

Professional Development

Providing the Scaffold: A Model for Early Childhood/Primary Teacher Preparation

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INTRODUCTION

Providing a model for early childhood teacher preparation must begin with a clear vision of a goal. Our goal is to help to prepare teachers who will be able to meet the needs of future generations and help these children work toward meeting their fullest potential as lifelong learners, lifelong readers, and proficient users of technology. These new teachers will need skills to help children develop empathy, have good social skills, and develop into citizens who will care about their communities and the environment. Because communities are increasingly diverse, we need teachers who can successfully work in inclusive, multicultural environments and who will meet the needs of all students in these environments. If our future teachers are going to be able to live up to these expectations, we must have models of teacher preparation that help students secure the tools they need to accomplish these goals.

Lev Vygotsky described a model of working with students in which the teacher provides the “scaffold” for the students. In this theoretical framework, teachers or peers supply students with the tools they need in order to learn, and then slowly withdraw assistance as students are able to do more on their own (Berk & Winsler, 1995). This article describes a model of teacher preparation that provides a scaffold for those who will be teaching young children from birth through the early primary grades. The model begins with providing students with a firm theoretical foundation and helps students gain strategies and skills for putting the theory into action. It continues by modeling these techniques in teacher preparation classes and offering opportunities for students to practice and reflect on what they have learned. Figure 1

depicts a representation of this model of scaffolding in early childhood teacher preparation programs. Although shown as separate entities, many of the elements of the model are interrelated. A discussion of the theories and skills suggested by the model will be presented first, followed by an explanation of how to help students acquire them.

THE SCAFFOLD'S FOUNDATION: THEORY

The scaffold begins with a sound theoretical basis and a deep understanding of developmentally appropriate practices that will serve as a strong foundation from which to build. An understanding of developmentally appropriate practices means that students will know the principles of child development and appropriate expectations for the ages of the children with whom they work. They will learn how to look at each child as an individual and how to work with each child where he or she is currently functioning. They will recognize the importance of understanding the social and cultural background of the children so they can make their teaching more meaningful and relevant (Bredenkamp & Copple, 1997).

The theories of Vygotsky and Piaget are a fundamental piece of this foundation. Their theories will provide students with a firm understanding of constructivism (Bufkin & Bryde, 1996) that will allow them to discover how children construct their own knowledge through interaction with the environment. Students will also understand the importance of recognizing and working within each child's “zone of proximal development.” This zone, according to Vygotsky, is where children learn, the area just beyond where they can function independently. Adults and peers interact with children in this zone, “scaffolding” their learning and helping them to reach a higher level of functioning (Berk & Winsler, 1995).

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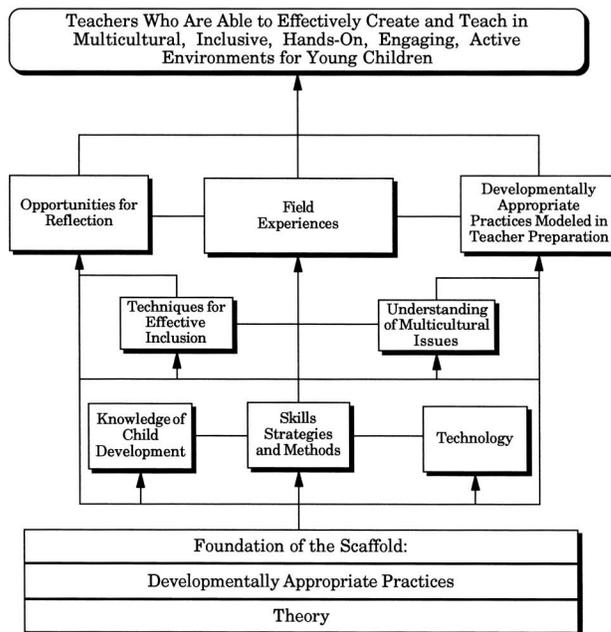


Fig. 1. A scaffolding model for early childhood/primary teacher preparation.

The theoretical foundation must include an understanding of how children learn and process information. It should provide a strong background in the latest brain research that has shown that children learn through making connections via neural pathways in the brain. This information helps students understand the importance of the early years when so many of these connections are formed (Shore, 1997). This also helps them to understand the necessity of preparing learning environments that provide meaningful, hands-on activities which allow children to continually make connections as they interact with their surroundings.

