conducted *t*-test, ANOVA, Pearson's correlation, and hierarchical multiple regression to examine our research questions. Specifically, a *t*-test and univariate analyses of variance were performed to examine group differences in preservice teachers' perceptions of the parent-teacher partnership. To examine relations among key variables, Pearson's correlation analysis was performed. We also performed several regression analyses to estimate *Z* scores and performed a simple slot test to examine the interaction effects of motivation and teaching beliefs on the parent-teacher partnership. Lastly, hierarchical multiple regression analyses were performed to examine the predictive utility of teacher motivation and constructivist teaching beliefs, as well as the interaction effect between them on preservice teachers' perceptions of the parent-teacher partnership. Hierarchical multiple regression is useful to disclose the additional variance explained by independent variables when new sets of variables are entered (Leech, Barrett, & Morgan, 2008). The analysis model of this study is in Figure 1.

[Insert Figure 1 about here]

The equation of the three-step multiple regression analysis model above is as the following:

$$\text{Step 1: } Y = \beta_0 + \beta_1x_1 + \varepsilon$$

$$\text{Step 2: } Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \varepsilon$$

$$\text{Step 3: } Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon$$

To examine the interaction effects between motivation and constructivist teaching beliefs, we computed the interaction terms using *z* scores prior to the final analysis. We then added the interaction terms into the regression model to predict the overall degree of preservice teachers'

perceptions of the parent-teacher partnership. Using simple slope tests, we examined the nature of the interaction effects between motivation and constructivist teaching beliefs on preservice teachers' perspectives on the parent-teacher partnership.

Results

Descriptive Statistics

On a 7-point Likert scale, preservice teachers' perceptions of the parent-teacher partnership, constructivist teaching beliefs, and overall motivation were rated above the midpoint of 3.5 ($M = 4.81$, $SD = .69$; $M = 5.04$, $SD = .77$; $M = 3.5$, $SD = .76$, respectively). Among the four sub-constructs of teacher motivation, identified motivation ($M = 3.74$, $SD = 1.20$) showed the highest mean score ($M = 4.64$, $SD = 1.41$), followed by intrinsic motivation ($M = 4.64$, $SD = 1.42$), extrinsic motivation ($M = 3.65$, $SD = 1.07$), and introjected motivation ($M = 2.62$, $SD = 1.18$). The average total motivation ($M=3.45$, $SD=.76$) was rated 3.45 ($\alpha = .744$).

Group Differences in the Preservice Teachers' Perceptions of the Parent-teacher Partnership by Program and Program Status

First, we looked at mean differences by program (early childhood education vs. elementary education). The t -test results revealed that there were significant differences in "parent involvement" and "perspectives on extra-curricular activities". More specifically, early childhood preservice teachers ($M = 4.54$, $SD = .91$) valued parent involvement more than their counterparts in elementary education programs ($M = 4.20$, $SD = 1.08$). In group differences in perspectives on extra-curricular activities, like in parent involvement, early childhood preservice

teachers ($M = 4.30$, $SD = .88$) valued parental support in extra-curricular involvement more than their counterparts in elementary education programs ($M = 4.07$, $SD = .88$).

Second, we examined the group mean difference by program status (1st year, 2nd year, 3rd year, and 4th year in the program). The results of ANOVAs showed that there were significant group mean differences in preservice teachers' perceptions of the parent-teacher partnership ($F = 6.63$, $p < .001$). Specifically for the constructs, the results of ANOVAs showed that there were significant group mean differences in "parent involvement" ($F = 5.78$, $p < .001$), "family-centered professionalism" ($F = 3.48$, $p < .05$), and "parenting competence" ($F = 7.49$, $P < .001$). On the other hand, there were no significant group mean differences in "perspectives on extra-curricular activities" ($F = .89$, $P > .05$). Post hoc tests were performed to see more detailed information about the differences among groups. The results of Scheffe's tests showed that differences in the preservice teachers' perceptions of the parent-teacher partnership were attributed to differences between (1) freshmen and seniors and (2) sophomores and seniors. The additional results of Scheffe's tests for the subscales are available in Table 2.

[Insert Table 2 about here]

According to the ANOVAs, the higher level of perception of the importance of parent-teacher partnership among senior preservice teachers was attributed to the significance in group differences in overall parent-teacher perspectives.

