

Physical Education Teachers' Reflections on Preparation for Inclusion

by Brent Hardin

Abstract

The purpose of this study was to identify practicing physical education teacher's perspectives regarding the adapted physical education curriculum of their respective Physical Education Teacher Education (PETE) programs, and to explore how their preparation programs have affected their feelings of competence and confidence when teaching students with disabilities in inclusive environments.

Five beginning physical education teachers were interviewed for approximately 90 minutes; questions during the interview addressed their education experience, current teaching experience, and assessment of the influences on their comfort levels in inclusive teaching environments. Then they were observed over a two-week period while teaching three inclusive physical education lessons. Finally, each participant was interviewed again after the observations, using selected field note segments of the lessons to stimulate discussion; asked to sort and rank (Q-sort) eleven cards, each depicting a different knowledge source for teachers; and interviewed again and asked to explain their rank ordering.

Interview transcripts, Q-Sort results and field notes were analyzed through analytic induction (Manning, 1991). Information gathered from all the interviews, Q-Sort data and observations were accumulated to form a composite of practitioner's views regarding the adapted physical education curriculum of their individual PETE programs. Three themes emerged from the data: the importance of teaching experience, the example of other teachers, and the influence of one adapted course during the subjects' college careers.

Teacher education no longer tolerates prejudiced treatment of children from various ethnic or racial backgrounds. Education programs often include a variety of courses and field experiences that provide prospective teachers with opportunities to develop skills for working within culturally and ethnically diverse classrooms (Welch, 1996). But has the same progress been made for teacher education regarding students with disabilities? These children come from all racial and socioeconomic groups, and may be denied equal access to education if their teachers are not adequately trained.

Welch (1996) argues that because teachers have been historically exempt from teaching students with disabilities, teacher preparation has been woefully inadequate in training teachers for inclusion. Welch described teacher training programs as "immoral and inefficient," because while special education practice has improved in both design and implementation, teacher education programs continue to be inadequate. Many programs perpetuate a separate system, training special educators to focus on students with disabilities and general educators on whole class instruction.

A separate system is also in place in the field of physical education. Adapted physical education specialists are trained to teach students with disabilities. Regular physical educators, on the other hand, take few adapted courses and have little practical experience working with students with disabilities. This can result in physical educators who have negative attitudes toward including students with disabilities in their programs. In some instances, students with disabilities have been excluded altogether from physical education classes (Block, 1994).

The enactment of PL 90-170, Title V (1967), was the first act of legislation to mandate funding in physical education teacher education for students with disabilities. This act authorized the U.S. Department of Health, Education, and Welfare to make grants to colleges and universities for teacher training and research in physical education. As a result of this legislation, most physical education professional preparation programs offer an introductory adapted physical education course. Most physical education teacher preparation programs also offer specialized courses on individuals with disabilities. Some offer a major or minor emphasis in adapted physical education as part of an undergraduate degree program. Although these efforts lay the groundwork for including individuals with disabilities into the professional preparation program, they continue to segregate the training for regular and adapted physical educators (DePauw, 1986).

Some research points to teacher training programs that provide both classroom and practicum experience components as eliciting greater changes in pre-service teacher behavior than programs emphasizing classroom academics. Reynolds, Reynolds, and Mark (1982) reported that programs stressing student involvement with disabled individuals have a positive impact on attitudes toward students with disabilities. Naor and Milgram (1980) reported that pre-service training that provides contact with a variety of exceptional children and traditional classroom lecture was more effective than traditional classroom methods. A training program laden with hands-on experience is likely to increase pre-service teacher's perceptions of students with disabilities.

Stewart (1990) also researched the effect of early field experiences on the attitudes of pre-service teachers toward students with disabilities. This study found that direct contact between non-disabled and disabled populations led to improvement in the attitudes of non-disabled students. Students who worked with their disabled university peers had greater improvements in

attitudes than those who worked with older populations. These findings supported the conclusions of Kisabeth and Richardson (1985) and Stewart (1988) in that the interaction between individuals of equal social status is an effective method of giving pre-service students practical experiences with disabled populations.

