

**Reinhardt College
Professional Education Programs Unit**

**Institutional Report
For
Developmental Approval Visit**

**Submitted to the
Georgia Professional Standards Commission**

**October 4-8, 2003
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**Differentiated Approaches to
Teaching and Assessment:**



"Creating a Community of Care and Challenge"

“The experience and acceptance of diversity is the first step to empathy and understanding. It is something at Reinhardt we should strive to create.”

*President J. Thomas Isherwood
Reinhardt College
October 12, 2002*

“We know that one of our strengths will be our ability to differentiate student needs and respond. We will continue to look at each student as an individual and create an educational experience for that particular student that meets that student’s needs. This is much more than simply determining what courses a student will take, but assumes the coordination of classroom, service activities, and student activities into a meaningful, transforming life experience.”

*President Isherwood
Inaugural Address
March 31, 2003*

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PSOE CONCEPTUAL FRAMEWORK

Reinhardt College History/Institution Overview:

In the early 1880's, Captain A. M. Reinhardt and his brother-in-law John J. A. Sharp saw the need for an outstanding school in Waleska---one that would give students an opportunity to advance beyond the primary grades. A devout Methodist who cared about the spiritual and intellectual growth of young people, Captain Reinhardt asked the North Georgia Conference of the Methodist Church for help in establishing a school to provide basic instruction in the liberal arts. The Conference chartered the new school in 1883, naming the Reverend James T. Linn as its first teacher and president; in January of 1884, the institution started classes for 12 students in an old cabinet and wood shop.

Reinhardt Academy, as the school was then called, provided instruction for all ages and grade level with curriculum designed to train teachers and ministers. The academy gradually evolved into a privately supported two-year college and was accredited to offer associate degrees as a Level I institution by the Commission on Colleges of the Southern Association of Colleges and Schools in 1953. In 1994, the Commission on Colleges accredited Reinhardt as a Level II institution, and that same year, the school awarded the first bachelor's degree programs in business administration. In the fall of 1997, three bachelor's degree programs were offered in the areas of biology, communication, and liberal studies. Bachelor degree programs in psychology and fine arts were added in the fall of 1999.

Like its founding fathers, Reinhardt College continues to respond to the educational needs of North Georgia. In addition to its day and evening programs on the Waleska campus, the College offers a full range of evening and weekend courses through the North Fulton Center in Alpharetta.

Mission/Objectives of Reinhardt College:

The genesis for the development and evolution of the conceptual framework by the Price School of Education (PSOE) was derived from the mission of Reinhardt College which is to educate the whole person from a Liberal Arts and Sciences context by committing its resources and services to developing the intellectual, social, personal, vocational, spiritual/moral and physical dimensions of its students, who are nurtured through the values of a caring Christian college community. The following College objectives were considered in order to establish a correlation to the PSOE conceptual framework:

- To develop a foundation of academic skills characterized by high-level competencies in reading, writing, speaking, mathematical reasoning and computing; the ability and passion to learn continuously; and the critical thinking skills of knowledge, comprehension, application, analysis, synthesis and evaluation.
- To develop an understanding that while each of us is a member of many communities, we are all members of a common community; the ability to understand and appreciate diverse social settings and environments; a commitment of service to others and a sense of civic responsibility.
- To develop a sense of personal responsibility, honesty, integrity, the drive to excel, a sense of the worth of work and the ability to make and understand decisions and their consequences.
- To prepare students for the world of work, for additional formal education or for life's calling.
- To develop an understanding of one's own spiritual and moral roots and an understanding and appreciation of life's spiritual dimension and its meaning.
- To develop an understanding and appreciation of the need for good health and exercise and a commitment to wellness as essential for living a full and satisfying life.

Given the College mission and objectives, combined with the PSOE beliefs about learning, it has been concluded that the principles of Differentiated Instruction more closely articulate the direction and focus of the teacher preparation programs of study. These perspectives are reflected in the now emerging theoretical fields of social constructivism, cognitivism, and socio-culturalism theories (Shepard, 2000).

The key principles of Differentiated Instruction are as follows:

- The teacher is clear about what matters in subject matter.
- The teacher understands, appreciates, and builds upon student differences.
- Assessment and instruction are inseparable.
- The teacher adjusts content, process, and product in response to student readiness, interests, and learning profile.
- All students participate in respectful work.
- Students and teachers are collaborators in learning.
- Goals of a differentiated classroom are maximum growth and individual success.
- Flexibility is the hallmark of a differentiated classroom. (Tomlinson, 1999, p. 48)

Concluding that Differentiated Instruction aligns in spirit and in content with the College Mission and Objectives, the PSOE has founded its teacher preparation programs on three basic tenets:

- *Learner differences are understood, appreciated, and built upon through respectful, meaningful work in a collaborative, nurturing environment.* This important tenet supports the mission of the College by advocating that teacher candidates develop a caring, challenging, and respectful learning environment built on supportive partnership and unconditional acceptance of student differences. Teacher candidates regard the development of a nurturing environment to be a personal and professional commitment to the teaching philosophy of differentiated instruction, and consider the support of students' diverse learning needs to maximize learning as a civic responsibility to the school community. Further, teacher candidates also act in accordance with the Code of Ethics as outlined by the Georgia Professional Standards Commission. The Code of Ethics confirms the College mission by providing standards of conduct that strongly support the demonstration of honesty, integrity, and personal commitment to the welfare of students in the course of professional practice. Additionally, the tenet endorses a spiritual dimension in teacher development at Reinhardt College. Affirming the College belief that there is a powerful connection between spiritual development and the quality of a school's teaching and learning, this key tenet encourages teacher candidates to offer their students an atmosphere of hope and joy in learning, a meaningful connectedness, and a sense of community. While exhibiting an optimistic perspective, teacher candidates combine exciting differentiated teaching and meaningful, challenging academic tasks with a classroom environment that nurtures the spirit of each learner.
- *Learner growth and success are developed through the process of ongoing assessment and adjusted instruction.* Committed to the College's belief in continuous assessment and quality improvement, the teacher candidate uses systematic assessment as an ongoing diagnostic activity to guide, differentiate, and adjust instruction. After the teacher candidates have collected, organized, and interpreted data about student learning, they must then reflect on the status of each learner to plan and adjust their instruction. This assessment cycle proposes that critical thinking be defined as *reasonable, reflective thinking* in which the teacher candidates judge what instructional course to take in light of the data, or, more specifically, how to adjust the learning tasks based on student progress.
- *Teachers who are extremely knowledgeable about subject matter, a variety of wise and flexible instructional practices, and multiple options for differentiated assessment are better equipped to adjust essential content, their teaching process, and student assessment options to address learner differences.* Promoting the College objective of preparedness for the world of work, this tenet highlights the need for teacher candidates to demonstrate high-level competency in all curriculum areas, and to continually learn as much as possible about differentiated instruction in order to make more informed decisions about their own teaching and student learning. This tenet also underlines the need for teacher candidates to exhibit a strong sense of professionalism, including a drive to excel, a dedication to the teaching profession, and a positive attitude about continuous learning.

Price School of Education Mission Statement/Beliefs:

The mission of all teacher preparation programs at Reinhardt College is to produce reflective, problem-solving teachers who respond to the diversity of student needs through differentiated instruction driven by ongoing assessment and adjustments within a nurturing environment.

With this mission in mind, the PSOE faculty believes that effective teachers:

Knowledge

- Utilize knowledge of human growth and development, emphasizing the intellectual processes of learning and motivation, to provide a critical basis for instruction that addresses learner differences.
- Know how to enhance learning and address learner differences through a wide variety of instructional strategies.
- Understand content and can communicate the essential concepts, principles, and skills of each discipline in different ways.

Skills

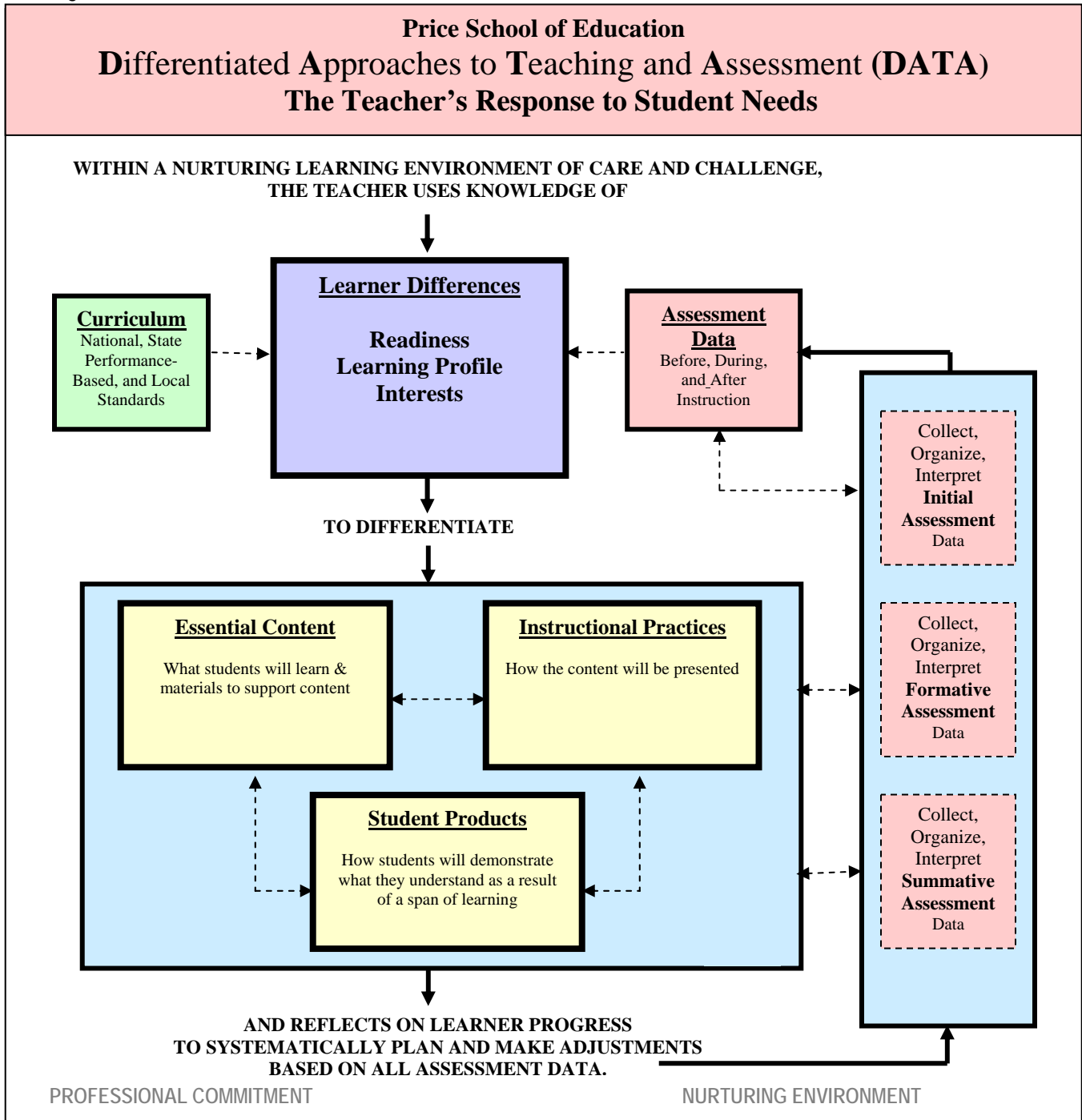
- Acknowledge and enhance the rich, diverse backgrounds and experiences that all students bring to the classroom.
- Use learner differences to shape instruction.
- Challenge all students with increasingly targeted complex skills.
- Collaborate with students to facilitate effective teaching and learning.
- Utilize technology to address learner differences.
- Perform ongoing assessment as an integral part of instruction to address learner differences.