Correlations among Motivation, Constructivist Teaching Beliefs, and Parent-teacher Partnership

The results of Pearson's correlation analysis showed that the preservice teachers' perceptions of the parent-teacher partnership were positively correlated with constructivist

teaching beliefs ($r = .55, p < .01$) (see Table 3). In turn, the more positive the overall constructivist teaching beliefs, the greater the perception that preservice teachers had about the importance of the parent-teacher partnership. On the other hand, preservice teachers' perception of the parent-teacher partnership showed no correlation with their overall motivation. However, when we looked at the correlations between the parent-teacher partnership and subscales in motivation, the results showed that the preservice teachers' perception of the parent-teacher partnership was positively related with intrinsic motivation, identified motivation, and extrinsic motivation. Among them, identified motivation was more significantly correlated with the preservice teachers' perceptions of the parent-teacher partnership than with the other two motivations.

[Insert Table 3 about here]

Predictor of Preservice Teachers' Perception of Parent-Teacher Partnership

We conducted a hierarchical regression analysis to examine how preservice teachers' constructivist teaching beliefs and motivation for teaching (e.g., intrinsic and extrinsic motivation) predict their perception of the parent-teacher partnership. To reduce multicollinearity problems, predictor variables were standardized (Aiken & West, 1991), and then interaction terms were created by multiplying the standardized predictor variables.

Preservice teachers' motivation (i.e., intrinsic and extrinsic motivation) was entered as a covariate in the first step of the regression model and preservice teachers' constructivist teaching beliefs were entered as the main effect predictor variable in the second step of the model, followed by interaction terms between preservice teachers' motivations (i.e., intrinsic and extrinsic motivation) in the third step.

Before estimating an interaction term, we standardized the two predictor variables and multiplied them (Aiken & West, 1991). First, we examined the predictability of the sub-constructs in motivation on preservice teachers' perception of the parent-teacher partnership and then the interaction effect between constructivist teaching beliefs and intrinsic motivation on preservice teachers' perception of the parent-teacher partnership.

The overall regression model was significant ($F = 24.09, p < .001, R^2 = 32.3$), with a significant increase in R^2 in each step. The results showed that preservice teachers' constructivist teaching beliefs ($\beta = .483, t = 7.59, p < .001$) and traditional teaching beliefs ($\beta = .124, t = 1.98, p < .05$) were positively related to their perception of the parent-teacher partnership (see Table 4).

[Insert Table 4 about here]

As seen in Table 4, at step one, we entered two types of motivations (intrinsic motivation and extrinsic motivation). Preservice teachers' motivation explained 2.6% of variations in their perception of the parent-teacher partnership ($F = 3.36, p < .05$). Entry of constructivist teaching beliefs ($\beta = .48, t = 7.61, p < .001$) and traditional teaching beliefs ($\beta = .133, t = 2.13, p < .05$) to the model resulted in a significant increase in R^2 ($F = 29.77, p < .001, R^2 = 30.7$) by 31.9 % at the step 2.

At the final step, the model was further improved by 0.3% in R^2 when the interaction effects between constructivist teaching beliefs and motivation predictors (intrinsic motivation and extrinsic motivation) were added to the model. The interaction term (as predictor) between constructivist teaching beliefs (CB) and intrinsic motivation ($\beta = -.061, t = -1.117, p > .05$) was not statistically significant. Although the interaction effects were not statistically significant, we detected changes in the effects of main predictors (see Table 4)

In order to better understand the nature of the two-way interaction, we conducted simple slope tests and graphed regression lines at a low (1 *SD* above the mean) and a high (1 *SD* below the mean) level of preservice teachers' positive perception of the parent-teacher partnership (see Figure 2), following the guidelines proposed by Aiken and West (1991). As found in Figure 2, the simple slope tests revealed that standardized regression coefficients for preservice teachers' intrinsic motivation were different from zero for those who scored low on their constructivist teaching beliefs, while they were not different from zero for the preservice teachers who scored high on their constructivist teaching beliefs. The result suggested that while not significant, preservice teachers' constructivist teaching beliefs had an influence on their perception of the parent-teacher partnership when preservice teachers had a low level of constructivist teaching beliefs, with high level of intrinsic motivation leading to a higher level of parent-teacher partnership. Low intrinsic motivation resulted in a lower perception of parent-teacher partnership when it was accompanied by a low level of constructivist teaching beliefs. Although not included to the model, we checked the effects between constructivist teaching beliefs and extrinsic motivation. The results showed that, regardless of the levels of intrinsic and extrinsic motivation, the teachers' constructivist teaching beliefs seem to have positive interactional effects on the parent-teacher partnership.

