

2011

Preservice Teacher Application of Differentiated Instruction

Amy Lynn Dee

Follow this and additional works at: https://digitalcommons.georgefox.edu/soe_faculty

 Part of the [Education Commons](#)

RESEARCH ARTICLE

PRESERVICE TEACHER APPLICATION OF DIFFERENTIATED INSTRUCTION

AMY LYNN DEE

School of Education, George Fox University

Successfully implementing the practice of inclusion by differentiating instruction depends on both the skills and attitudes of general education teachers. New general education teachers who are entering the field are particularly vulnerable to the demands and stress of the profession, and teacher education programs must prepare preservice teachers to meet the needs of all students by teaching the skills needed to make appropriate lesson adaptations, accommodations, and modifications. This study investigates the manifestation of differentiation for special education students in work sample lesson plans written by preservice teachers working toward an elementary school credential. The research examined the nature, characteristics, and types of instructional adaptations included in the work samples prepared by a sample of preservice teachers resulting in six distinct themes and recommendations for teacher education programs.

Students with differentiated learning needs increasingly receive education in total inclusion programs that tax general education teachers who lack the skills necessary to teach them well. Inclusion requires that the general education classroom teacher possess skills that were once the purview of the special education teacher alone. Adapting instruction and making modifications to content for special education students often represents a new skill set for veteran teachers and a foreboding challenge for new and preservice teachers. Successfully implementing the practice of inclusion by differentiating instruction depends upon both the skills and attitudes of general education teachers. New general education teachers who enter the field are particularly vulnerable to

Address correspondence to Amy Lynn Dee, School of Education, George Fox University, 414 N. Meridian St., Newberg, OR 97132, USA. E-mail: adee@georgefox.edu

the demands and stress of the profession, and exemplary preservice teacher education programs must prepare them to meet the needs of all students by teaching the skills to make appropriate lesson adaptations, accommodations and modifications. Fusing the concepts of differentiation and inclusion promises to move educators closer to the ideal of instructional equity in meeting the needs of all learners in the general education classroom. Friend (2008) claimed differentiation began as a strategy for gifted students and now has a place in both special education and general education.

Statement of the Problem

The purpose of this study was to investigate the manifestation of differentiation for special education students in work sample lesson plans written by preservice teachers working toward an elementary school credential. Specifically, employing content analysis, the research examined the nature, characteristics, and types of instructional adaptations included in the work samples prepared by a sample of preservice teachers. The objective of the study was to gain greater understanding of the types of adaptations this sample identifies as appropriate for diverse learners.

Review of the Literature

Exceptional learners may require adaptations to instruction, an area that has received ample attention from researchers. In particular, differentiation as a model of planning for all learners is a promising practice (Friend, 2008; Tomlinson & McTighe, 2006). Research and discourse surrounding inclusion and differentiation in the area of teacher education may lead to effective changes in methods and strategies as well as in required course work in teacher preparation programs. Preservice teachers must develop the skills required to meet the needs of special populations of students. An overview of teacher preparation, inclusion, and differentiation provides scaffolding for this study. This literature review examines three areas: (a) teacher preparation for the practice of inclusion, (b) preservice teacher preparation in the area of inclusive classrooms, and (c) differentiation.

Teacher Preparation for Inclusion

Using the IEP (Individualized Education Program) as a guide, teachers must plan for incremental objectives for identified students rather than

focusing on the state curricular goals for the grade level. Providing accommodations and curricular modifications through such strategies as multilevel curriculum and curriculum overlapping allows students with different abilities to gain access to new knowledge in the same classroom as their peers (Giangreco, 2007). Teachers who are skilled in this area create classrooms in which it is difficult for the casual observer to identify the student with the IEP, and yet extensive research supports the idea that a majority of teachers are not prepared for this practice of inclusion. For example, a case study (Burke & Sutherland, 2004) focusing on the experiences of a 1st-year special education teacher supports the conclusion that general education teachers lack the experience and education necessary to integrate students with special needs into the classroom. In a study by Monahan, Marino, and Miller (1996), 75% of general education teachers surveyed indicated a lack of instructional skills and educational background in special education. Snyder's (1999) study indicates that 100% of those surveyed had not taken a graduate level course on working with special education students. In addition, 87% indicated that they had never participated in an inservice workshop focusing on working with special education students. Hammond and Ingalls (2003) revealed that 81% of the teachers indicated a lack of education and training about inclusion. These researchers identify the lack of training as a major roadblock to successful inclusion.