Other theories, such as Dewey's ideas of integrating the curriculum with meaningful hands-on projects, help students form a solid basis for designing meaningful learning environments. Learning about programs that exemplify good teaching practices will also help students construct their own ideas of how to put theory into practice. The early childhood programs in Reggio Emilia, Italy, where children are actively involved in working on meaningful projects (Edwards, Gandini, & Forman, 1994) offer an excellent example for students to study and emulate. Students are able to acquire a strong theoretical foundation in a number of ways, including readings, small and large group discussions, lectures, investigating information on the worldwide web, and classroom activities, as well as by learning how to put these theories into action.

SUPPORTS IN THE SCAFFOLD

Strategies and Skills

Students can gain a deeper appreciation of early childhood theories and developmentally appropriate practices by learning techniques for putting them into practice in the classroom. These practical strategies and skills help them to plan inviting learning environments that encourage active learning and exploration. These strategies must include knowledge of how to design learning centers that are developmentally appropriate for the children in their programs. Students should possess the skills to use authentic assessments that will enable them to understand where children are functioning and know how to help them continually progress. Another important skill for students is knowing how to access resources that can help them in the classroom, and knowing examples of good curriculum materials they can use. Students can become familiar with materials such as those developed by the Bank Street College of Education (Mitchell & David, 1992) and the Creative Curriculum guides (Dodge & Colker, 1992; Dodge, Jablon, & Bickart, 1994; Dombra, Colker, & Dodge, 1997) that include detailed ideas on curriculum development for children from the very early years through the primary grades.

Inclusion and Multicultural Support

Classrooms are moving toward greater diversity and inclusion of children with disabilities (Cavallaro, Haney & Cabello, 1993; Odom et al., 1999). Students must have the tools that will enable them to work with children with special needs in their classrooms. Knowing how to adapt activities and materials and where to obtain resources so that each child can participate as fully as possible will be important skills for them to acquire. Texts such as *The Developmentally Appropriate Inclusive Classroom in Early Education* (Miller, 1996) can help students gain expertise in this area.

Students entering schools come from a variety of cultures. Teacher preparation programs should provide future teachers with experiences, both in the field and the classroom, that will help them to understand the importance of getting to know each child's cultural background and how to provide a meaningful curriculum for each of them. These experiences can include exploring ways to work with children and families with multilingual backgrounds. They can also encompass activities that will help students find ways to design appropriate classrooms that reflect the cultures of the children and families in their programs and a curriculum rich in

multicultural activities (Derman-Sparks & the A.B.C. Task Force, 1989). The Project CLAS (Culturally and Linguistically Appropriate Services) website that has been developed at the Early Childhood Research Institute at the University of Illinois provides a wealth of resources for early childhood programs that are working to meet the needs of all children. The materials at the website (<http://clas.uiuc.edu>) are accompanied by reviews to aid practitioners in finding materials that are respectful of cultural and linguistic diversity and are appropriate for children of all abilities in their programs.

Knowledge of Child Development and National Standards as Part of the Scaffold

When students have a clear understanding of child development, they are better prepared to work effectively with children in their individual zones of proximal development. Knowledge of child development helps to provide a framework for understanding what children may be capable of accomplishing at certain ages.

Those who will be teaching kindergarten and the primary grades should also be familiar with the National Standards that have been developed for each area of the curriculum. Teachers who understand these standards and how to teach them through meaningful activities will be better equipped to help their students gain the knowledge and skills they need at each level. The National Association for the Education of Young Children (NAEYC) publication, *Reaching Potentials: Transforming Early Childhood Curriculum and Assessment (Volume 2)* (Bredekamp & Rosegrant, 1995) is an excellent resource in this area. It identifies the standards developed by the professional organizations and offers suggestions of how these standards can be taught and assessed in developmentally appropriate ways.

The Role of Technology in the Scaffold

Technology is a powerful tool that can strengthen teacher preparation programs. Teachers need to feel comfortable with technology if they are to use it effectively in their own classrooms. Training in the latest technological advances will help students to be able to use technology for their own purposes and to help their future students make the best use of it (NAEYC, 1996). Technology permits greater communication across the globe and opens possibilities to access information and resources that may allow for deeper multicultural awareness.