[Insert Figure 2 about here]

Discussion

This study examined preservice teachers' perceptions of the parent-teacher partnership according to teacher education program type and years spent in the program (grade) and the relationship between teacher motivation, teaching beliefs, and the parent-teacher partnership, as perceived by preservice teachers. We also examined how the interaction between teacher

motivation and teaching beliefs affects the parent-teacher partnership and how to foster preservice teachers' perception of this partnership. As a result, preservice teachers' perceptions of the parent-teacher partnership were differentiated by their education program and program status, and the differences were various depending on sub-factors. Constructivist teaching beliefs were the most significant variable to predict preservice teachers' perceptions of the parent-teacher partnership, and intrinsic teacher motivation showed more meaningful predictive effect than extrinsic teacher motivation. Even though there were no statistically meaningful interaction effects between intrinsic motivation and constructivist teaching beliefs, the result of hierarchical regression equation showed that the predictive effects of the predictors were changed according to steps. Based on the results, we will discuss here effective teacher education and future research.

First, while the overall parent-teacher partnership was not differentiated by program type, parent involvement and perspectives on extra-curricular activities were differed by program type. Particularly, preservice teachers of early-childhood education participating in this study considered parent involvement and perspectives on extra-curricular activities more important than preservice teachers of elementary education did. The result that there was no significant difference between preservice teachers' perceptions of the parent-teacher partnership by program type is regarded as considerably positive. However, it should be substantiated by extensive study due to the complex structure of teacher education in early childhood (birth through age 8) in Korea. Korean early childhood teacher education comprises educating (1) teachers of students from birth through preschool, (2) teachers of preschool to kindergarten students, and (3) teachers of primary students (first graders to third graders). These three fields are governed by two different teaching certificate tracks and followed by different educational policies.

The result of differences by preservice teachers' status in the program showed that preservice teachers participating in this study gradually perceived the significance of the parent-teacher partnership in general as their teacher education programs proceeded. The mean of sophomores was slightly lower than that of freshmen but it did not affect the result, while

senior preservice teachers perceived the importance of the parent-teacher partnership more than freshmen did. This implies that as academic year goes up, preservice teachers can expand their knowledge and visualize theory through field experience and teaching practice because developmental theories based on constructivism and knowledge of educational theories learned from teacher education programs emphasize the importance of the parent-teacher partnership (Ebbeck & Waniganayake, 2003; Woodruff & O'Brien, 2005). It is conceivable that theoretical knowledge is meaningful when preservice teachers implement theories into practice through their practicum and student teaching. Therefore, opportunities of developing cooperative plans between parents and teachers and effective programs to improve students' learning through relationships with parents should be provided through courses and practice during teacher education program. It is important to provide preservice teachers with ample opportunities to learn more about the implementation of theories into practices through well-trained supervisors and cooperating teachers or by working with veteran professional teachers who can teach them how to construct positive partnerships with parents (Lee, Choi, & Jang, 2009). That is, teacher education programs should stress the importance of enhancing partnerships among stakeholders even during teacher education, and give preservice teachers chances to effectively learn through teaching practice and seminars associated with local society (Kim, & Kim, 2004; Jung, Lee, & Nho, 2004).

Second, the result of correlation analysis showed that constructivist teaching beliefs had a higher positive correlation than teacher motivation. As we mentioned earlier, it may be an effect of constructivism that actively encourages parent-teacher partnerships and parent involvement in the education of children. It was the absence (or lack) of motivation that was the only variable of negative correlation with the parent-teacher partnership. Thus, teacher education programs should endow preservice teachers with internal and external motivation in order for them to have a calling for teaching and provide quality education to improve the parent-teacher partnership.

Third, as the result of hierarchical multiple regression in order to predict preservice teachers' perception of the parent-teacher partnership shows, the effect of constructivist teaching

beliefs was the most significant, and in spite of no statistical significance, there was a mediation effect of constructivist teaching beliefs between teacher motivation and interaction effect. This result is consistent with the previous research that preservice teachers' motivation is not a stationary psychological state but changes due to time and specific occasion (Deci & Ryan, 2000; Sinclair, 2008). Thus, by developing various educational theories and practices including constructivist teaching beliefs and programs to intensify autonomous teacher motivation, preservice teachers should have opportunity to feel their conviction and passion for teaching and have positive parent-teacher relationships. In addition, the interaction effect between teacher motivation and constructivist teaching beliefs showed that among preservice teachers with a low degree of constructivist teaching belief, those who had low intrinsic motivation did not consider the parent-teacher partnership seriously and those who had high intrinsic motivation attached greater importance to the parent-teacher partnership, while there was no interaction effect with intrinsic motivation in prediction of the parent-teacher partnership among preservice teachers with a high degree of constructivist teaching belief. The interaction effect with extrinsic motivation was the same. These results are considerably encouraging although they were not statistically significant. Most preservice teachers learn about constructivism and its educational insights when they study in a teacher education program. Although preservice teachers' motivation to be a teacher can differ by person (Dowson & McInerney, 2003; Ramsey, 2000), the results imply that their perceptions of the parent-teacher partnership can be changed through the effect of theoretical knowledge (constructivist theory and practice) learned in teacher education programs. Nevertheless, the generalization of the mediation role of constructivist teaching beliefs seems to be possible only after further studies with the participation of many more preservice teachers.

