

*Full Length Research Paper*

# Attitudes of Preservice Teachers towards Family-Centered Practices in Early Intervention: An Implication for Teacher Education

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Accepted 19 June, 2015

Family-centered practices are the key to successful early intervention (EI) service delivery. University faculty members should help preservice teachers develop awareness and initial understanding of family-centered practices through course content and practicum. The current study focuses on preservice teachers' attitudes towards family-centered practices in EI service delivery. Eighty-seven preservice teachers participated in the study and wrote pre- and post-essays about their beliefs of family-centered service delivery before and after they took the Introduction to Early Intervention course. Pre- and post study was compared using the inductive content analysis and grounded theory and the effectiveness of the course content and instruction in influencing preservice teachers' understanding and belief about family-centered practices were discussed. Results show that after taking the course the participating preservice teachers have a deeper understanding of the importance of family-centered practices in EI, the roles families played in service delivery as well as the collaboration families set up with professionals in the transition process. In addition, they also have a better understanding of the special challenges families and professionals may encounter in delivering family-centered practices.

**Keywords:** Family-centered practices, early intervention, preservice teachers' attitudes, teacher education

## INTRODUCTION

According to special education law, the Individuals with Disabilities Education Act (IDEA 86', 97', 04'), early intervention (EI) services and accommodations should be provided to infants and toddlers with established disabilities, who are at higher risk of developing a delay, or who are with developmental delays, as well as their families. Families should be involved in the whole process of EI service delivery ranging from referral to program evaluation, and family members are equal partners as professionals in decision making and planning (Bruder, 2010; Pang, 2008; Mandell and Murray, 2005; Hammond, 1999). The interaction between families and service provider, therefore, is critically important in implementing family-centered practices in early

intervention service delivery. The pre-service teachers majoring in special education/early childhood special education are future generation of special education teachers and service providers, so their attitudes towards family-centered practices determines how they are going to interact with families when they are out working in the field. The current study aims to study preservice teachers' attitudes towards family-centered service delivery and the result will contribute to the teacher education.

## Literature Review

The studies on special education preservice teachers about family-centered practices can be summarized into two groups; the preservice teachers' attitudes or beliefs about family involvement in EI service delivery (group 1) and personnel preparation for family involvement (group

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2). According to Marvin and Rupiper (2004), factors affecting preservice teachers' attitudes towards family involvement include "respecting diversity, Individualized Family Service Plan (IFSP) skills, knowledge of families, communication skills, and knowledge of teamwork" (p.391). The Early Childhood Special Education (ECSE) faculty participants reported they spent less attention to the knowledge of teamwork or communication skills because they regard this to be less important than the respecting diversity, IFSP skills and knowledge of families when working with families (Marvin and Rupiper). This is problematic because the preservice teachers' knowledge of the team or communication skills is critically important in providing family-centered services. If these preservice teachers lack of the ability to "appropriately use culturally sensitive communication skills, effective interviewing techniques, active listening and problem-solving processes" when interacting with families, how can they engage parents as active team members in EI service delivery (Marvin and Rupiper, 2004). The authors believe it is the university faculty members' responsibility to consider the appropriate methods for teaching the content in early intervention courses.

Both quantity and variety of interactions between preservice teachers and families contribute to preservice teachers' understanding and implementation of family-centered practices in EI service delivery (Mandell and Murray, 2005). In order to develop competencies of collaborating with families preservice teachers not only need multiple interactions with families, but they also need to get involved in a variety of experiences such as attending seminars about fathers' roles in caring for their young children with special needs, which continues to influence the preservice teachers' job performance (Mandell and Murray, 2005). Some preservice teachers admitted that these interaction experiences with families positively impact their attitude toward families after they enter into the career (Mandell and Murray, 2005).