Preservice Teacher Preparation for Inclusion

The National Council for Accreditation of Teacher Education (NCATE, 2008) sets standards for institutions preparing teachers to work in preschools through secondary schools. Although Beyerback and Nassoii (2004) criticized NCATE for needing more clarification on terminology in addition to more specific connections between teaching and the practice of equity, the organization stipulates in Standard 1 that institutions must prepare preservice teachers to alter instructional practices so all students learn (NCATE, 2008). Furthermore, Standard 4, which focuses on diversity, stipulates that institutions prepare students to work with students from various cultural backgrounds, English language learners, and students with exceptionalities.

As the research indicates, and despite NCATE standards or state requirements, the lack of education and preparation in the area of inclusion and the use of instructional accommodations for preservice teachers in general education programs remain deficient. This deficiency remains even though research confirms that intensive preparation in teacher education programs has a direct effect on a teacher's

perception of being well prepared to teach (Boe, Shin, & Cook, 2007). Additionally, Jung (2007) found that preparation had an impact on preservice teacher attitudes and confidence in working in inclusive settings. Recognizing the need to provide preservice teachers with more preparation in the area of meeting diverse student needs, The Department of Teaching and Learning at Southeastern Louisiana University embarked on a research project titled *The 3 Dimensions of Diversity for Inclusion* (Edwards, Carr, & Siegel, 2006). The authors suggested that teachers are receiving little instruction on differentiation within the course work required at the university level, but they are well aware of the importance of meeting the needs of diverse learners. Interestingly, in a study comparing preservice teachers to inservice teachers, Burke and Sutherland (2004) found that the preservice teachers believed their teacher preparation programs were providing them with the skills to work with diverse learners, but the inservice teachers believed the programs did not. The insufficiency of research assessing the skills of preservice teachers in the area of differentiation continues despite the inclusive education movement.

Differentiation

Interestingly, the unique junction where legislation, literature, and praxis meet often reveals overlapping definitions of terms. Tomlinson and McTighe (2006) referred to differentiated instruction as the framework for planning for a variety of learners. They described *differentiation* as an instructional design method that provides for a variety of learners within the classroom. Friend (2008) described differentiation as changes to content, how students are taught, and the way in which they demonstrate learning. Miller (2002) defined *accommodations* as “changes to the delivery of instruction, method of student performance, or method of assessment that do not significantly change the content or conceptual difficulty of the level of the curriculum” (p. 292). Guillaume (2008) supported Miller’s definition by confirming that accommodations allow for individual abilities without changing content objectives. Others (Hall, Quinn, & Gollnick, 2007) defined accommodations broadly as adjustments made to ensure instructional equity.

Furthermore, the term *adaptations* appears in current texts and is defined by Miller (2002) as “more significant changes or modifications to the instructional process than accommodations” (p. 299). Curricular objectives, instructional methods, and student outcomes are changed under this definition of adaptation. Regardless of Miller’s definition of

adaptation, the word appears in literature as a general descriptor of any type of change. Note that only modifications are actual changes to curricular objectives, whereas accommodations are changes requiring planning on the part of the teacher in order to meet the needs of students with disabilities. Differentiation includes changes to content, so the practice may cause some trepidation for teachers because students who have IEPs may have modifications written into the plan; however, students who struggle should not have modified content or curricular objectives.

Quantitative research designs in the area of differentiation prove almost nonexistent, but a study on Universal Design of Learning, which employs principles of differentiation, found that an hour-long inservice prepared teachers to include students with disabilities in the classroom (Spooner, Baker, Harris, Ahlgrim-Delzell, & Browder, 2007). Universal Design necessitates planning for accommodations within the lesson plans rather than making changes or interventions afterward. Boe et al. (2007) asserted that intensive preparation affects preservice teachers' perception of preparedness to teach. This study supports the possibility that short teacher inservice courses can make a difference in how teachers plan for students with disabilities.