Based upon these results, suggestions for future studies and teacher education programs are as follows. First, future research studies should examine preservice teachers' perception of the parent-teacher partnership by considering the influences of socio-cultural factors. These studies should provide a direction for all three teacher education certificate programs in Korea by

enabling equal benefits and opportunities for future teachers and enhancing the quality of teachers through tailoring effective and sound teacher education policies which fit local, social, and cultural needs. In order to do so, future research studies should utilize more advanced social research methods and data collection procedures including all stakeholders in early childhood education. These studies should also be supported so that their results can formulate a practical direction for early childhood teacher education policy in Korea.

Second, subsequent research should provide preservice teachers with extensive opportunities to work with parents, teachers, and school staff, and this can be done through action research and analyzing preservice teachers in preschool, early childhood, and elementary education from birth through age 8. These efforts will provide teaching practice opportunities for preservice teachers to recognize the significance of the parent-teacher partnership.

Third, some people actively learn new knowledge and internalize it, and others do not. The result of this study showed that the gap of meaningful educational perceptions could be narrowed through teacher education program, regardless of teacher motivation. Nevertheless, there may be a wide level of differences in teacher motivations among the three different levels of preservice teachers in early childhood certificate programs. By comparing with other countries' teacher education programs per each level (i.e., birth through age 5, pre-K, pre-age 8, etc.), it can be possible to enhance the extant teacher education programs for different ages in Korea. Thus, subsequent research should conduct both in-depth analysis of classified teacher motivation among Korean early childhood preservice teachers and cross-cultural studies pertaining to global teacher motivations among early childhood preservice teachers and their perception of parent-teacher partnerships.

Lastly, future studies should be a multilateral approach to suggest conditions and direction for the parent-teacher partnership, utilizing both qualitative and quantitative methods. On the basis of the result of this approach, teacher education program should be both a field of education for preservice teachers to participate in, through which they effectively internalize constructivist teaching beliefs, and an opportunity for them to learn their role as teachers, playing

a proactive role in the parent-teacher partnership, through systematic programs and professional field experiences.

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Table 1

Parent-Teacher Partnership Constructs, Items, and Internal Consistency

Construct (a)	14 parent-teacher partnership constructs (a = .82)
Parent involvement (a = .75)	<ul style="list-style-type: none"> • Parents should collaborate with teachers and staff for class activities. • Parents should be active in school events. • Parents need to take parts in decision-making on school policy and administration.
Family-centered professionalism (a = .76)	<ul style="list-style-type: none"> • Teachers need to discuss with parent to promote child development and learning. • Teachers should enhance background knowledge and develop skills to support culturally diverse families for their child's learning and development. • One of the most important early childhood teachers' responsibilities was to provide parents with necessary advice and guidelines regarding child learning and development. • Teachers need to invite parents to be actively engaged in their children's learning process through participating in classroom learning activities.
Parenting competence (a = .71)	<ul style="list-style-type: none"> • It is important that parents manage their upbringing tasks well. • It is important that parents invest energy in the welfare of their family. • It is important that parents show their interests in their child's life in the school environment.
Perspectives on extra-curricular activities (a = .61)	<ul style="list-style-type: none"> • Parents should encourage their children to participate in after school programs. • Extra-curricular activities including tutoring is helpful as supplemental educational resource to make teaching and learning effective. • Teachers should implement EBS programs into classroom teaching and guide students to use EBS programs to help them complete homework at home as well. • Parents need to provide their children with necessary learning materials and appropriate environment to maximize EBS programs.