Baum and McMurray-Schwartz's (2004) discussed how to relieve preservice teachers from concerns and anxieties of conflicts and criticism they will encounter when interacting with families. Sufficient opportunities should be provided to preservice teachers to experience the parent perspectives; "activities such as parent interviews, attending parent-oriented meetings (e.g., parent advisory boards and support groups) and observing parent-teacher conferences may further preservice teachers' understanding" of the struggles that are inherent in parenting, the struggles individual families face, as well as families' important role in their children's early education (Baum and McMurray-Schwartz, 2004). Moreover, preservice teachers need to "receive instruction and have opportunities to practice their skills in the area of conflict resolution and effective communication. Allow students to role-play a variety of

possible situations in which they need to use appropriate communication and/or conflict resolution strategies" (Baum and McMurray-Schwartz, 2004). It is also recommended that professional training programs should alter or enhance field experience to fully address the issue of parent involvement. Allow preservice teachers to interact with parents on a more direct level, perhaps by requiring preservice teachers to initiate contact with parents, write newsletters or other forms of correspondence, plan and implement a family activity, develop a family notebook, and/or participate in parent-teacher conferences. In field experience or student teaching, the cooperating teachers also can play a role in influencing preservice teachers' attitudes towards family involvement by offering some basic suggestions and clarifying expectations and allowing for more direct opportunities to be involved with families across the curriculum. (Baum and McMurray-Schwartz, 2004)

University faculty members at special educator training programs also can adopt narratives from non-traditional families about their personal painful school experiences and embed that into course curriculum, thus enabling preservice teachers develop awareness and initial understanding of family diversity; this helps preservice teachers "put a human face on the real consequences of teacher ignorance or indifference toward family diversity" (Turner-Vorbeck, 2005). Turner-Vorbeck suggested that preservice teachers' supervisors should discover preservice teachers' opinions and biases on family diversity through group sharing and whole group discussion using questions such as "how do you think those prejudices translate into the classroom environment?" and "How, as a teacher, might you create a more positive, accepting environment for children from non-traditional families?" Also design activities that can encourage students to express information about themselves and their families in a free and unrestricted fashion (Turner-Vorbeck, 2005).

Like the studies reviewed above, there have been an increasing number of studies that provide advice to higher institution faculty members on how to increase preservice teachers' knowledge about the importance of implementing family-centered practices. Very few studies, however, focus on the impact of college level course on preservice teachers' attitudes towards family involvement in EI service delivery. This study focuses on the effectiveness of Introduction to Early Intervention course in influencing preservice teachers' attitudes towards family involvement in early intervention service delivery. The specific questions guiding the current study were:

1. Are there any differences in preservice teachers' understanding of family-centered practices before and after they take the Introduction to Early Intervention course? If yes, what are the differences?
2. How do preservice teachers intend to facilitate

family participation in early intervention service delivery?

## METHODOLOGY

Introduction to Early Intervention course provides an overview of the field of early intervention (EI), including historical perspectives, philosophies of EI, and influences of disabilities on the development of young children, EI models and intervention strategies. As an important philosophy in this course, family-centered care determines the family and professional collaboration style and family role in EI service delivery. As suggested by Pearl (1993), essential family-centered elements that are applicable to an EI setting include “recognizing the family as a constant in the child’s life; facilitating parent/professional collaboration in the care of the child; in the development, implementation, and evaluation of programs for the child; and in the development of intervention policy; and recognizing and respecting family diversity” (p.88). The preservice teachers’ attitudes towards this concept directly impact their understanding of family diversity and the collaboration between them and families.

### Participants

Eighty-seven students, who took the course in spring 2009, participated in the study. The majority of the participants are special education and elementary dual major students, while a few of them are social work major with a concentration in family, children and youth, psychology major, sociology major, speech pathology major with concentration in exceptionalities, special education major with a concentration in deaf/hard of hearing, and speech pathology major students. 5% of the participants are freshman, 47% sophomore, 31% junior, 3% senior, and 14% graduate students. Since the Introduction to Early Intervention course is a lower level course in special education major, students in their probationary years, that is, students who haven’t been admitted to the special education program, can take this course. According to students’ self-report, most of them enrolled in this course have taken some special education foundation course such as Introduction to Individuals with Exceptionalities, Behavioral Intervention and Support, Elementary Methods, Principle of Teaching, Psychology Foundation of Special Education, and Assistive Technology for Exceptional Individuals. However, none of them have taken higher level special education major courses such as Assessment and Planning, Vocational Programming, or Methods in Elementary Special Education. The majority of the

students took this course as required, while only a few of them took it as an elective.