Whereas a search for quantitative studies comparing an experimental group exposed to differentiated instructional strategies to a control group reveals a dearth of literature, a profusion of qualitative studies, articles, and books on implementing differentiation appears in all databases. An ethnographic study done by Beecher and Sweeny (2008) over a period of 8 years, revealed that differentiation can and does make a difference in student achievement in the area of writing, math, and reading. Tomlinson (2003) and Tomlinson and McTighe (2006), authorities on differentiation, presented a case and method for its use in all classrooms. Bailey and Williams-Black (2008) studied how differentiation was taking place in classrooms in the area of literacy, and focused on modifications to content, process or activities done during instruction, and what the students produced to demonstrate mastery; appearing consistent with Tomlinson and McTighe's (2006) definition of differentiation. Of the 24 teachers in the study who were either working toward a master's degree in reading, or already had a graduate degree in reading, the researchers found that only three teachers met the criteria for using differentiation in the classroom. These teachers were using flexible grouping, graphic organizers, scaffolding, work stations, centers, multiple levels of questioning, and student choice. In another study designed to assess the practice of differentiation in classrooms, Edwards et al. (2006) found that both inservice and preservice teachers felt well prepared to provide modifications and accommodations for

students, use flexible grouping strategies, use a variety of materials in their teaching, and allow for a range of student products. Interestingly, the preservice teachers in this study also reported being well prepared to use differentiated grouping strategies, but were not likely to use them in the practicum experience.

Research Methodology

Content analysis permitted an in-depth examination of preservice teacher practice in the area of differentiation for students with an IEP. Berg (2007) described content analysis as a way to uncover patterns and meaning from written documents. The Teacher Work Sample served as the unit of analysis. Developed at Western Oregon University, the work sample has long been regarded as an accurate and reliable way to measure the competency of a preservice teacher during the practicum experience (Henning et al., 2005). Student teachers in the state of Oregon produce a working unit of instruction that includes unit goals and objectives, pre- and post-assessments, lesson plans, and an analysis of student learning and reflections. The document also includes a description of each student in the class. The work sample requires a section on accommodations for students with learning exceptionalities. Preservice teachers produce the work sample with guidance from both the university supervisor and the cooperating teacher, who must meet professional requirements set by each teacher education institution. The work sample, then, exemplifies the best possible teaching done by the preservice teacher in the final stage of teacher education and should reflect best practices, methods, and differentiation. Therefore, content analysis using this particular document produces evidence of the type and degree of differentiation used by preservice teachers.

Analysis of all sections of the work samples revealed the types of differentiation preservice teachers use in their lessons and teaching. The data gathered from the work samples allowed for the analysis of the types of accommodations employed in the classrooms of preservice teachers who were, together with their cooperating teachers, responsible for the education of both general education students and students with IEPs or learning exceptionalities.

A stratified sampling method allowed the study to focus on an equal number of work samples from both undergraduate and graduate students. Stratified sampling, according to Babbie (1989), allows the researcher to “organize the population into homogeneous subsets (with heterogeneity between the subsets) and to select the appropriate number of elements from each” (p. 188). The work samples were

analyzed with five coming from each of the graduate and undergraduate programs in order to represent the demographics of an institution with two distinct student populations. Each work sample contains approximately 100 pages of content and each contained a minimum of ten lessons producing ample data (107 lessons) to analyze. Work samples were randomly selected from within the graduate and undergraduate departments to reduce bias. A representative sample was desired rather than a selection of strong work samples produced by strong teacher candidates. They represented preservice teachers in the full time 15-week student teaching experience who taught in grades 3, 4, or 5.

The purpose of this study was to investigate the manifestation of differentiation for special education students in work sample lesson plans written by preservice teachers working toward an elementary credential at a private university in the Pacific Northwest. This university is NCATE accredited, and thus, adheres to those standards as well as those spelled out in the state administrative rules for credentialing new teachers. Specifically, using archival data and employing content analysis, I examined the nature, characteristics, and evidence of instructional differentiation included in the work samples prepared by preservice teachers from this institution.

Data Treatment and Analysis Procedures

Each work sample analyzed during the study period was reviewed in seven different areas. First, the descriptions of the community, class, and students written in Section 1 of the work sample were examined for information about the students. This section provided data about the number of students in each class who were identified as students with disabilities. This information alerted me to look specifically for purposeful planning for these particular students.

Section 2 of the work sample served as the next part of the document examined for data. In addition to unit goals, this section includes accommodations or differentiation. This section appeared in all work samples, but fell under titles such as “Plan for Differentiation,” “Modifications,” or “Adaptations.” General narratives gave data about ways the preservice teacher planned for inclusion in the learning experience for all types of learners. Any further information regarding students on IEPs was also recorded regardless of where in the first two sections it was located.

Section 3 of the work sample contained the actual lesson plans written for the unit and in order to fully examine the lessons, separation into three sections allowed for thorough analysis. To begin with, the

differentiation section in the lesson plan template was analyzed. The fourth segment examined was the actual sequence of the lesson where I searched for evidence of purposeful planning for students on IEPs. Fifth, the reflection of each lesson provided evidence of preservice teacher attention to the achievement of students identified as students with disabilities.