Dispositions

- Recognize that all students have an innate capacity and desire to learn.
- Provide a supportive, nurturing environment to facilitate learning.
- Reflect systematically on instruction to operationalize ongoing assessment and subsequent adjustments.
- Display honesty, integrity and a deep sense of personal responsibility for decisions and their consequences.
- Exhibit a sense of professionalism, including a drive to excel, a dedication to the teaching profession, and a positive attitude about continuous learning.
- Possess a personal understanding of and appreciation for life's spiritual dimension to offer students a sense of hope, connectedness, and community.

PSOE Differentiated Model for Instruction:

Aligning our beliefs with the key principles of differentiation, the faculty of the Price School of Education has created the following model for instruction:



Correlation of the DATA Model to the PSOE Proficiencies:

Within a nurturing learning environment of care and challenge, the teacher consistently uses knowledge of curriculum, student differences, and assessment data to differentiate essential content, instructional practices, and assessment. Throughout instruction, the teacher collects, organizes, interprets, and reflects on data about student learning to systematically plan and make adjustments. A teacher who consistently displays a professional commitment to the teaching philosophy of differentiated instruction to support students' diverse learning needs and to maximize learning is crucial to the success of the instructional model.

PSOE Candidate Proficiencies:

To best facilitate the Differentiated Instruction Model, the faculty of the Price School of Education has established the following domains and proficiencies for all teacher education programs:

DOMAIN I: PLANNING FOR DIFFERENTIATED INSTRUCTION & ASSESSMENT

Proficiency 1.0: The teacher candidate uses knowledge of curriculum, learner differences, and ongoing assessment data to plan for student access to same essential content.

- 1.1 Exhibits knowledge of subject matter, including key facts, organizing concepts, guiding principles, associated attitudes, methods of inquiry, connections to other disciplines, and applications to common life experiences.
- 1.2 Identifies and references national, state performance, and local curriculum standards
- 1.3 Specifies essential content to meet curriculum standards.
- 1.4 Collects a variety of materials for student access to essential content.
- 1.5 Prepares essential content that is accurate, developmentally appropriate, and sequenced.
- 1.6 Activates and pre-assesses student prior knowledge for planned instructional tasks.
- 1.7 Uses information about student interests to provide motivation for learning tasks.
- 1.8 Considers students' preferred learning styles or intelligences.
- 1.9 Utilizes ongoing assessment data to plan differentiated learning experiences.

DOMAIN II: PROVIDING DIFFERENTIATED INSTRUCTION & ASSESSMENT

Proficiency 2.0: The teacher candidate utilizes a variety of strategies to differentiate instruction and assessment.

- 2.1 Assists students in making connections between the essential content and their lives and interests.
- 2.2 Provides scaffolded assistance in response to the learner's level of performance.
- 2.3 Offers interactive and collaborative learning experiences.
- 2.4 Provides for flexible grouping.
- 2.5 Uses and integrates technology to differentiate instruction.
- 2.6 Conducts and adjusts thoughtful, reflective questioning and dialogue to explore student understanding.
- 2.7 Maintains and monitors consistent standards of conduct that are respectful of student differences.
- 2.8 Presents meaningful tasks that are respectful of student differences, challenging, and engaging for all students.
- 2.9 Varies and adjusts complexity of tasks.
- 2.10 Paces students based on learner needs.
- 2.11 Offers student choices about topics to study and ways to work.
- 2.12 Provides differentiated assessment options to demonstrate student learning.
- 2.13 Offers various modes of expression for student assessment.
- 2.14 Provides rubric assessments linked to outcomes.
- 2.15 Offers flexible, "real world" assessment options.
- 2.16 Provides time for student reflection and self-assessment of learning.

DOMAIN III: IMPACTING STUDENT LEARNING

Proficiency 3.0: The teacher candidate uses systematic formal/informal assessment as an ongoing diagnostic activity to measure student growth and to guide, differentiate, and adjust instruction.

- 3.1 Collects formative and summative assessment data about student learning.
- 3.2 Reflects on status of learner in light of data.
- 3.3 Organizes data into meaningful structures.
- 3.4 Interprets the data.
- 3.5 Plans and adjusts learning tasks based on assessment data.

DOMAIN IV: PROFESSIONAL RESPONSIBILITIES IN SUPPORT OF DIFFERENTIATED INSTRUCTION & ASSESSMENT

Proficiency 4.0: The teacher candidate displays a professional commitment to the teaching philosophy of differentiated instruction to support students' diverse learning needs and to maximize learning.