### Data Collection and Analysis

All of the eighty-seven preservice teachers are requested to write an essay about their understanding of whether families should be involved in EI service delivery; if yes to the first question, the participants are requested to explain how they as a professional would involve family in the EI service delivery. With the permission from the participating preservice teachers, the two faculty members who teach the Introduction to Early Intervention course used inductive content analysis and grounded theory to analyze the emerging themes out of the essays the preservice teachers turned in within the first two weeks of the spring 09 semesters. Two weeks before the end of the spring 09 semester these preservice teachers were requested to write another essay regarding family involvement in EI service delivery. Preservice teachers are requested to use student ID instead of real names when completing the essay questions. Essays submitted are kept in a locked cabinet of one of the researchers/instructors’ office. Only the two researchers can access to the data. The two researchers used the same methods to analyze data again after the post-essays were turned in. Thematic topics found after data analysis from both pre-and post-study are compared and contrasted, the impact of the course on preservice teachers’ interpretation of family involvement in early intervention service delivery are discussed, implications for higher education faculty who train preservice special educators are provided.

## RESULTS

### Pre-study

The themes analyzed out of the pre-study essay can be grouped into three categories, issues relating to families (category I), professionals (category II) and the goal of family-centered practices (category III) (Table 1).

*Category I—Family:* For category I, issues relating to families, four subthemes stand out including the extent to which families should be involved, the frequency that families should be involved in service delivery, the definition of families and the benefits of family involvement. The representative themes regarding the extent to which families should be involved can be summarized as follows:

Families should be involved greatly in the life of

**Table 1.** Comparison of Pre- and Post-Study

Pre study		Post study	
Category I: Family	The extent to which families should be involved; The definition of family The benefits of family involvement	I. Professionals' roles	Resource person Guide Assessor Being flexible
Category II: professionals	What professionals should do to maximize family's involvement in EI	II. Families' roles in EI service delivery	Information provider Support provider
Category III: The goal of family-centered practices	Should meet the entire families' needs; Should give the child around the clock attention; Families take charge of how fast progress should be made with the child; Integrate the activities into the child's natural environment.	III. The outcome of family-centered practices	Allow parents to see both the strengths and weaknesses of the child; Make the service delivery easier Creates bonds between the child and family
		IV. Preservice teachers' preparation	list of available resources; IFSP/IEP goals Basic knowledge about early childhood development Open to different opinions Working with families from diverse backgrounds Collaboration skills
		V. Challenges for professionals	Inadequate resources Attitudinal problems
		VI. Challenges for families	Lack of ability of taking care of their child with a disability Busy working schedule Lack of child care Feel threatened by the influx of information being provided by professionals Professional jargons
Summary: after taking the Introduction to Early Intervention course, preservice teachers admitted that they have a better understanding of professionals' responsibilities, parents' concerns and challenges, and the importance of collaboration between professionals and families.			

children both at home and in school.

Families should be involved in all EI procedures to the fullest extent, including but not limited to meetings, gathering information (i.e., observation), assessment/diagnosis, monitoring their child's progress, transition planning, and implementation. Families should have awareness and understanding of what they are subjecting their child to and the numerous people they will be working with.

"Families can monitor their child's progress and communicate to teacher's information on behaviors needed to be considered when evaluating the student" (Participant).

"Families have to be honest with themselves on which is the best solution instead of denying the situation" (Participant).

The frequency to which families should be involved can be summarized as "family should be involved in early intervention as often as possible" (participant). Families can be defined as "mothers, fathers, siblings, grandparents, guardians, etc." (participant). The benefits of family involvement have been emphasized and elaborated by the majority of participants.

"Family involvement in EI can avoid misinterpretation of children's behavior: sometimes it is difficult for family to recognize a child at risk" (Participant).

"The skills the child learns outside the home can be carried over and properly used in the home setting or with other people—help their children generalize the skills they are taught" (Participant).

"Families have multiple opportunities to implement EI strategies directly in their child's life" (Participant).

“Families can learn correct techniques from professionals” (Participant).

“Families should have a say in what can or cannot be done. –decision making” (Participant).

“Families should not run the intervention, but should witness it being given so they understand what works best with their child when they implement it at home” (Participant). “Families should be allowed to join in games etc. during service delivery” (Participant).

“Involve families in E.I. will help teach them to be good teachers and role models for the child” (Participant).

“It gives families a sense of involvement, knowledge in the area of EI and eliminates the feeling of helplessness” (Participant).