Following the lesson plans, preservice teachers address the learning gains for each student and the class as a whole, and these quantitative data, supported by explanatory narrative, served as the sixth section for analysis. Section 4 was analyzed for comments made about those students identified in the first section of the work sample as students with IEPs. Additionally, this section was examined for evidence indicating that the preservice teacher addressed achievement and access to the curriculum by those identified students.

The last and seventh section for analysis was the final unit reflection in which the preservice teacher addressed the unit as a whole and personal growth attained teaching the lessons. Preservice teachers may address strengths and weakness of teaching, planning, and assessing in this essay and make judgments about future areas of growth.

A pilot study led to the development of a coding and recording process by which manifest content (Berg, 2007) were extracted and recorded in seven categories corresponding to the sections of the work sample. Explicit statements included within the work sample about differentiation made for a student on an IEP was recorded by section. The data collected then underwent a sorting coding process according to themes and patterns aligned with the differentiation methods suggested in the literature (Bailey & Williams-Black, 2008; Miller, 2002; Tomlinson & McTighe, 2006). For example, patterns that implied a trend toward strategies that rely on proximity or additional time to complete a task represented categories used. Length of assignments or work required were also recorded along with any use of peer tutoring or group work. These categories were then tallied and compared as seen in Figure 1.

Results

In this study, preservice teachers specifically identified 25 students with IEPs with 13 of those students receiving special education services in a learning resource classroom. Although students may receive services outside the general education classroom through a pull-out model for special education, preservice teachers must address differentiation for these students in the work sample. When discussing the needs of the students with learning disabilities, preservice teachers said they would

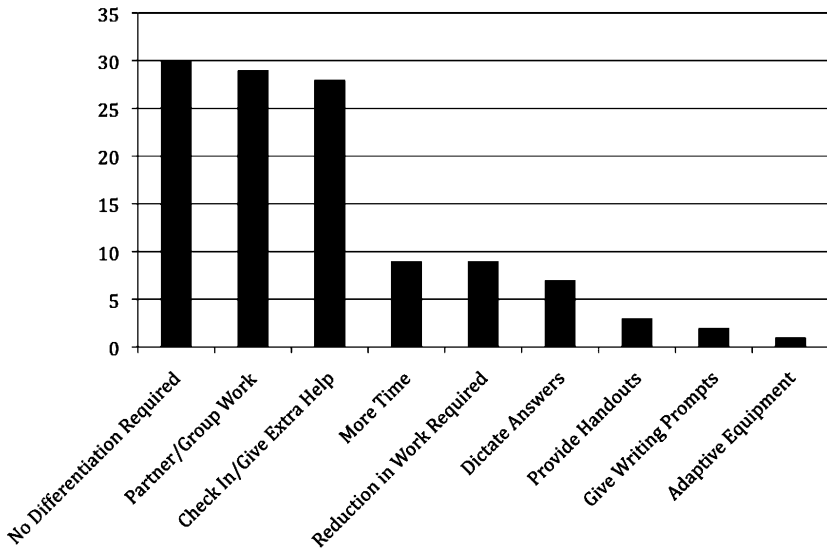


FIGURE 1 Differentiation written in lesson plans.

work one-on-one with students, give students preferential seating, re-explain directions, modify the amount of work required, read directions aloud, use group work and give extra time. Due to the fairly general nature of the first sections of the work sample, the differentiation strategies preservice teachers discuss do not always align with strategies they use in the actual lesson plans as seen in Figure 1.

Section 3 of the work sample contains the lessons for the unit. Each lesson plan template includes a section in which the preservice teacher specifically addresses differentiation for students with disabilities for that particular lesson. Figure 1 depicts the types of differentiation planned in each lesson. The descriptions in the figure are taken directly from work samples. After the examination of the lesson plan template for the planned differentiation strategies, the actual lesson plan sequence was evaluated in a search for any evidence of purposeful intervention for students with IEPs. Within the lesson plan procedures, only eight lessons contained references to what a preservice teacher perceives as an intervention, and they included the following: take time to focus on things when students are struggling, call aside individuals who are struggling, conference with those who struggle, students will work in partners, circulate the room and check on groups, student will work in a group, monitor the student, check in periodically with the student.