Rizzo & Kirkendall (1995) extended previous research on attitudes of future physical education teachers. Their study assessed the relationship between selected demographic attributes and attitudes of future physical educators toward teaching students with disabilities. The results indicated that advanced students who had more experience working with students with disabilities were more competent than younger, less experienced students. Also, competence and academic preparation regarding individuals with disabilities were the best predictors of favorable attitudes.

Hodge (1998) examined the attitudes of pre-service physical education teachers toward teaching students with disabilities, before and after matriculation, in an adapted physical education course, with and without practical experience. The key affirmation in this study was that pre-service physical education teachers' attitudes toward teaching students with disabilities may be positively impacted within an introductory adapted physical education course. An interesting finding was that the participants' attitudes were favorably impacted void of practicum experiences.

Hodge (1998), however, maintains that practicum settings have a stronger influence on prospective teachers' decision-making skills and general attitudes toward students with disabilities. Furthermore, he agrees with others who have insisted that professional preparation programs in physical education ought to emphasize course work coupled with hands-on, field-based experiences.

Is this formula—coursework coupled with hands-on time in the field—necessary to prepare today's physical education teachers for teaching students with disabilities in an inclusive

environment? This study examines the experiences and attitudes of practicing physical educators, with the goal of assessing how they believe their academic experience prepared them for the inclusive physical education classroom.

Research Questions

While there is a varied body of knowledge about physical educators' attitudes with regard to the inclusion of students with disabilities, research on training regular physical educators for inclusion is still in the infant stages. In view of the growing number of students with disabilities who are being taught in regular physical education classes, more research along these lines is needed. It is surprising that so few studies have been completed on how effectively teacher education programs are training pre-service teachers to teach students with disabilities.

Many practitioners feel qualified yet often excluded from the governance of teacher education. Therefore, a goal of this study was to extend existing research on physical education teacher preparation and identify practicing physical education teacher's perspectives regarding the adapted physical education curriculum of their respective PETE programs. This study was also designed to explore how their preparation programs have affected their feelings of competence and confidence when teaching students with disabilities in inclusive environments.

To address the purpose of this study, the following questions guided the data collection and analysis:

1. What types of course work, early field experiences, and student teaching experiences do the participants remember from their respective undergraduate teacher education programs?
2. How has each participant's feelings of competence and confidence in teaching students with disabilities in inclusive environments been affected by their respective under-

- graduate teacher training programs?
3. What types of course work, early field experiences, and student teaching experiences are important to practitioners in relation to preparation to teach students with disabilities in inclusive environments?
4. What knowledge sources have the participants found helpful when teaching students with disabilities?

Conceptual Framework

The conceptual framework that steered this study was gleaned from the works of Bain (1990) and Locke (1984), in which teacher education programs are defined as knowledge learned and experiences encountered by pre-service teachers. Examples of the vehicles by which this knowledge is imparted are course work, early field experiences and student teaching.

Course work refers to all the courses that a student takes in the preparation program. These classes are those that deal with the learning of content, pedagogical content, learners, and contexts of education (Shulman, 1987). Early field experiences are opportunities for students to interact with pupils in a school setting, practice teaching skills, and become socialized to being in a school (Dodds, 1989). Early field experiences are sometimes incorporated in the course work but are usually included as separate requirements. Student teaching consists of students who work in a public school as full time teachers for a period of time under the continual supervision of a cooperating teacher. This experience usually lasts an entire semester.

Goetz & LeCompte (1984) noted that conceptual frameworks might be used to help shape the initial research and interview questions. In this study the conceptual framework not only guided the interview questions but also served as a structure for data analysis. Questions on each of the components listed above were asked of the participants and their answers and actions helped generate themes. The questions focused on how participants viewed the impact of each of these

curricular components on their confidence and competence in teaching students with disabilities in inclusive environments.