- 4.1 Behaves consistently in accordance with PSC Code of Ethics and PSOE Policies.
- 4.2 Establishes positive, respectful, and collaborative relationships with students, collaborating teachers, school personnel, parents, community members, and outside agencies.
- 4.3 Completes lesson plans, records, and reports in an organized, accurate, and timely manner.
- 4.4 Practices consistent, constructive written and spoken communication with students, parents, and school personnel that is accurate and grammatically correct.
- 4.5 Creates a nurturing learning environment of care and challenge that supports the philosophy of differentiated instruction.
- 4.6 Reflects on teaching, personally and with peers, to make informed decisions about student learning.
- 4.7 Assumes ethical responsibility for all instructional decisions and their consequences.

Knowledge Base to Support PSOE Proficiencies:

In researching a knowledge base to support the PSOE proficiencies, the faculty was guided by three basic tenets that underline the DATA Model:

- A. Learner differences are understood, appreciated, and built upon through respectful, meaningful work in a collaborative, nurturing environment.
- B. Learner growth and success are developed through the process of ongoing assessment and adjusted instruction.
- C. Teachers who are extremely knowledgeable about subject matter, a variety of wise and flexible instructional practices, and multiple options for differentiated assessment are better equipped to adjust essential content, their teaching process, and student assessment options to address learner differences.

The following discussion provides a correlation between the three basic tenets that reflect the PSOE proficiencies and relevant research that supports the conceptual framework of the program.

Learner differences are understood, appreciated, and built upon through respectful, meaningful work in a collaborative, nurturing environment.

In examining the elements of a nurturing environment, it is helpful to refer to current brain research, which offers useful information about the type of atmosphere that must exist for differentiated instruction. For example, Diamond & Hopson (1999) state that enriched environments unmistakably influence the brain's growth and learning. An enriched environment for children, Diamond and Hopson say, includes a steady source of positive emotional support; stimulates the senses; has an atmosphere free of undue pressure and stress but suffused with a degree of pleasurable intensity; presents a series of novel challenges that are neither too easy nor too difficult for the child at his or her stage of development; allows social interaction for a significant percentage of activities; promotes the development of a broad range of skills and interests that are mental, physical, aesthetic, social, and emotional; gives the child an opportunity to choose many of his or her efforts and to modify them; provides an enjoyable atmosphere that promotes exploration and the fun of learning; and allows the child to be an active participant rather than a passive observer. In their discussion of mind/brain learning principles, Caine & Caine (1994) concur that learning occurs only when what is being presented is meaningful enough to the student that he or she decides to actively engage in the learning experience. The principles also address the importance of attending to students' unique learning styles, offering many opportunities for social interaction, assisting students in making emotional connections, and providing an environment of relaxed alertness with low threat and high challenge.

This research is vital to the classroom teacher as he/she begins to create a nurturing environment that supports differentiated instruction. For example, Caine & Caine (1994) also explain that when a task is far too difficult for a learner, he/she may feel threatened and "downshift" into a self-protection mode. A threatened learner will not persist with thinking or problem solving. On the other hand, a simple task also suppresses a learner's thinking and problem solving. He or she may coast into a relaxation mode. This situation may be compounded if students perceive that their unique learning styles are not valued within the classroom, or if assignments seem meaningless and disconnected from their own lives. Teachers moving toward differentiated instruction find greater success if they attend to issues of classroom structure and management as they move toward more student-centered learning (Tomlinson, 1999). According to Good & Brophy (2000), teachers who approach classroom management as a process of establishing an effective learning environment tend to be more successful than teachers who emphasize their roles as disciplinarians. They use management techniques that elicit students' cooperation and sustain their engagement in activities.

There are numerous ways to differentiate the learning environment to address student readiness, interests, and learning profiles. Some examples include: (1) ensuring that there are places in the classroom to work quietly without distraction, as well as places that encourage collaboration; (2) providing materials that reflect a variety of cultures and home settings; (3) setting out clear guidelines for independent work that matches individual needs; (4) developing routines that allow students to get help when teachers are busy with other students and cannot help them immediately; and (5) helping students understand that some students need to move around to learn, while others do better sitting quietly (Tomlinson, 1999; Winebrenner, 1992, 1996). These management examples clearly portray a supportive environment that reflects an acceptance and respect for student similarities and differences.

To further understand other critical components of differentiated instruction within a nurturing environment, one must examine key elements that provide the basis for a more collaborative and supportive interaction between the teacher and his/her students. In differentiated instruction, Tomlinson (1999) states that: (1) all students participate in respectful work -- work that is challenging, meaningful, interesting, and engaging; (2) students and teachers collaborate in setting class and individual goals; and (3) students often have choices about topics they wish to study, ways they want to work, and how they want to demonstrate their learning. These three points clearly underline a classroom environment that is student centered. Shifting the emphasis from the "teacher and instruction" focus to the "student and learning" focus means redefining the role of the teacher.

Essentially, the aim of differentiating instruction is to maximize each student's growth by meeting each student where he or she is and helping the student to progress (Tomlinson, 1999). So, in redefining the role of the teacher to focus on "student and learning" in a differentiated classroom, one must also examine the importance of thoughtful questioning, constructive feedback and how it relates to student self-assessment, and scaffolded assistance.