Following the lessons, preservice teachers reflect on the lesson by focusing on the teaching, student engagement and student achievement. Only 4 of 107 lessons included any references to students on IEPs. These comments focused on the behavior of the student rather than on academic achievement. The one exception was a comment stating that differentiation was no longer required for the student due to a change in placement to a strictly pull-out program. The information found in the remaining reflections focused largely on the preservice teacher's performance during instruction, and present exiguous information on specific student achievement.

Section 4 requires preservice teachers to reflect on the achievement of individual students, as well as on the whole class results. In this section of the work sample, the research revealed many references to students with IEPs. Every work sample examined contained information in this section about students with disabilities, in addition to other students who may have struggled with the content of the unit. Recommendations preservice teachers made for students on IEPs included reviewing the material, moving the student to the front of the class, providing more one-on-one instruction, providing more partner work and allowing the student more time to complete in-class work. Recommendations focus on a *more of the same* strategy for students who did not master unit objectives. The data revealed no strategy suggesting insight into the specific learning needs of the students.

Section 5 of the work sample is the final reflective essay focusing on the entire unit, and preservice teachers are asked to reflect on what they learned about themselves and their students. The two following excerpts were taken directly from the essays in Section 5 and exemplify typical sentiments on meeting the needs of students with IEPs:

The second goal I hope to work towards is learning how to better incorporate the differentiation of instruction into my lessons. I noticed that I get so caught up in just teaching the lesson or focusing on the management that I overlook the differentiation piece. I also don't think I have the bank of knowledge, ideas and resources to draw from in order to differentiate.

Sometimes I did not need to change much about the lesson, because every student was going to be able to participate and grow. However, in some lessons I had to adapt them to some of the students' needs, and allow some students to work without a partner, or have their partner chosen for them. I also gave special attention to some students, in that I would just check in more with them to make sure that they were staying on task and were focused. This helped all the students to benefit and learn from the lessons, and was done so that all the students would have the chance to grow.

The excerpts taken from the work samples, and the categorical data make it clear that the lessons studied do not include differentiation and that, as stated in the passage above, preservice teachers might not have the knowledge and resources to differentiate. The following section addresses the scarcity of differentiation in lessons by exploring six themes that developed through evaluation of the data.

Discussion and Conclusion

Six themes emerge from the research into the extent to which preservice teachers plan for the instruction for students with disabilities in the general education classroom. First, no evidence of purposeful planning for students with IEPs appears in the sequence of the lesson plans. Second, accommodations written into the work sample lessons center around partner or group work. Third, preservice teachers have an undeveloped or inaccurate understanding of special education and its terminology. Fourth, preservice teachers tend to use multiple intelligences and the use of manipulatives for differentiation. Fifth, preservice teacher reflections focus on the teacher and his or her actions rather than student learning. Sixth, very little evidence of meaningful planning or differentiation for students with disabilities appears in the work samples generally. These themes allow teacher educators an opportunity to criticize the culture in a classroom taught by preservice teachers through the conclusions developed by synthesizing the data from the research.

With the data from the work sample lesson plans serving as evidence, no purposeful planning for students with IEPs emerges in the sequence of the lesson plans. It appears that preservice teachers write lesson plans for whole group instruction and any student needing a different approach is assisted as the lesson unfolds, or while students are working in groups. Sections 1 and 2 of the work sample revealed a total of 25 students on IEPs, with the average number per class at 2.5 and a range of 0–6. Additionally, preservice teachers specifically stated 13 students received services in resource classrooms, and did not include differentiation for these students regardless of the area in which the student carried the IEP.

These lesson plans were written while preservice teachers did practicum hours with a cooperating teacher who has at least three years of teaching experience. The cooperating teacher reviews and agrees to the lesson plans taught and signs a statement to that effect. Are cooperating teachers looking for differentiation in the lesson plans? The research done by Bailey and Williams-Black (2008) found that

only three teachers out of the 24 in their study met their criteria for differentiation. Their research, coupled with the data in this study, point to the reality that preservice teachers may not have strong role models demonstrating differentiation in the classroom. From a case study, Burke and Sutherland (2004) concluded that general education teachers lack the experience and education necessary to integrate students with special needs into the classroom. Given their conclusion, preservice teachers may imitate the teaching done by the cooperating teacher in that planning for students with disabilities does not happen.