Methods

The five practitioners for this study were drawn from a list of teachers provided by teacher education faculty from five different institutions. The researcher chose participants who were beginning teachers (2-5 years of experience) so that their recollections of their teacher preparation program were relatively fresh. Each participant graduated from a different teacher education program; programs were at colleges and universities spread throughout the Southeastern United States and along the East Coast. All the participants were teaching a wide range of students with

disabilities in inclusive environments on a daily basis at the time of the study. The teachers taught children with the following disabilities: autism, amputations, behavior disorders, cerebral palsy, down syndrome, hearing impairments, mental retardation, spinal cord injuries, severe obesity, and visual impairments.

A faculty member from the respective teacher education program initially contacted the teachers. If permission for contact was given, the researcher then contacted the participants via telephone to request their participation. All participant signed a consent form that outlined the requirements of their participation in this study. For a thumbnail sketch of the participants, see Table 1.

Table 1
Participants

Name*	Adapted PETE	Q-Sort (Top 3)	Teaching Experience
Mike	One course no hands-on	1. Teaching exp. 2. Other teachers 3. Conferences	4 th year, elementary
Lindy	One course camp work	1. Teaching exp. 2. Other teachers 3. In-service train.	4 th year, elementary
Renaë	“Infusion”	1. Early field exp. 2. Other teachers 3. Student teach.	3 rd year elementary
Barry	One course clinical hours	1. Teaching exp. 2. Other teachers 3. Course work	3 rd year, middle
Nadia	One course clinical hours	1. Teaching exp. 2. Student teach. 3. Course work	2 nd year, elementary

*all names were changed to protect the confidentiality of respondents.

Data Collection

The data collection techniques for this study were semi-structured interviews, field observations, stimulated recall interviews and Q-Sort interviews. The participants were interviewed for approximately 90 minutes; questions during the interview addressed their education experience, current teaching experience, and assessment of the influences on their comfort levels in inclusive teaching environments. Then they were observed over a two-week period while teaching three

inclusive physical education lessons. Finally, each participant was interviewed after the observations, using selected field note segments of the lessons to stimulate discussion; asked to sort and rank eleven cards, each depicting a different knowledge source for teachers; and interviewed again and asked to explain their rank ordering. Knowledge sources listed on the cards included teaching experience, journals & magazines, and other teachers; sources are listed in Table 2.

Table 2
Q-Sort Grand Rank Order

Grand Rank Order	Knowledge Source	Total Points
1	Teaching Experience	8
2	Other Teachers	13
3	Course Work	20
4	In-Service Training	27
5	Conferences	29
6	Students	32
7	Student Teaching	36
8	Early Field Experiences	37
9	Journals	40
10	Videos	42
11	Other	42

The semi-structured interviews were used to gather the teachers' perceptions on how well prepared they felt in teaching students with disabilities (students with disabilities included students with physical and/or cognitive disabilities). Semi-structured interview questions focused on the teacher preparation curriculum areas of course work, early field experiences, and student teaching. The participants were also asked to provide a detailed description of their undergraduate teacher training and current teaching setting. The semi-structured interviews were audio taped and transcribed.

Each participant was then observed teaching three inclusive physical education lessons. The lessons came from one of the participant's regular physical education classes at their respective schools. Every teacher instructed students with disabilities in inclusive classes. The researcher took copious field notes during each teaching observation, logging the dialogue and activity that took place during the inclusive class.

O'Sullivan (1996) states that stimulated recall enables the researcher to capture the thought processes of teachers as they analyze their instructional behaviors. Thus, selected segments of the previously described lessons were reviewed with each instructor. The field notes were reviewed and segments were selected based upon the level of pedagogical activity involving students with disabilities at various points in the lesson. During the review session the researcher asked the participants to recall decisions about instructional events and teaching behavior. The researcher attempted to discover to what extent the teacher's confidence and instructional behaviors are connected to their respective teacher training programs. The stimulated recall interviews were also audio taped and transcribed.