### Category II—Professionals

In this category what professionals should do to maximize family involvement in EI has been focused. The major content can be summarized as below:

“Family involvement requires professionals to be knowledgeable and aware of the important role families can play” (Participant).

“Professionals can involve families in EI by showing them what they can do to assist the child, teaching them more about the exceptionality, and showing the positive data how other children in the same situation have been successful” (Participant).

“Professionals should ask families their opinions” (Participant).

“Professionals should be sensitive to family’s culture, needs and concerns, and approachable to the family” (Participant).

“Professionals can facilitate families’ involvement by providing a schedule or plan” (Participant).

“Professionals should avoid jargon and judgment of the family” (Participant).

“Massive communication is required between professionals and families” (Participant).

“Professionals should provide the needed instructions and materials needed for successfully intervening with the child” (Participant).

“Professionals should deliver the best practices for the child’s needs” (Participant).

“Professionals should collaborate with families in decision making” (Participant).

### Category III—the Goal of Family-Centered Practice

The goal of family-centered practices is also a hot topic covered in the preservice teachers’ pre-study essays. The goals can be summarized as “Rather than exclusively meet the child’s needs, the family-centered

practice should meet the needs of the family by addressing their concerns, educating them, and providing resources” (participant). “Ensure that the child is getting adequate and around the clock attention” (participant). “It means that the help is directed towards the family who in turns helps the child. The child is too young to modify their own environment so it is the parents’ responsibility to help do so” (participant). “It means families take charge of how fast progress shall be made with their child” (participant). And “Integrating the activities into child’s natural environments, the child will be more likely to learn skills quicker and maintain those techniques longer” (participant).

### Post-Study

Two weeks before the end of the spring 09 semester, the preservice teachers who had been exposed to the major content areas of the Introduction to Early Intervention course along with the nine-hour field experience of observing young children with special needs in EI field were requested to write another essay about their understanding of family-centered practices. After analyzing the data collected from the post-study, several themes have been found including professionals’ roles in the implementation of family-centered practices, families’ roles in EI service delivery, the outcome of family-centered practices, preservice teacher preparation and the challenges in family-centered practices in EI.

### Professionals’ Roles

Professionals should play a role as a resource person whom families can talk to and share their concerns, and who understand families and help them cope with what they are going through. “Professionals should speak to families in a way that families understand and be able to apply the knowledge to help the child achieve and succeed” (participant). “Professionals should know the right timing and words when reaching out to a family with a child with special needs because it is so hard to tell the family that their loved one is not going to be the person they want to be” (participant). “Professionals should provide families with all the update information and help they can provide, and connect families to support group or expert families” (participant).

Professionals should play a role of guide who provides guidance for parents in the service delivery (Bruns and Fowler, 1999; Pang, 2008). Professionals should get to know families and let families know them when work with families (participant). Or families may feel uncomfortable working with the professionals. Families may feel apprehensive, for example at the beginning of collaboration

collaboration with professionals (participant). Professionals involved in family life can increase the understanding between professionals and families. Professionals should understand that “families feel sad or mad sometime” (participant). “Many families have not found the comfort or joy parents with a ‘normal’ child may experience” (participant). They need guidance in the whole process from referral, planning and implementation of the plan to evaluation. “Professionals also play a role of building up network for families and assist families in getting the support they need” (participant). “Connect families to expert families, for example, so that families can learn from others that they are not there alone who have to face these trials but others have had similar experiences and it will turn out to be ok” (participant).

Professionals can provide trainings to families so that families know what to do at home and thus become self-sufficient (Pang, 2008). “This way families will feel more competent and have more faith in their abilities; they will have more positive outlook on the situation, and they will be able to help others with similar predicaments as well” (Participant). This will lessen the demands on the interventionist, which would relieve a great deal of stress. “It will eventually become a series of training sessions for the parents; they would learn by examples from the interventionists so they could continue the work at home” (participant).

Professionals play a role as assessor (Pang, 2008). “They gather all information as much they need just so they can find all the services the child need” (participant). They also involve families in the assessment so that get the authentic data about the child’s current development level and design appropriate goals for the child and its family.