This research reveals that accommodations written into the work sample lessons center around partner or group work. This observation, stemming from the data in this study, aligns with that done by Valli and Buese (2007), in which the conclusions point to grouping strategies as a primary way to meet the needs of students needing acceleration or remediation. In this study, preservice teachers identified group work as the leading method used to meet the needs of students with IEPs. With 28 lessons relying on group work, it becomes clear this may represent a preferred method for working with this population. Although grouping for instruction differs from partner or group work, those practices, nonetheless, demonstrate that lessons are not constructed with purposeful attention to differentiation.

In addition to the evidence that purposeful differentiation does not take place in lesson planning, the data in this study point to the continued practice of educating students with disabilities in pull-out programs. Twenty-five students identified with IEPs were served by the lessons analyzed in the study, and of those 25, 13 specifically had descriptions stating that services were provided outside the general education classroom. Furthermore, not one of the lesson plans made reference to any type of collaboration with a special education teacher, a factor identified by Titone (2005) as necessary for successful inclusion of students with disabilities.

In view of the large number of hours that preservice teachers spend with their cooperating teachers, who assist with lesson planning and who approve the work sample lessons, if purposeful differentiation does not occur, then the conclusion follows that students with disabilities actually face a degree of exclusion in the classroom. This conclusion, and the data from this study pointing to over one half of students with IEPs leaving the general classroom for special education services, point to a need to reassess how we include students with disabilities in the general education classroom. This conclusion runs contradictory to Silverman's (2007) finding that preservice teachers held positive attitudes toward inclusion. Regardless of attitude, it appears praxis and attitude are out of alignment, and that students with disabilities attempt to learn

in classrooms where little attention to specific learning needs actually occurs.

A thematic strand rising from the data collected in this study revolves around the contention that preservice teachers have an undeveloped or inaccurate understanding about special education and its terminology. When writing about the differentiation required that might allow students with disabilities greater access to curricular objectives, preservice teachers use several terms such as differentiation, accommodation, modification, and adaptations interchangeably. Statements such as, “I will modify for the student by adjusting the length of the required writing” indicate confusion about terminology. As stated previously, the use of these misnomers in both textbooks and the literature occurs often enough for this inaccuracy to continue without intervention or correction from either cooperating teachers or professors of education. An analysis of the lesson plans also revealed zero references to any IEP goals for any student with a disability. The observation that terminology is used incorrectly, together with the absence of references to content of IEPs in the work sample lessons, leads to the conclusion that inservice and preservice teachers do not understand terminology nor adhere to the requirement to differentiate for exceptional learners.

Not only does lack of understanding cause concern, so does the belief that differentiation is unnecessary for students in the classrooms where preservice teachers teach the work sample lessons. As seen in the data, preservice teachers most frequently explain that no differentiation is required for the lessons they plan. As seen in Figure 1, preservice teachers specifically state in 30 lessons that their students do not need differentiation for those lessons. Considering the research by Edwards et al. (2006) suggesting that teachers receive little instruction on differentiation within the course of study required for licensure, and that by Hamre and Oyler (2004), which found that preservice teachers did not discuss complex strategies needed to differentiate instruction, the data uncovered in this research accord with existing literature and support the line of reasoning that preservice teachers are not prepared for differentiation.

Furthermore, the data reveal that preservice teachers assume that the use of manipulatives, or the incorporation of kinesthetic activities into lesson plans, qualify as a satisfactory response to the mandate to differentiate. Comments such as, “my lessons are hands-on” and “I use manipulatives in most lessons” persist throughout the work samples. Analysis also revealed preservice teachers write that their students are visual or kinesthetic learners, but include nothing visual or active within those lesson plans to address the learner. These data support the conclusion that preservice teachers are not prepared to include adequately

and effectively the strategies necessary to assist students with disabilities reach a level of competency toward curricular objectives. In the analysis of the lesson plans, many comments were directed toward the use of manipulatives or kinesthetic activities, but they did not appear in the sequence of the lesson plans; rather, they were written in other sections of the work sample. Although preservice teachers appear to think about the use of activities that could possibly satisfy a professor-directed requirement to incorporate activities that support the theory of multiple intelligences, it appears that, like differentiation, preservice teachers are thinking about those concepts but do not have skills to execute the strategies within the course of the lessons. Apparently in direct opposition to this conclusion, the research by Burke and Sutherland (2004) found preservice teachers believe their programs were providing them with the skills needed to work with diverse learners; however, it appears the belief held by preservice teachers and the actual ability, as evidenced by work samples, do not align.