In addition to using e-mail and the world wide web, one of the most common ways early childhood and elementary teachers will be using technology with young

children involves using children's software. It is critical that early childhood professionals know developmentally appropriate software that they can use with children. Appropriate software can help to scaffold children in their zone of proximal development (Haugland & Wright, 1997), taking them from their current level of performance to the next level. Students can explore resources that will help them with technology, such as the book, *Young Children and Technology: A World of Discovery* (Haugland & Wright, 1997). This book includes reviews of software in all curricular areas that have been found to be developmentally appropriate. The book also provides a software evaluation system so teachers can evaluate software themselves. The website (<http://www.childrenandcomputers.com>) has additional software titles that have been recently released so that professionals can stay informed of the most current, highly rated programs. It also contains evaluations of web sites appropriate for children.

Providing Scaffolding through Modeling Appropriate Practices in Teacher Education

A model of teacher preparation may begin with an outline of the foundation and skills that are required, but the model must also describe how students can acquire these theories and strategies. Students can learn through a variety of methods, including lecture, small group discussion, and case studies. We know that children learn best in an interactive environment that provides opportunities for hands-on experiences. Many educators believe the same thing is true for teacher education students and other adult learners (Rogers & Sluss, 1996; Jones, 1992). Because one of our major objectives is to help students be able to design active, engaging learning environments for young children, modeling this approach in teacher education courses is another effective way for students to learn how to do this themselves.

Learning Centers

Learning centers are one of the best ways that preschool, kindergarten, and elementary students become actively involved in their environment. Learning centers can also be used in college courses for those preparing to work with young children. They provide a tremendous opportunity for students to be actively engaged in their learning. Learning centers can allow students to become more self-directed and responsible for their own learning. They can also help students experience for themselves what it is like to be part of an environment that allows them to be active participants, engaged in

meaningful activities and provides them with choices (Jacobs, 1999).

The types of learning centers that can be used will vary according to the objectives of the course. Curriculum and methods classes especially lend themselves to learning centers. A variety of learning centers designed to develop the concepts discussed during the class can be set up around the room. The centers could include a video center where students could watch a short tape that expands on the topic covered in class and a library center where students could read and take notes on journal articles related to the class topic. At other centers students could explore curriculum materials and activities for children or become more familiar with children's books related to the current course topic. Additional centers might contain teacher materials that would help familiarize students with resource books that could enhance their curriculum planning. A computer on a movable cart can become a computer center that would allow students to become familiar with some of the latest children's software. If the classroom has access to the Internet, students could also explore course topics and curriculum materials on the web.

Center time in teacher preparation classrooms can be used as a culminating activity at the end of a class, used informally during class breaks, or be the major portion of a class. They can be used once during the semester to give students a hands-on idea of the benefits of using learning centers or become a daily or weekly routine part of class. For example, when discussing art and music in the early childhood curriculum, students could explore a variety of centers that would help them understand how to integrate the curriculum through art and music. One center might contain articles on issues related to aesthetics in the curriculum. Another center could contain a variety of art materials for students to explore, including a variety of paper, paints, and drawing materials, as well as multicultural crayons, clay, and markers. At another center students could play a variety of musical instruments from around the world and locate each instrument's origin on a map. The computer center could contain children's software that promotes creative artwork. The video center could have tapes explaining developmentally appropriate approaches to teaching art and music. This center could also present videos of Reggio Emilia where children are encouraged to express themselves through many art forms which are considered to be part of the "hundred languages of children" (Edwards, Gandini, & Forman, 1994). Students could experiment with scientific concepts that children can learn through aesthetics by trying to make musical scales with glasses filled with varying amounts of water,

exploring vibration as they stretch rubber bands over styrofoam trays to make homemade stringed instruments, or experimenting with color mixing.

Providing a guidesheet can help facilitate students' use of the centers. The guidesheet can designate which centers students may be required to do and which are optional. It also provides a place for them to record their observations, discoveries, summaries of articles, and a self-evaluation of how they spent their time.

When using centers, instructors are free to spend time with individual students, scaffolding their learning. Centers allow instructors to accommodate for different levels of experience and background. They can also demonstrate the flexibility that is possible when using learning centers in inclusive environments, accommodating for the various needs of the children.