Professionals need to possess the ability of flexibility. They want to make adjustment and accommodations when work with families with different resources, needs and priorities. They might want to change their plans or schedule to fit to that of families. It is very important to hold meetings on a regular basis. “The pace and amount of meetings should be dependent on the family” (participant). For example, “some families may prefer to have a couple of meetings to get to know each other” (participant). Professionals need to be sensitive to family emotions, beliefs, understand the dynamic of the family, family values and culture, and most of all not stereotype or think a particular family is “a lot like all other families”. Involve families to the extent they feel comfortable with. Some families want to be fully involved in their child’s development, other want to be given guidance and prefer professionals to organize the intervention procedures. In order to make sure that families are involved, professionals must make special attempt to show that they value the beliefs, pinions and ideas presented by family members. “Professionals must provide an environ-

ment that welcomes family members to speak their minds on issues regarding the child” (participant). Professionals also should understand that “families’ partial involvement in a child’s development doesn’t mean families do not care about their child’s welfare” (participant).

### **Families’ Roles**

Families can play a role as information provider. As child’s primary care, families know best of their child’s strengths and weaknesses. By providing information to professionals, sharing their concerns and priorities, families actually have the power to direct the services that they receive. Families play a role of observer. They should observe the intervention whenever possible to understand and to learn how to best help the child. Through the observation they can monitor the child’s progress and familiarize themselves with the intervention techniques. Families can play a role as advocate. Although laws mandate special services provided to meet children’s special needs, families may still have to push for more services or more detailed services.

Family also can play a role as support provider (Pang, 2008). The participants of the study share with professionals their own experiences of playing role as support providers. “From personal experience, whenever I had trouble, either within or outside of school, I could always count on my family to be there for me to offer advice, or even solve the problems themselves” (participant). “When it comes to everyday, families are the center of a child’s life. Children rely on their family members to look out for their best interests and do what they can to enable them to succeed” (participant). “Families should be involved in the service delivery to the utmost extent until it gets to the point where family is crossing into the professionals’ job” (participant).

### **Outcomes of Family-Centered Practices**

The outcomes of family-centered practices were also touched on and emphasized in the post-study essay. “Family-centered practice is one of the many ways that a child and family can be closer and can help the child participate and grow as any other child would” (participant). “The family-centered practices strengthen the ability of parents to care for their children and encourage the family’s capacity to handle their own lives” (participant).

Family-centered practices allow parents to see both the strengths and weaknesses of their child. “It allows families to be part of the goal setting and know what goal needs to be met. And parents can then reinforce those

goals by incorporating them into the home” (participant). Family involvement and support in the service delivery makes the process easier in all aspects of the child’s learning and the processes for the professionals. Family involvement also helps the professionals and makes their job easier and more enjoyable. Also, the interventions can be worked on even when the specialists are not around. “Family can gain access to desirable community services and activities. This helps parents see that even the community settings become fully inclusive for their child and their family” (participant).

Family involvement also creates better bonds between the child and family. “The intervention with the child will directly affect the child” (participant). Family involvement also creates better results. Imagine that a therapeutic practice is not carried over into the home the child goes at the end of the day, the lack of reinforcement and practice in the home setting where the child spends the majority of time will not progress in the intervention. Family-centered practices focus on the positive aspects of the family through their strengths. “When understanding the child the provider focuses on the strengths possessed by the family in order to meet and overcome the challenges” (participant).

### **Preservice Teacher Preparation**

In order to prepare quality professionals in early intervention field, preservice teacher should be provided a list of resources that will assist them to work with families. Preservice teachers should be trained on how to write an IFSP/IEP with functional and realistic goals. Preservice teachers should be equipped with basic knowledge about early childhood development, need to acquire a certificate or license in the state in which they are planning on working. “Many specialists in early intervention field go for further education to get an advanced degree usually in fields such as special education, educational development, audiology and speech therapy” (participant). Pre-service teachers should have basic knowledge of the child’s development in all five developmental domains including cognitive, communication, social, emotional, physical and self-care. Preservice teachers also should obtain basic knowledge about assessment; know different types of assessment, use appropriate assessment to ensure the data collected are authentic that reflect the child’s real development. “Preservice teachers should know how the assessments are administered properly” (participant).