Table 2

Group Differences in the Preservice Teachers' Perceptions of Parent-teacher Partnership by Program and Program Status

Factors	Program	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	
Parent involvement	ECE	114	4.54	.91	2.73**	
	EL	148	4.20	1.08		
Family-centered professionalism	ECE	114	5.38	.94	1.18	
	EL	147	5.23	.93		
Parenting competence	ECE	114	5.40	1.01	-1.49	
	EL	147	5.58	.95		
Perspectives on extra-curricular activities	ECE	114	4.30	.88	2.09*	
	EL	148	4.07	.88		
Parent-teacher partnership	ECE	114	4.90	.70	1.74	
	EL	148	4.73	.66		

Factors	Status	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	Ad hoc test
Parent involvement	Freshmen	47	3.96	1.00	5.78***	<i>a</i> < <i>d</i> *
	Sophomore	46	4.04	.94		<i>b</i> < <i>d</i> *
	Junior	55	4.50	1.06		
	Senior	111	4.55	.99		
Family-centered professionalism	Freshmen	47	5.15	.83	3.48*	<i>b</i> < <i>d</i> *
	Sophomore	46	5.00	1.02		
	Junior	55	5.32	1.06		
	Senior	111	5.47	.91		
Parenting competence	Freshmen	46	5.28	.91	7.49***	<i>a</i> < <i>d</i> *
	Sophomore	46	5.06	1.03		<i>b</i> < <i>d</i> ***
	Junior	55	5.52	1.06		
	Senior	111	5.78	.82		
Perspectives on extra-curricular activities	Freshmen	46	4.03	.84	.89	--
	Sophomore	46	4.10	.68		
	Junior	55	4.30	1.05		
	Senior	111	4.16	.86		
Parent-teacher partnership	Freshmen	46	4.58	.64	6.63***	<i>a</i> < <i>d</i> *
	Sophomore	46	4.55	.69		<i>b</i> < <i>d</i> **
	Junior	55	4.90	.78		
	Senior	111	4.97	.60		

Note. Post hoc test = Scheffe test

****p* < .001, ***p* < .01, **p* < .05.

Table 3

Correlations Among Motivation, Constructivist Teaching Beliefs, and Parent-Teacher Partnership

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Intrinsic motivation	1	.63**	.55**	.23**	-.34**	.55**	.30**	.08	.07	.19**	.20**	-.01	.14*
2. Identified motivation		1	.56**	.58**	-.23**	.75**	.29**	.25**	.07	.13*	.12*	.18**	.17**
3. Extrinsic motivation			1	.55**	.01	.81**	.17**	.21**	.06	.10	.06	.09	.12*
4. Introjected motivation				1	.05	.76**	.04	.16*	.02	-.10	-.08	.13*	.00
5. Amotivation					1	.26**	-.14*	.12*	.08	-.18**	-.20**	.08*	-.13*
6. Teacher motivation						1	.19**	.29**	.53**	.02	.02	.17**	.08
7. Constructivist Beliefs							1	.52**	.49**	.53**	.54**	.26**	.55**
8. Traditional Beliefs								1	.15*	.27**	.19*	.35**	.47**
9. Parent Involvement									1	.49**	.46**	.21**	.73**
10. Family-centered professionalism										1	.65**	.26**	.84**
11. Parenting competence											1	.15*	.76**
12. Perspectives on extra-curricular activities												1	.59*
13. Parent-teacher partnership													1
<i>N</i>	265	265	265	265	265	265	261	261	262	261	261	261	262
<i>M</i>	4.64	3.74	3.65	2.62	2.70	3.45	5.04	4.05	4.35	5.30	5.50	4.17	4.81
<i>SD</i>	1.41	1.20	1.07	1.18	1.38	.76	.77	.61	1.02	.92	.98	.89	.69

. ** $p < .01$, * $p < .05$. (2-tailed).

Table 4

Predictability of Motivation and Constructivist Teaching Beliefs on Preservice Teachers'

Perception of Parent-Teacher Partnership

Step/ DV	β	t	VIF	F	$R^2(\Delta)$
1				3.36*	.026
Intrinsic motivation (IM)	.133	1.80	1.434		
Extrinsic motivation (EM)	.042	.57	1.434		
2				29.77***	.319
Intrinsic motivation	.005	.005	1.519		(.294)
Extrinsic motivation	-.002	-.029	1.434		
Constructivist teaching beliefs (CT)	.484	7.61***	1.094		
Traditional teaching beliefs (TT)	.133	2.13*			
3				24.09***	.323
Intrinsic motivation	.020	.31	1.650		(.003)
Extrinsic motivation	.001	.004	1.518		
Constructivist teaching beliefs	.483	7.59***	1.523		
Traditional teaching Beliefs	.124	1.98*	1.471		
IM \times CT	-.059	-1.12	1.276		