In order to teach well, it is widely believed that one must be able to question well. According to Morgan & Saxton (1991), teachers ask questions for several reasons: (1) the act of asking questions helps teachers keep students actively involved in lessons; (2) while answering questions, students have the opportunity to openly express their ideas and thoughts; (3) questioning students enables other students to hear different explanations of the material by their peers; (4) asking questions helps teachers to pace their lessons and moderate student behavior; and (5) questioning students helps teachers to assess student learning and revise their lessons as necessary. Black & William (1998) encourage teachers to use questioning and classroom discussion as an opportunity to increase their students' knowledge and improve understanding. They caution, however, that teachers need to make sure to ask thoughtful, reflective questions rather than simple, factual ones and then give students adequate time to respond. Good & Brophy (2000) view thoughtful questioning as one of the best avenues to engage students in cognitive processing and construction of knowledge. They further assert that, in addition to providing immediate feedback to student responses, the effective teacher also consistently encourages students to clarify or elaborate on their answers to obtain a more complete picture of what they understand.

Danielson (1996) characterizes high-quality teacher-to-student feedback as timely, accurate, significant, constructive, and specific. When the goal is to increase student motivation and learning, productive feedback tells students what they are doing right, pinpointing strengths and helping learners develop those strengths even further. Black & William (1998) state that student self-assessment is directly related to student feedback. When anyone is trying to learn, feedback about the effort has three elements: recognition of the desired goal, evidence about present position, and some understanding of a way to close the gap between the two. All three must be understood to some degree by anyone before he or she can take action to improve learning. They conclude that feedback on tests, seatwork, and homework should give each student specific guidance on how to improve, and each student must be given help and an opportunity to work on the improvement. Shepard (2000) asserts that regular student self-assessment increases students' responsibility for their own learning and makes the relationship between teachers and students more collaborative.

Scaffolding is one of the principles of effective instruction that enables teachers to accommodate individual student needs. Scaffolded instruction is a concept that has grown out of research on how individuals learn (Vygotsky, 1978). Vygotsky's principle of teaching within the students' zones of proximal development implies that students need explanation, modeling, coaching, and other forms of assistance from their teachers, but also that this teacher structuring and scaffolding will diminish as the students' expertise develops. Eventually, students should become able to use what they are learning autonomously and to regulate their own productive task engagement. According to Roehler & Duffy (1991), scaffolded instruction may include direct explanation, modeling, or showing students how to perform a task or operation, and think-alouds of the reasoning behind a particular procedure. Modeling has been shown to be a vital part of helping students learn the process of constructing meaning and of helping them learn the various strategies and skills involved in this process (Bandura, 1971). Hogan and Pressley (1997) summarized the literature to identify the following essential elements of scaffolded instruction: (1) pre-engagement with the student and curriculum; (2) establish a shared goal; (3) actively diagnose student needs and understandings; (4) provide tailored assistance; (5) maintain pursuit of the goal; (6) give feedback; (7) control for frustration and risk; and (8) assist internalization, independence, and generalization to other contexts.

The above elements of scaffolded assistance, which do not have to occur in sequence, highlight several important points as they relate to the nurturing environment within a differentiated classroom. Operating within these guidelines, the teacher considers curriculum goals and students' needs to select appropriate learning tasks. As the teacher collaborates with each student to plan instructional goals, the students become more motivated and invested in the learning process. The teacher must be knowledgeable of essential content and sensitive to the students' background knowledge or misconceptions to determine if they are making progress. The teacher then uses appropriate scaffolding techniques, adjusting them to meet the students' needs. The teacher can ask questions or request that student clarify or elaborate their responses to assist students in remaining focused on their goals. To help students learn to monitor their own progress, the teacher can summarize current progress and explicitly note behaviors that contributed to each student's success. By encouraging the students to try alternatives, the teacher can create an environment in which the students feel free to take risks with learning. Finally, the teacher can assist the students in becoming more independent in beginning or completing a task and also can provide the opportunity to practice the task in a variety of challenging, meaningful, interesting, and engaging contexts.

Expert teachers use knowledge about children and their learning to fashion lessons that connect to students' experiences. They create a wide variety of learning opportunities to make subject matter come alive for young people who learn in different ways. They know how to support students' continuing development and motivation to achieve while creating incremental steps that help student progress toward more complicated ideas and performances. They know how to diagnose sources of problems in students' learning and how to identify strengths on which to build (Shulman, 1987). Differentiated instruction is a teaching philosophy based on the premise that teachers should adapt instruction to student differences. There is ample evidence that students are more successful in school and find it more satisfying if they are taught in ways that are responsive to their readiness levels (e.g., Vygotsky, 1986), interests (e.g., Csikszentmihalyi, 1997)

and learning profiles (e.g., Sternberg, Torff, & Grigorenko, 1998). According to Bruner (1990), instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness). Instruction must be structured so that it can be easily grasped by the students, continually building on what they have already learned. According to Gardner (1993), individuals should be encouraged to use their preferred intelligences in learning, instructional activities should appeal to different forms of intelligence, and assessment of learning should measure multiple forms of intelligence. Learning differences should be acknowledged and respected because each person is unique, can learn, and has an individual learning style (Dunn & Dunn, 1999). Teaching individuals through their learning-style strengths improves their achievement, self-esteem, and attitudes toward learning.

Learner growth and success are developed through the process of ongoing assessment and adjusted instruction.