Although preservice teachers were required to reflect on each lesson after teaching, the data confirm that these reflections focus on the preservice teacher rather than on student learning. In the course of analyzing the content of teacher reflections, only one lesson plan mentioned a student on an IEP and that was to explain that the student would no longer remain in the classroom, but leave for special education services. The absence of consideration directed towards students with IEPs supports the assertion that little planning occurs for these students.

Evidently, planning for students with disabilities does not occur, but in Section 4 of the work sample, where preservice teachers report findings for student achievement in the unit of study, students with disabilities are reported, albeit, without substantial recommendations for remediation when needed. In fact, the methods most often suggested for students with disabilities include review of the material, one-on-one work, proximity (or where the students sit in a classroom), and more partner work. These suggestions are not consistent with the definition of differentiation, suggesting that teachers continue to teach the same way to all students.

Overall, the data exposed exiguous evidence of meaningful planning or differentiation for students with disabilities in the work sample. As one student explained, “[The cooperating teacher] and I have kept our eyes and ears open to try to solve these learning styles, but we haven’t figured out how to teach these particular students.” Perhaps this most telling statement found in the work sample classifies differentiation as practice not specific enough to implement: an ambiguous concept posing a challenge for both inservice and preservice teachers.

Comments such as “I will check in with those having trouble” support the proposition that specific changes to instruction, student work, or curricular objectives do not occur in the lesson plans. This final and encompassing theme, that preservice teachers do not incorporate meaningful differentiation for students with disabilities into the lesson plans in the work sample, points to an alarming conclusion presented in the next section.

Conclusion and Recommendations

Preservice teachers spend a substantial segment of a teacher preparation program with an experienced cooperating teacher who mentors and coaches in the area of instruction and planning. Even with the assistance provided by cooperating teachers, little if any differentiation appears in the lesson plans. Literature often points to a negative attitude held by teachers toward inclusion (Hammond & Ingalls, 2003; Monahan et al., 1996). Because of preservice teacher comments such as, “Unfortunately, I have not been able to get a grasp on the different learning styles/modalities in the classroom because each student does the same thing,” the conclusion follows that differentiation might not occur on a regular basis in the classroom of the cooperating teacher. When preservice teachers specifically refer to large numbers of students leaving the classroom for assistance in the learning resource classroom rather than receiving service in the general education classroom, it follows that students with disabilities experience exclusion in the general education classroom when it relates to curriculum and instruction. In other words, there exists a question as to the quality of inclusion.

The discussion of the lack of knowledge of special education and the terminology used in the discipline, along with the data in this study that confirm the absence of references to curricular goals contained in the IEP, and the belief held by preservice teachers that differentiation need not exist in the majority of lesson plans leads to the conclusion that preservice teachers are not prepared to include differentiation strategies in lessons. “I also don’t think I have the bank of knowledge, ideas and resources to draw from in order to differentiate.” Such comments should alarm and inform teacher preparation institutions as the conclusion points to a deficit in education in this area.

Review of material or content when students struggle with the curricular objectives, along with the use of proximity and more partner or group work, comprise the strategies preservice teachers use for remediation following lessons deficient in differentiation. During the course of the lesson, preservice teachers “check in” with students who

have been identified as qualifying for an IEP. The conclusion that whole class instruction remains the norm follows the preceding premises.

The data collected in this research support the conclusion that little occurs to allow for inclusion at the instructional level through the use of differentiation strategies for students with disabilities in the general education classroom. The data also appear to point to a lack of preservice teacher education in the area of differentiation. Without the use of differentiation strategies, possibly precipitated by a lack of education or training in this area, whole class instruction becomes the prevailing ethos in the general education classroom. If whole class instruction is the norm, a question arises challenging the authority and credence of an IEP for students with disabilities. Do both preservice and inservice teachers follow IEPs or do the plans function merely as a formality to identify certain students and thus become an excuse when curricular objectives remain elusive?

Given the research results, it follows that teacher candidates need explicit instruction and guidance in implementing differentiation skills, strategies for remediation, in-depth understanding of IEP requirements, and they must intern with professionals well versed in such knowledge and who teach in inclusive environments. Additionally, teacher education programs must ask preservice teachers to demonstrate course content in practicum experiences to ensure skills transfer to practice.

More research examining work samples from a wide selection of teacher preparation institutions across states would allow researchers to delve into the degree of differentiation taking place nationally. Additionally, research into the types of courses at teacher preparation institutions that specifically include methods of differentiation for students with disabilities would allow schools of education to conduct internal program evaluations focusing on improvement in this area. Last, research that compares traditional models of special education and the identification process to current programs such as Response-to-Intervention will lead to a greater understanding of how to make content objectives accessible for students with disabilities, and thus move towards a true model of inclusion.