Note. VIF = variance inflation factor; $R^2(\Delta)$ = changes in R^2

*** $p < .001$, ** $p < .01$, * $p < .05$.

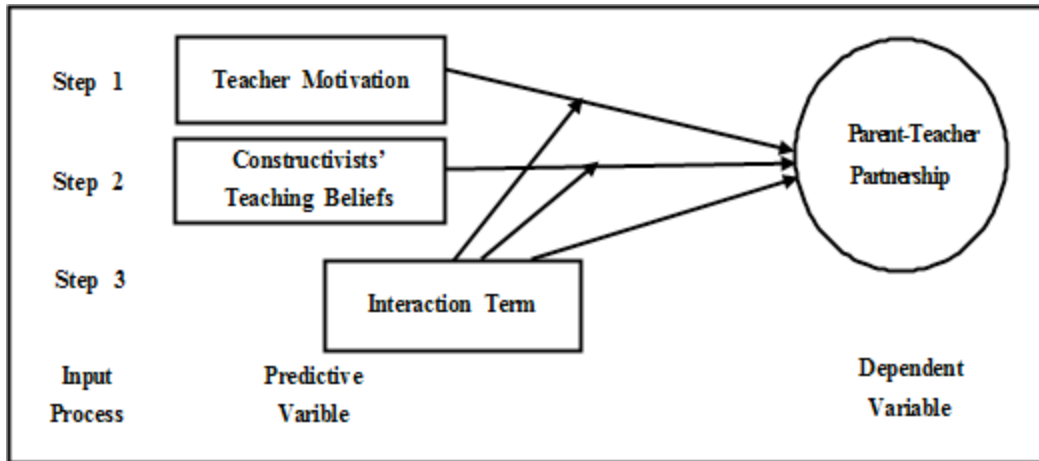


Figure 1. The Predictive Analysis Model of Parent-Teacher Partnership Perspective

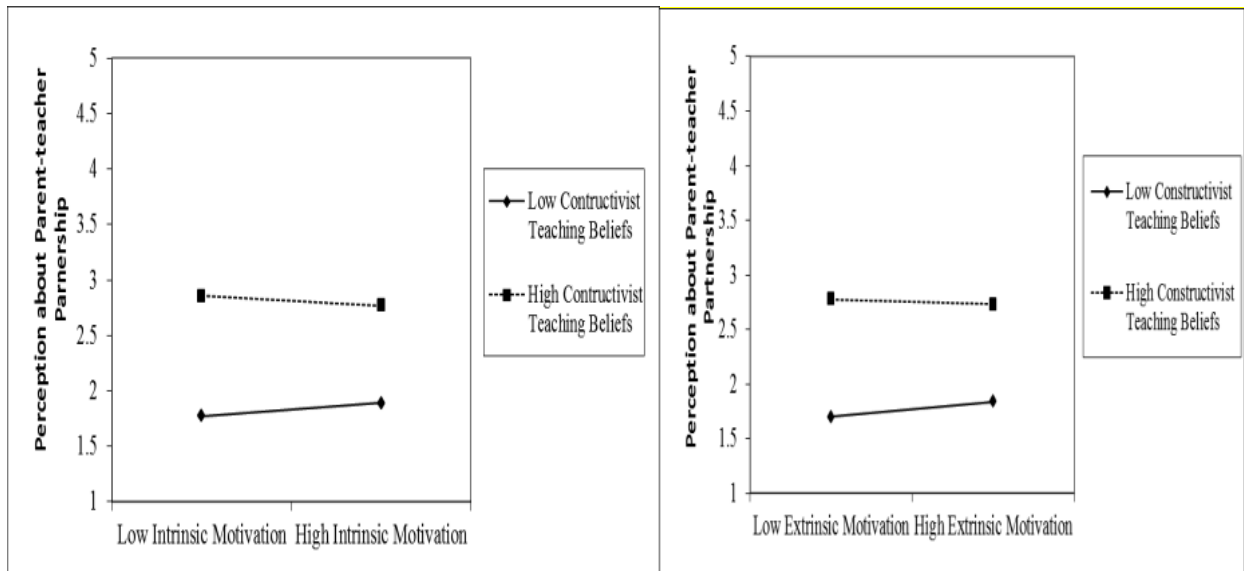


Figure 2. Interaction Effect Between Motivation and Constructivist Teaching Beliefs on Preservice Teachers' Parent-Teacher Partnership