Teachers make three types of decisions using assessment results: (1) Instructional placement decisions--what the student knows and where he or she should be in the instructional sequence--i.e., what to teach next; (2) Formative evaluation decisions--information to monitor a student's learning while an instructional program is underway--how quickly progress is being made, whether the instructional program is effective, and whether a change in instructional program is needed to promote the student's learning; and (3) Diagnostic decisions--which specific difficulties account for the student's inadequate progress so the teacher can adjust the learning progress by designing more effective instructional plans.

When assessment is integrated with instruction, it informs teachers about what activities and assignments will be most useful, what level of teaching is most appropriate, and how summative assessments provide difficulties of their students, they can make better decisions about what a student needs to learn next and how to teach that material in a manner that will maximize the student's learning (Fuchs, 1995). Many studies arrive at another important conclusion: that improved formative assessment helps low achievers more than other students and so reduces the range of achievement while raising achievement overall. A notable recent example is a study devoted entirely to low-achieving students and students with learning disabilities, which shows that frequent assessment feedback helps both groups enhance their learning. The nature of assessment influences what is learned and the degree of meaningful engagement by students in the learning process. Wiggins (1998) contends that assessments should be authentic, with feedback and opportunities for revision to improve, rather than simply audit learning. Black & William (1998) shows that student self-assessment skills, learned and applied as part of formative assessment, enhance student achievement. Teachers use assessment information formatively when they (1) pretest before a unit of study and adjust instruction for individuals or the entire group; (2) analyze which students need more practice; (3) continually revise instruction on the basis of results; (4) reflect on the effectiveness of their own teaching practices; (5) confer with students regarding their strengths and the areas that need improvement; and (6) facilitate peer tutoring, matching students who demonstrate understanding with those who do not (Chappuis & Stiggins, 2002). Assessment for learning occurs during the teaching and learning process rather than after it and has as its primary focus the ongoing improvement of learning for all students (Shepard, 2000). Teachers who assess for learning use day-to-day classroom assessment activities to involve students directly and deeply in their own learning, increasing their confidence and motivation to learn by emphasizing progress and achievement rather than failure and defeat (Stiggins, 1999; 2001).

The content of assessments should match challenging subject matter standards and serve to instantiate what it means to know and learn in each of the disciplines. Therefore, a broader range of assessment tools is needed to capture important learning goals and processes and to more directly connect assessment to ongoing instruction. The most obvious reform has been to devise more open-ended performance tasks to ensure that students are able to reason critically, to solve complex problems, and to apply their knowledge in real-world contexts. In addition, if instructional goals include developing students' metacognitive abilities, fostering important dispositions, and socializing students into the discourse and practices of academic disciplines, then it is essential that classroom routines and corresponding assessments reflect these goals as

well. This means expanding the armamentarium for data gathering to include observations, clinical interviews, reflective journals, projects, demonstrations, collections of student work, and students' self-evaluations, and it means that teachers must engage in systematic analysis of the available evidence (Shepard, 2000).

Teachers who are extremely knowledgeable about subject matter, a variety of wise and flexible instructional practices, and multiple options for differentiated assessment are better equipped to adjust essential content, their teaching process, and student assessment options to address learner differences.

Effective teachers explain content to their students from different perspectives, respond accurately to their questions, plan lessons intelligently, qualify assertions appropriately, and choose what to include, exclude, and emphasize in the curriculum (Shulman, 1987). Shulman also states that teachers need to understand subject matter deeply and flexibly, so that they can help students create useful concept maps, relate ideas to one another, and address misconceptions. He also believes that teachers need to see how ideas connect across fields and to everyday, life. This kind of understanding provides a foundation for pedagogical content knowledge that enables teachers to make ideas accessible to others.

Flexible grouping allows students to see themselves in a variety of contexts and aids the teacher in "auditioning" students in different settings and with different kinds of work (Tomlinson, 1999). Full cognitive development requires social interaction (Vygotsky, 1986). Cognitive development is facilitated by providing activities or situations that engage learners and require adaptation (i.e., assimilation and accommodation). A teacher must use teaching methods that actively involve students and present challenges (Piaget & Inhelder, 1969). Research on learning tasks suggests that activities and assignments should be sufficiently varied and interesting to motivate student engagement, sufficiently new or challenging to constitute meaningful learning experiences rather than needless repetition, and yet sufficiently easy to allow students to achieve high rates of success if they invest reasonable time and effort.

As children do not learn in the same way, they cannot be assessed in a uniform fashion (Gardner, 1993). Therefore, it is important that a teacher create a "learning profile" for each student. Knowing how each student learns will allow the teacher to properly assess the child's progress. This assessment practice will allow a teacher to make more informed decisions on what to teach and how to present information. Traditional tests (e.g., multiple choice, short answer, essay) require students to show their knowledge in a predetermined manner. A better approach to assessment is to allow students to explain the material in their own ways using their different intelligences or learning styles. Preferred assessment methods include student portfolios, independent projects, student journals, and assigning creative tasks (Lazear, 1992).

A prime reason for differentiating instruction relates to effective teaching. Expert teachers are attentive to students' varied learning needs (Danielson, 2002); to differentiate instruction, then, is to become a more competent, creative, and professional educator. Differentiation must be a refinement of, not a substitute for, high-quality curriculum and instruction. Expert or distinguished teaching focuses on the understandings and skills of a discipline, causes students to wrestle with profound ideas, calls on students to use what they learn in important ways, helps students organize and make sense of ideas and information, and aids students in connecting the classroom with a wider world (Brandt, 1998; Danielson, 1996; Schlechty, 1997; Wiggins & McTighe, 1998). Extending the learning community from the school to the home, the teacher establishes and maintains collaborative relationships with parent and encourages their active involvement in their children's learning (Good & Brophy, 2000).