The participants were also asked to Q-Sort (Kerlinger, 1973) a set of eleven cards, each depicting a different source of teachers' knowledge (Shulman, 1987). The sources of knowledge included: (a) course work, (b) early field experiences, (c) student teaching, (d) journals &

magazines, (e) professional conferences, (f) in-service training, (g) students, (h) other teachers, (i) teaching experience, (j) films & videos, and (i) other. After sorting the cards, the teachers were asked to reconsider the rankings to ensure that they indeed represented a ranking from most to least important. Finally, they were asked to explain their ranking in another semi-structured interview. Particular attention was directed to what the participants felt they had learned from each of the knowledge sources and how that information had been applied in actual practice. This interview was audio taped and later transcribed.

Data Analysis

Analytic induction is the process of drawing themes and commonalties from data and is a suitable way to ascertain the experiences and thoughts of participants. Information gathered from all the interviews, Q-Sort technique data and observations were compiled to form a composite of practitioner's views regarding the adapted physical education curriculum of their individual PETE programs.

This study followed the guidelines laid out by Huberman and Miles (1995) using four stages of data analysis in qualitative research. In the first stage, data collection and preliminary analyses was conducted. Themes emerging in the initial interview transcripts and observation field notes guided the stimulated recall interview questions. Results from the Q-Sort technique helped guide the questions concerning how the various knowledge sources had affected the participant's feelings of competence and resulting teaching practices.

In the second stage, data reduction, data was coded, summarized, and clustered into categories. At this point, the conceptual framework guided the coding of answers into the clusters of course work, early field experiences and student teaching. For example, answers to questions about early field experiences were placed into a cluster of "field experience answers." Themes were

drawn from the participant's perceptions of the early field experiences in their PETE programs and how those experiences had affected their confidence and skill in teaching students with disabilities in inclusive environments. The Q-Sort data were arranged to determine a grand rank ordering of teacher knowledge sources. The Q-Sort interview transcripts were analyzed in order to understand the rationale underlying the participant's rankings of knowledge sources and their application in teaching students with disabilities.

The third stage is data display. In this stage the data were organized into smaller forms and assorted constructs. For example, responses or observations that seemed to indicate that adapted physical education courses should be required for all pre-service teachers were placed under a "required classes" section of the course work cluster. These constructs sometimes included diagrams and matrices. A table was constructed to display the grand rank ordering of the knowledge sources.

The fourth stage of data analysis is conclusion drawing and verification. In this stage the researcher tried to interpret and make meaning of the displayed data. In the case that more questions arose during the data analysis, follow-up interviews were used to obtain more information from the participants.

Data Trustworthiness

One way to enhance trustworthiness in a qualitative study is by triangulating the data. Triangulation is defined by Goetz & LeCompte (1984) as "a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation" (p.79).

In this study, triangulation of the data was accomplished by using member checks and by attempting to connect the themes noted in the semi-structured interview transcripts to the observation field notes, Q-Sort data and stimulated recall transcripts (Rubin & Rubin, 1995). Member checks consisted of returning the data collected to

the subjects for them to examine. This allowed the participants to refute, confirm or revise anything they said and/or believed to be inaccurate. The taped transcriptions were given back to the participants for a member check. Participants were asked to read the transcriptions and verify or dispute what had been recorded. As themes emerged from the data, they were checked with the participants for comment and validation. The five participants concurred with the transcripts and final themes presented by the researcher.

Information gathered from all the data sources was compiled and then three themes, based on the participant's perceptions, were drawn. As the themes emerged from the data, each theme was individually validated with corresponding evidence in other data sources. For example, if a theme was noted when reviewing interview transcripts, then the researcher attempted to find further evidence of that theme in other data sources such as university catalogs, observation field notes, interview transcripts or Q-Sort results. The themes were then checked with the participants for comment and validation.