“Preservice teachers should be prepared to accept the difference. Agree to disagreement. Preservice teachers should be equipped with knowledge, skills, understanding, patience and communication skills” (Participant). “They must acquire a strong knowledge of

their content area and be able to clearly explain the strategies and techniques to the family but also the importance of each one. They must also have effective skills to involve different personality types” (Participant). “The preservice teachers should develop an understanding for family members who may want to be involved in intervention” (Participant). “This leads to preservice teachers’ having the patience not only to conduct their session, but also to teach others how to effectively take part in the process (Participant). “Preservice teachers must keep an open mind and listen and adapt to all strategies and advice suggested” (participant). “It is common for professionals in this field to have ethnocentric attitudes or using one’s own culture and experiences as a measure of what is normal or expected” (participant). Instead, preservice teachers need to adapt their attitude to one that more importantly benefits the child” (participant).

“Preservice teachers should be prepared to work with families of diverse backgrounds, know families, how family functions and operates” (Participant). “They should be culturally competent” (Participant). It is their responsibility to learn and provide services that are culturally appropriate and positively influence the family as well as the child. “Learning the different roles, attitudes and routines of the family can help the preservice teachers to learn more about the family culture, and understand more about the children with special needs and what work best for them” (participant). “Pre-service teachers should know that as a professional in the future they should take time to understand each member of the family, including parents, siblings, extended family, guardians, caregivers and anyone else close to the child. In addition, they also should learn the relationship each family member has with the child” (participant). Family theories such as ecological systems theory help prepare preservice teachers to be more culturally competent.

Preservice teachers should learn it is very important that professionals should collaborate with families in EI service delivery (Johnson, 2001; Pang, 2008). “Actually, the individuals involved with a child’s service plan all need to be able to work together and communicate with each other. Without this teamwork and communication line between all of the individuals on the team, the child may not receive the best services possible” (participant). “Preservice teachers also need to be familiar with assessment and involve everybody on the team to measure how well the plan is doing. There should be a time period every so often that the team gets together to complete these and discuss everyone’s feelings about the progress of the child” (participant). Love and enthusiasm are very important credentials in preservice teachers as well. “Teaching can be a very difficult job at times, and if the person does not have a genuine love for the job, they will not do well” (participant). “The preservice

teachers should know that professionals should honestly care for the child's needs and the development that needs to take place" (participant).

### Challenges

As a professional working with family-centered intervention, one may face professional barriers, such as lack of parental skills, inadequate resources, and attitudinal problems. "Families may lack of the ability to take care of their own disabilities leading to more obstacles and responsibility for the professional" (participant). For families, challenges may exist in parents' occupations, lack of child care, and unavailable transportation, which are examples of inadequate resources that can affect the family's involvement in the EI intervention system. "Families may feel threatened by the influx of information being provided by the professionals, confused by the barriers that is often created through the use of excessive acronyms and professional jargon, or discouraged by a general inability to connect to those involved in the intervention process" (participant). Another barrier that may hold back families from participation is lack of time. "Parents that work all day are not able to participate in the school function during the day" (participant). Although during the evening, parents can participate in some school related activities they often want to spend their time with families rather than participating in and attending some conferences. Finally, "the family's stance or feelings toward their child may lead to additional obstacles. For example, if a father lacks assertiveness with his child, this can lead to the lack of consistency in involvement" (participant).

### CONCLUSION

Comparing the pre- and post-study essay related to family-centered practices, it is found that although both before and after taking the Introduction to EI course the preservice teachers mentioned about the dynamic of family, the importance of family involvement in the service delivery, the post-study essay is more geared toward the importance of family-centered practices, and emphasizes more of involving the whole family including the parents, grandparents and siblings instead of solely focusing on the child, the roles families can play, the roles professionals should play to maximize family involvement, the requirement of preservice teachers in interacting with families, and the challenges/barriers in the implementation of family-centered practices (Pang, 2008; Mandell and Murray, 2005; Bruder and Dunst, 2005; Mandell and Murray, 2004; Marvin and Rupiper, 2004). The mastery of the Introduction to EI course

content undoubtedly plays a major role in impacting the participants in such a change. Plus the field experiences, guest speakers and class discussion all contribute to the participants' growth.