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Knowledge Base Applied to PSOE Program Design:

The PSOE Differentiated Approaches to Teaching and Assessment (DATA) Model was developed in response to a consensus by the faculty that there is a crucial need to assist teacher candidates in teaching an increasingly diverse student population. Carol Ann Tomlinson (1999) states that it is critical that colleges and universities develop pre-service programs that provide prospective teachers with a meaningful understanding of the elements of differentiated instruction. She recommends that teacher education programs and school districts

- Set clear expectations for the novice's growth in student-centered, responsive instruction.
- Provide clear models for differentiated curriculum and differentiated instruction in action.
- Provide mentoring that helps teachers reflect on student needs and appropriate responses.
- Ensure teachers' comfort in implementing a growing range of instructional strategies that invite differentiation and facilitate its management.
- Provide early partnerships with teachers who practice differentiation. (p. 115)

NOTE: The above recommendations offer a clear explanation as to why the total and successful implementation of the DATA model by teacher candidates should not be the primary objective of the PSOE preparation programs. The intention should be to assist the candidates in developing classrooms responsive to the needs of academically diverse learners. Understanding what impedes and what facilitates appropriately differentiated instruction is essential information for candidates as they move into school settings where one-size-fits-all instruction may be prevalent. It is expected that the candidates will struggle with the principles of differentiated instruction as they begin their first year of teaching. Like students, each beginning teacher will be ready for differing degrees of challenge. Therefore, it is the opinion of the PSOE faculty that differentiated instruction for teacher candidates be considered on a growth continuum of implementation as they move through the preparation programs and enter the teaching profession as novice teachers. The PSOE preparation programs will assist candidate growth by offering a strong foundation for the student-centered differentiated classroom. As candidates move through the programs and into classrooms, they will be encouraged to (1) consistently examine their personal philosophies about students and their individual needs; (2) set personal goals for differentiating instruction; (3) implement differentiated instruction with small, well-organized adaptations; and (4) reflect on what was learned from each experience.

The basic tenets that underlie the PSOE DATA Model are as follows:

- A. Learner differences are understood, appreciated, and built upon through respectful, meaningful work in a collaborative, nurturing environment.
- B. Learner growth and success are developed through the process of ongoing assessment and adjusted instruction.
- C. Teachers who are extremely knowledgeable about subject matter, a variety of wise and flexible instructional practices, and multiple options for differentiated assessment are better equipped to adjust essential content, their teaching process, and student assessment options to address learner differences.

In consideration of the above recommendations by Tomlinson and the three basic tenets that reflect the teacher candidate proficiencies, the PSOE has designated nine common elements of differentiated instruction that will be reflected throughout each of the teacher preparation programs.

(1) **Diversity.** *All teacher preparation programs must consider individual differences and backgrounds of all teacher candidates.* Differentiated instruction is a teaching philosophy based on the premise that teachers should adapt instruction to individual differences (Tomlinson, 1999). Tomlinson believes that, in order to meet the needs of a diverse group of pre-service teachers, the goal of university training should be the creation of “communities of learning” in which a prospective teachers engage in a broad mix of educational experiences designed to maximize the contributions of each teacher candidate to self and to the whole. Students who enter the PSOE programs bring with them very diverse

backgrounds and experiences. For this reason, it is critical that education faculty differentiate essential content, teaching processes, and teacher candidate assessment products in order to more successfully address the varied readiness levels, interests, and learning profiles of their teacher candidates.

(2) **Technology.** *All teacher preparation programs must provide learning experiences through technology that enhance instruction to meet the individual needs of all learners.* A national survey conducted by the International Society for Technology in Education (ISTE) commissioned by the Milken Exchange on Education Technology found that teacher preparation programs are not preparing teachers to effectively teach with technology (Moursund & Bielefeldt, 1999). Results of this survey indicate that teacher preparation faculty do not model technology use in part because they lack the skills to do so, and they lack the necessary hardware and software. The results also indicate that methods and curriculum courses that integrate technology into the curriculum impact new teachers' use of technology in their classrooms more than stand alone technology courses. In the PSOE teacher preparation programs, teacher candidates must participate in classroom activities designed to provide experiences in enhancing instruction with technology to meet the individual needs of students (Matthew & Kimbell-Lopez, 2000). Additionally, any utilization of technology must be for the integration and enhancement of the curriculum and the strengthening of instructional strategies. Finally, faculty members will need to model appropriate uses of technology and restructure their courses so that some of the content deals with the use of technology in a differentiated classroom.

(3) **Spirituality and the Nurturing Environment.** *All teacher preparation programs must create classroom environments that nurture the spirit of each candidate by offering respectful and meaningful tasks that provide all learners with hope, connectedness, and community.* Tomlinson's use of the phrase "communities of learning" provides an excellent foundation for nurturing environments that support differentiated instruction (1997). In his book *The Courage to Teach*, Palmer (1998b) supports a community where students and learning are at the center, and connectedness is the principle behind good teaching. Shulman (1999) believes that activity, reflection, collaboration, and passion among learners, combined with generative content and the creation of powerful learning communities, can support general designs for instruction. He supports the idea of a community of learners in active, collaborative, reflective reexamination of ideas in a social context. Sergiovanni (1996) maintains that classrooms must become communities of learning, caring, and inquiring. "Key to community in both classrooms and schools is a commitment to inquiry, and a commitment to learning as the basis for decisions" (p. 147). "If our aim is to help students become lifelong learners by cultivating a spirit of inquiry and the capacity for inquiry, then we must provide the same conditions for teachers" (p. 52). The PSOE preparation programs can help to bring about these conditions.