Q-Sort Grand Ranking

The themes that emerged from the data corresponded directly with the top three knowledge sources ranked by participants on the Q-Sort test. The grand ranking revealed that the participants felt teaching experience was the most valuable knowledge source when learning how to teach students with disabilities. Other teachers were seen as the second most valuable knowledge source and course work was listed as the third most valuable. The Q-Sort grand ranking was computed by awarding one point for each knowledge source corresponding to its ranking on the individual Q-sort tests. For example, if other teachers were ranked as second on a participant's form, then two points were added to the grand rank score for other teachers. If other teachers were ranked fifth on a participants form, then five points were added. The rankings from all of the

individual sheets were added together and a grand rank order was compiled. The knowledge sources were arranged in grand rank order from lowest score to highest score. The knowledge source that was ranked the most valuable by the participants had the lowest grand rank score. The knowledge source that was ranked the least valuable had the highest grand rank score. (See Table 2)

Findings

Three themes emerged from the data: the importance of teaching experience, the example of other teachers, and the influence of one adapted course during the subjects' college careers. The participant's names have been changed to protect their anonymity.

Teaching Experience is Supreme

Teaching experience was consistently seen as the most valuable knowledge source for learning how to teach students with disabilities, according to the Q-Sort grand ranking. Participants credited some form of teaching experience for enhancing their competence and confidence when teaching students with disabilities. This theme was drawn from and confirmed by the participant's perceptions as recorded in the Q-Sort results, field observations and interview transcripts.

Barry volunteered at the special school for students with disabilities in his school district as a fulfillment for required clinical hours in his adapted physical education class. Barry talked about his confidence growing after this initial experience in teaching students with disabilities.

I mean it is kind of uncomfortable at first. You just don't know how to act or what to say. But, you get more confident after a while, and its like they are just like regular people. But there is that wall you kind of have to get through at first and I guess the clinical hours helped me with that. You can't be afraid of them; you have to jump right in (Interview, Barry, 4/12/00).

“Jumping right in”—gaining valuable teaching experience through trial and error—was mentioned by most of the participants. Renae, a third-year elementary school teacher, talked about gaining in-the-classroom confidence with one of her students:

Take this seven year old boy who is mentally retarded with a physical disability, and he is afraid to get in the water. Do it. You know, who can't throw a ball. Give him a physical fitness and motor test, and write him an IEP, and get going. You know that is invaluable. You know the success I had from that was also motivating, because I got that boy in the pool and I taught him how to throw. Now no book knowledge can replace that hands-on experience (Q-Sort Interview, Renae, 4/22/00)

Teachers Teaching Teachers

All of the participants felt that other teachers were a valuable knowledge source when learning how to teach students with disabilities in integrated environments. Other teachers were ranked as second in the Q-Sort grand ranking. Four of the five teachers ranked other teachers as second on their individual Q-Sort forms and the other participant ranked other teachers as the fifth most important knowledge source when learning how to teach students with disabilities.

Mike spoke of several other teachers who have helped him learn how to teach students with disabilities when he explained why he ranked other teachers as second on his Q-Sort form.

I guess just discuss with them, knowing people like Nan and Susie and just asking them, hey I have this situation with this disability here, how would you handle that? I am thinking of Bill mostly, he has helped me a lot — this is kind of his specialty working with kids with disabilities and I call him anytime I need to. He teaches over at Country Lake and I think he just got the job as being over adapted for the whole county, so you

know he is a big, big help. Also, my wife Julie, you know she is working on her masters right now and so I bounce things off her all the time too (Q-Sort Interview, Mike, 4/19/00).

Lindy credited collaboration with teachers outside of her school and outside of physical education for helping her learn to how to teach students with disabilities.