References

- Babbie, E. (1989). *The practice of social research*. Belmont, CA: Wadsworth.
- Bailey, J. P., & Williams-Black, T. H. (2008). Differentiated instruction: Three teachers' perspectives. *College Reading Association Yearbook* (29), 133–151.
- Beecher, M., & Sweeny, S. M. (2008). Closing the achievement gap with curriculum enrichment and differentiation: One school's story. *Journal of Advanced Academics*, 19, 502–530.

- Berg, B. L. (2007). *Qualitative research methods for the social sciences*. Boston: Pearson.
- Beyerback, B., & Nassoioy, T. D. (2004). Where is equity in the national standards? A critical review of the INTASC, NCATE, and NBPTS standards. *Scholar-Practitioner Quarterly*, 2(4), 29–42.
- Boe, E. E., Shin, S., & Cook, L. H. (2007). Does teacher preparation matter for beginning teachers in either special or general education? *The Journal of Special Education*, 41(3), 158–170.
- Burke, K., & Sutherland, C. (2004). Attitude toward inclusion: Knowledge vs. experience. *Education*, 125(2), 163–172.
- Edwards, C. J., Carr, S., & Siegel, W. (2006). Influences of experiences and training on effective teaching practices to meet the needs of diverse learners in schools. *Education*, 126(3), 580–592.
- Friend, M. (2008). *Special education: Contemporary perspectives for school professionals*. Boston: Pearson.
- Giangreco, M. F. (2007). Extending inclusive opportunities. *Educational Leadership*, 64(5), 34–37.
- Guillaume, A. M. (2008). *K–12 classroom teaching: A primer for new professionals* (3rd ed.). Upper Saddle River, NJ: Pearson.
- Hall, G. E., Quinn, L. F., & Gollnick, D. M. (2007). *The joy of teaching*. Boston, MA: Allyn and Bacon.
- Hammond, H., & Ingalls, L. (2003). Teachers' attitudes toward inclusion: Survey results from elementary school teachers in three southwestern rural school districts. *Rural Special Education Quarterly*, 22(2), 24–30.
- Hamre, B., & Oyler, C. (2004). Preparing teachers for inclusive classrooms. *Journal of Teacher Education*, 55(2), 154–163.
- Henning, J. E., DeBruin-Parecki, A., Hawbaker, B. W., Nielsen, C. P., Joram, E., & Gabriele, A. (2005). The teacher work sample: A tool for scaffolding and assessing preservice teachers' early field experiences. *The Teacher Educator*, 40(3), 188–207.
- Jung, W. S. (2007). Preservice teacher training for successful inclusion. *Education*, 128(1), 106–113.
- Miller, S. P. (2002). *Validated practices for teaching students with diverse needs and abilities*. Boston: Allyn and Bacon.
- Monahan, R., Marino, S., & Miller, R. (1996). Teacher attitudes toward inclusion: Implications for teacher education in schools 2000. *Education*, 117(2), 316–320.
- NCATE. (2008). *Professional standards for the accreditation of teacher preparation institutions* [Electronic Version]. Retrieved from <http://www.ncate.org/institutions/publicationsbooks.asp?ch=49&book=standards>
- Silverman, J. (2007). Epistemological beliefs and attitudes toward inclusion in pre-service teachers. *Teacher Education and Special Education*, 30(1), 42–51.
- Snyder, R. F. (1999). Inclusion: A qualitative study of inservice general education teachers' attitudes and concerns. *Education*, 120(1), 173–181.
- Spooner, F., Baker, J. N., Harris, A. A., Ahlgrim-Dezell, L., & Browder, D. M. (2007). Effects of training in universal design for learning on lesson plan development. *Remedial and Special Education*, 28(2), 108–116.

- Titone, C. (2005). The philosophy of inclusion: Roadblocks and remedies for the teacher and the teacher educator. *The Journal of Educational Thought*, 39(1), 7–32.
- Tomlinson, C. A. (2003). Teaching all students. *Educational Leadership*, 61(2), 6–11.
- Tomlinson, C. A., & McTighe, J. (2006). *Integrating differentiated instruction: Understanding by design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Valli, L., & Buese, D. (2007). The changing roles of teachers in an era of high-stakes accountability. *American Educational Research Journal*, 44(3), 519–558.