McGreevy & Copley believe that "there is a powerful connection between the spiritual nourishment of teachers and students and the quality of a school's teaching and learning" (1998). Wesley states that "teaching is the art of leading our learners to realize their potential. And when we elevate young people, we elevate ourselves" (1998). When a teacher believes in all students' potential, the experience can be an uplifting one for the teacher, as well as the students. In speaking about the spirituality of teaching and learning, Palmer (1998) states that learning does not occur when the subject matter is disconnected from the learner's life. Teachers can evoke the spirituality of any discipline by teaching in ways that allow the "big story" told by the discipline to intersect with the student's life. Doing so not only brings up personal possibilities for connectedness but also helps students learn the discipline more deeply. Darling-Hammond states, "Education should be a source of nurturance for the spirit as well as a means of reaching understanding" (1997). Shulman asserts that his vision of good teaching includes nurturing the moral and spiritual development, the civic engagement, and the socialization of students (Tell, 2001). Teachers, in particular, play a singular role in our society in nurturing students.

(4) Integration. *All teacher preparation programs must integrate the essential key facts, organizing concepts, and guiding principles of curriculum and content across disciplines to demonstrate the connectedness of content knowledge and pedagogical knowledge with the learner's life.* Curriculum integration is an avenue to increase student

understanding by teaching across the disciplines, teaching subject areas according to their natural connections rather than in isolation from one another. Curriculum integration focuses on making learning reflect life so that students see the value of what they are being taught. "As students see how the content of one source relates to that of others, they begin to make connections and, in so doing, gain not only a more integrated view of knowledge but also a more authentic view of life (Boyer, 1990, p. 92).

(5) Assessment. *All teacher preparation programs must promote, demonstrate, and model the use of systematic formal/informal assessment, including self-assessment, as an ongoing diagnostic activity to guide, differentiate, and adjust instruction.* There continues to be very little emphasis on assessment in the preparation of teachers (Stiggins, 2002). Stiggins states that "teacher preparation programs have taken little note of competence in assessment, and the vast majority of programs fail to provide the assessment literacy required to enable teachers in assessment *for learning*."

Through the use of ongoing assessment in preparation programs, faculty can model and demonstrate how to use assessment as a driving force for instruction within a differentiated classroom, how to implement effective formal and informal assessments (such as systematic observational assessment and effective, thoughtful questioning techniques), and how to integrate authentic and performance-based assessments into their own lesson and unit plans.

(6) Reflective Practice. *All teacher preparation programs must provide opportunities for reflective thinking development in order for teacher candidates to more effectively guide, differentiate, and adjust instruction.* In order to develop teachers who differentiate instruction, education faculty must facilitate activities that support the development of a reflective teacher who can make informed decisions based on assessment data. Research on effective teaching over the past two decades has shown that effective practice is linked to inquiry, reflection, and continuous professional development (Harris, 1998). Teacher preparation programs should assist candidates in developing a reflective, problem-solving orientation by engaging them in school-based inquiry activities, such as case studies and action research. These approaches help teacher candidates build an empirical understanding of learners and a capacity to analyze what will occur in their future classrooms and in the lives of their students (Darling-Hammond, 1996).

(7) Instructional Practices. *All teacher preparation programs must utilize a variety of instructional strategies, including technologies, to prepare candidates to meet the diverse learning needs of all students.* Guided by the three basic tenets of the DATA model, education faculty must consider the readiness, interests, and learning profiles of all teacher candidates and implement a multitude of teaching strategies to address the differences. Howey (1990) suggests that the nature of the pedagogical activities that are designed to address the program's themes are the essence of a coherent program" (p. 168). He further explained that it is not enough for teacher candidates to encounter content but that it must be shared in "pedagogically powerful ways" (p. 166). In addition, by offering a variety of teaching strategies to their teacher candidates, teacher educators are serving as positive role models for future teachers who will differentiate instruction.

(8) Field Experience. *All teacher preparation programs must provide extensive opportunities for teacher candidates to develop and demonstrate principles of differentiated instruction in field-based applications.* Careful guidance and mediation to help teacher candidates focus on critical aspects of classroom teaching and interactions and to interpret what they see is necessary for candidates to benefit from field experiences (Huling, 1998). Following this experience, professors can debrief with candidates about what they have observed and the implications of these

experiences related to their own teaching and classroom management. In his study of teacher education, Goodlad (1990) argues that if teacher education is to improve, "the goal is to join theory and practice in every component of a future teacher's preparation" (1990, p. 300). Therefore, it is critical that field-based applications be a vital part of the PSOE programs. Across several research studies on field experiences, one theme that emerges is that field experiences lead to more significant learning when activities are focused and well structured.

(9) Professionalism. *All teacher preparation programs must promote, demonstrate, and model a sense of professionalism and quality teaching, including a commitment to the teaching philosophy of differentiated instruction, a drive to excel, a dedication to the teaching profession, and a positive attitude about continuous learning.* Shulman states that "we experience commitment as we internalize values, develop character, and become people who no longer need to be goaded to behave in ethical, moral, or publicly responsible ways. We also commit ourselves to larger groups, larger communities, larger congregation, and professions at large---and by doing so, we make a statement that we take the values and principles of that group seriously enough to make them our own" (2002).

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