I think, we often, so many times—I mean teachers—are isolated and we don't get to interact with other teachers. But, going to the classroom teachers to get ideas of what they are doing and how you can develop on what they are doing and go from there. I think other teachers are a valuable resource. Even other teachers in the county like for example our adapted PE person in this district. Some special ed teachers have helped me, like the special ed teacher here is more of a learning disabled specialist, but I have gone to her for several things like writing assignments for rainy days and what kind of adaptations I need to make and those kind of things (Q-Sort Interview, Lindy, 4/21/00).

Only One Course

Course work was ranked third on the Q-Sort grand ranking, and all of the participant's ranked course work as fifth or higher on their individual Q-Sort forms. However as earlier noted, most of the participants ranked course work high based only on the value of their adapted physical education class. With the exception of Renae, the topic of teaching students with disabilities was virtually ignored except in the participant's adapted physical education class. Furthermore, three of the five teachers did not even get the opportunity to teach students with disabilities in their student teaching or early field experiences. For most of the participants, their adapted physical education course and related clinical experience associated with the adapted class was their sole under-

graduate preparation for teaching students with disabilities in integrated environments.

When asked why he ranked course work as third on his Q-Sort form, Barry talked about his adapted class:

Well, my adapted class basically—just being introduced to the whole subject and learning about all the different types of disabilities. I mean it was really a great class and the best part about it was the volunteer hours I did for my clinical hours. Working with the kids and the disabled adults one on one, it made me see that I could do it (Q-Sort Interview, Barry, 4/17/00).

Nadia said her adapted class also gave her confidence she needed to begin teaching students with disabilities:

That was the first time I ever had to spend time with somebody with a disability, and I was scared. I was scared he was going to flip out or something, scared I was going to mess up and get him hurt or drowned, scared I just wouldn't be able to communicate with him. But, I got over that after one time, when I saw that smiling face and how happy he was to be there the next time (Q-Sort Interview, Nadia, 4/26/00).

While most participants received the chance to build confidence teaching students with disabilities in just one class, Renae received training for inclusion in more than one course. Her curriculum infused information about inclusion into many of her classes. Besides the contact she had with students with disabilities in her adapted class, she also had contact in her early field experiences and in her student teaching. That is reflected in her comfort level with inclusion:

Don't get me wrong—every student is different and every student has unique characteristics and challenges—but I feel confident in my ability to assess a

student's ability and then make adaptations within the classroom to help meet that student's goals (Interview, Renae, 4/21/00).

The contrast between Renae and the other participants, in terms of confidence in an inclusive environment, is apparent. Renae was so confident in her ability to teach students with disabilities that she became a resource for other teachers at her school and was asked to present material on the subject at a district training workshop, even though she was new. She was also able to improve inclusiveness in the physical education program at her school, although she was often frustrated by the lack of understanding of inclusion by her supervisors.

Discussion

Course work was ranked as the third most valuable knowledge source for the participants in this study. However, this high ranking was based only on one adapted physical education course for all the participants except for Renae. While it is encouraging that one course made such a lasting impact on the teachers, Renee's positive experience and her confidence beyond that of the others points to the need for more than just one class. I recommend that physical education teacher training programs investigate an infusion program that is similar to the one described by Renae. An infusion program is one that systematically infuses knowledge about individuals with disabilities throughout the curriculum (Blair, 1983). The existence of merely one separate course in adapted physical education may reinforce the notion that segregation is still necessary. Specialized adapted courses should certainly still exist but should change the emphasis by focusing attention on specialized adapted knowledge. Knowledge about teaching students with disabilities can be included within the other course work and not taught in isolation (DePauw & Karp, 1994; Kowalski & Rizzo 1996; Rizzo & Kirkendall 1995).