When talking about involving the whole family in service delivery, many participants relate to their personal experiences, and reflect on the success they made so far and conclude that family support is the most critical reason for what happened so far. Without involving the whole family in the EI service delivery, the skills children learned may not be carried over to the home setting, and the skills the children learned may not be functional skills that could be used in the daily based settings. On the contrary, with family involvement, families can facilitate the practice of the skills in the home setting or other daily-based settings, which will reduce the professionals' workload as well as make the goals/outcomes more functional. Also with family involvement, families obtain the first-hand information of their child's current development level, monitor the child's progress, and thus are more competent in designing goals. When involved in the service delivery, families also can be more likely to share with the intervention team of their concerns, needs, resources and priorities (Pang, 2008).

### DISCUSSION AND IMPLICATIONS

Given the importance and benefits of family involvement, it is summarized that families can play a role as information provider, observer/assessor, advocate and support provider, which corroborates the findings from previous studies (Bruns and Fowler, 1999; Gallagher et al., 2004; Hains et al., 1991; Pang, 2008), and professionals play roles such as resource person, guide and assessor. Professionals should promote family play active roles in service delivery. During the process of interacting with families, professionals should acquire capacities such as communication skills, being sensitive and flexible and cultural competent (Marvin and Rupiper, 2004). In order to obtain these capacities, the preservice teachers need to be equipped with basic knowledge of typical development in five developmental domains, family systems theory and the ecological systems theory, as well as basic skills of collaboration and teaming with families (Bruder and Dunst, 2005; Marvin and Rupiper, 2004; Renne, 2005). Appropriate training is required to obtain state certificate before go out and work in the field with families. Field experiences and direct interact with families such as observation, family interview, inviting family as guest speakers all help preservice teachers understand families and develop competence in working with families of diverse backgrounds (Mandell and Murray, 2005).

Involving families in the observation and assessment is

also a critically important credential in professionals, which also corroborate previous studies (Pang, 2008; Hains et al., 1991). Observer and assessor is also a role that families should play in service delivery, according to the preservice teachers who participated in the study. It indicates that the participating pre-service teachers believe both families and professionals should be involved in the data collection/assessment of monitoring the child's development although the roles they played may vary slightly different. For example, the professionals may play a role of guide in assessment, while families can actually observe and assess the child's progress in daily-based activities and regularly report the data to the professionals. With the collaboration between families and professionals more authentic data will be collected, which will guide the development of appropriate goals and plans.

No matter what type of roles families and professionals play in the EI service delivery, the collaboration between them is the key. Without it, it is impossible to provide family-centered services to families and their children. Collaboration requires communication and teamwork. Different from what the preservice teachers' beliefs in Marvin and Rupiper's study (2004) that didn't rank the communication and team skills as important as other skills such as Respecting Diversity, IFSP/IEP Skills, and Knowledge of Families, the preservice teachers who participated in this study believe the communication skills and team skills are the most critically important skills. Only through the communication families and professionals can get to know each other, and professionals get to know the families' needs and concerns and their resources so that they can guide them in the process better.

The current study has the following implications. The pre-service teachers participating in the study mentioned that they benefited from the guest speakers' speech on their personal experiences, their field experiences (all of them are required to have nine-hour field experience in inclusive child care settings and write a reflection paper based on that) and the class discussion regarding the family mechanism, family systems theory and Bronfenbrenner's Ecological Theory, the IFSP writing skills they obtained from this course and the communication skills they practiced in the Introduction to EI course. As one of the major course for elementary education and special education dual major students here at Bloomsburg University, the Introduction to Early Intervention aims at training pre-service teachers about serving young children with special needs and their families. Since this course can impact the preservice teachers' thought about what roles professionals should play in interacting with families, what roles families should play and what challenges professionals and families may encounter in EI service delivery, we will continue to do

what we are doing right now in this course.

In addition, we also will consider increase preservice teachers' interaction with families by assigning them to accompany EI service coordinators in home visits and observing the service delivery session provided by professionals such as occupational therapists and physical therapists. Utilize the student resources, such as inviting students' family members who have experienced EI process to share their experiences in our class. As some preservice teachers confessed in their essay, some of them have gone through the EI process when they were little, and they still appreciate the magic the EI has done in their life. Inviting these preservice teachers' families to come and share their experiences in our class will also impress these preservice teachers about families' thoughts in EI process. Relevant data will also be collected in the summer 09, fall 09 semesters and 2010 spring semester. Newer data collected by these times will be added to the current study. Follow-up study will be conducted accordingly with an aim to train quality service providers in early intervention field.

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