Student teaching and early field experiences are only of value to pre-service teachers learning how to teach students with disabilities when the pre-service teachers actually get the opportunity to teach students with disabilities (Naor & Milgram, 1980). These sentiments are echoed by the participants who ranked student teaching and early field experience at the bottom of their Q-Sort lists when they were not provided with the opportunity for hands on teaching experience during these curriculum requirements. The participants indicated over and over again, that exposure to students with disabilities boosted their confidence and eased their nervousness (Reynolds, Reynolds & Mark, 1982; Kisbeth & Richardson 1985; Stewart, 1988; Hodge, 1998).

The findings clearly illustrate that teacher education programs must become pro-active in assuring that their pre-service teachers receive opportunities to teach students with disabilities in their regular field experiences and student teaching internships. Training laden with hands-on experience is likely to increase pre-service teachers' perceptions of students with disabilities and improve their confidence (Naor & Milgram 1980).

Research Recommendations

One of the frustrations I experienced when collecting and analyzing the data for this study was the limited amount of information I was able to collect on the various teacher education programs. Many times I felt as if I were only scratching the surface on the five different institutions. I believe if I had limited this study to the perceptions of five graduates of one program, I would have been more able to provide a truly thick description of that program by visiting the campus, interviewing the teacher educators, sitting in on some of the required course work, early field experiences and student teaching internships.

Another advantage of limiting the scope of the project to one teacher education program would

be the opportunity to verify experiences of the participants by comparing them with their classmates. For example, I would have been able to verify if other students at Lindy's school had as little practical experience as she did. Conversely, I would have been able to confirm if other students in Renae's program were also provided so many opportunities to teach students with disabilities across the entire curriculum.

Secondly, I would recommend conducting a qualitative study along these lines limited to one participant, for a time period of at least one school year. One of the things I noticed when analyzing the data for this study was the lack of data from the stimulated recall interviews. I believe I could have gathered more rich data in the stimulated recall interviews by spending more time in the field with a single participant. This type of in depth study could be accomplished by visiting a participant for an entire school year on a weekly basis.

Another recommendation is to target a specific teacher education program for extensive study. For example, it would certainly be interesting to learn more about the infusion type program that Renae graduated from. In this study design, the researcher could spend a long period of time at a school targeted for study because of its unique methods. The thick description from this type of study could prove valuable for other teacher education programs looking to improve the way they prepare regular educators for integrated environments.

Finally, I recommend a longitudinal study that would follow a participant or group of participants from their first days in a teacher education program all the way through their first few years teaching. Although the participants in this present study were limited to teachers with 2-5 years of experience in order to provide for fresh recollections of their pre-service training, it was often difficult for the participants to provide detailed answers and examples about their undergraduate programs. A prolonged study, however, would

surely provide for rich data on what type of training pre-service teachers are receiving and how that training affects their competence and confidence when teaching students with disabilities.

Conclusion

Prior to passage of Public Law 94-142, colleges and universities trained regular educators to teach children who presented no serious learning difficulties, because children who did show such problems were typically referred for segregated special education. Currently, however, the law demands not only that the students with disabilities be integrated when appropriate but that the education they receive be effective as well. Thus, it is clear that teacher education programs need to re-evaluate and re-structure their programs to address the new expectations of their graduates.

In preparing teachers for inclusive teaching environments, training programs must listen to practitioner's perceptions and suggestions. Pre-service teachers' confidence is boosted via hands-on experience in teaching students with disabilities. No matter how valuable, one special education class or adapted physical education class is not sufficient. Teaching students with disabilities should be a thread of information woven throughout the teacher education curriculum. Teacher education faculty should become more pro-active and provide pre-service teachers with experience teaching students with disabilities in both early field experiences and student teaching. Clearly, teacher preparation curriculum change is not the only piece of the puzzle when facilitating successful inclusion, and thus not the only solution. However, curriculum change is a step in the right direction, as the practitioners in this study tell us that teacher education programs can make a difference in their feelings of competence and confidence when teaching children with disabilities.

It will surely take effort, and require a willingness to take risks. However it is time for teacher educators to recognize and attend to the neglected diversity of children with disabilities.

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