Modeling Authentic Assessment

Another way of modeling appropriate practices with students is to use authentic assessment in teacher preparation (Vartuli & Fyfe, 1993). The portfolio is one type of authentic assessment that has been recommended for young children as a way of giving parents, teachers, and children a more complete look at a child's growth over time. Teacher education students can experience the benefits of this type of authentic assessment by compiling portfolios for their early childhood courses that demonstrate their knowledge and skills. Students can be asked to design projects for their portfolio that demonstrate their competence in the course objectives. Additions to the portfolio might include such things as unit plans, outlines describing how they would use a project approach with young children, or critiques of journal articles they found to be helpful.

Students can also construct electronic portfolios that can be posted on the web. These portfolios can begin with each student designing a home page and then linking their unit plans or other portfolio projects to this page. Care must be taken to preserve students' privacy, but this can be done by avoiding the use of personal contact information and using passwords. Electronic portfolios allow students to put their technology skills into practice and may be an effective way to illustrate their capabilities throughout their professional lives.

Experiences in the Field: A Major Section of the Scaffold

Practical experiences are another excellent way for students to learn strategies and techniques. They are also the best way for students to understand how to put the theory and strategies they have learned into practice.

Teacher preparation programs need to include numerous opportunities to work with children. These experiences can begin in introductory teacher education courses and continue as students proceed through their programs. Practica in individual courses might emphasize certain aspects of practice, such as assessment or specialization in particular subject areas. Technology or curriculum courses could include a technology practicum where students have the opportunity to concentrate on working on computers with children.

An in-depth practicum in the third year of teacher preparation can provide students with needed opportunities to practice writing and carrying out lesson plans and developing their observation and assessment skills. In the final year, student teaching in good, developmentally appropriate settings gives students a culminating experience which allows them to synthesize the information they have learned into ongoing practice.

Another way to provide a rich scaffolding experience in teacher preparation is to add an additional year to the traditional teacher education experience. In this year, students can be given the opportunity to work in a school as a teacher, with a mentor working with them, scaffolding and encouraging them. This is occurring in a number of universities now, such as the University of South Dakota (USD). In the Professional Development Center (PDC) model used at USD, students who have graduated from their teacher preparation program may apply for a position as an intern in a participating school district. They teach in the classrooms of experienced teachers who have been released for the year to work toward an advanced degree while providing mentoring to the beginning teacher. This design provides the *time* that is so critical to effective mentoring—time to share ideas, model teaching, and reflect together.

Beginning teachers have the advantage of working with a mentor in their new classroom, as well as working with a university supervisor who comes to their classroom frequently to do model teaching and mentoring. These first-year teachers also work toward a master's degree in education, taking evening and summer classes. This program provides a firm scaffolding for the new teacher who gains additional education and an enhanced year of experience with tremendous support.

Mentors can be chosen for this program through an application process which includes listing their qualifications, experiences, and interest in mentoring. Peers and administrators can be asked to submit letters of recommendations and an observation of their classroom can be conducted. Unfortunately, there may be a shortage of interested, qualified mentors. This problem is also faced by many programs as they try to find placement sites

for student teachers, practicum students, and interns. Overcoming this challenge is difficult. Having good university supervisors who mentor students is especially helpful in these situations. Teacher education programs can also work toward improving the quality of the placement sites by offering summer and evening courses at free or reduced rates for field based supervisors. These courses can cover topics such as mentoring and designing developmentally appropriate curriculum. The PDC program itself is an excellent way to help train mentors who can continue to work with practicum students and student teachers in their classrooms.

The Final Piece of the Scaffold: A Time for Reflection

One final element in the scaffold for teacher preparation is including opportunities for students to reflect on both the theory and practice they have learned and experienced. One of the key tenets of developmentally appropriate practice states that the major role of the teacher is that of decision maker (Bredenkamp & Copple, 1997). If we are to assist in preparing students who will be able to make sound decisions, we need to be sure they have time to think about their experiences and how to use the knowledge they have acquired. There are several ways this reflection can occur. Keeping a journal throughout their field experiences is one way to start the reflection process. Putting together portfolios of their experiences with reflections on lessons and units they have designed can expand the process. Portfolios can also include summary papers of experiences in which students record what they have learned and analyze how they have grown. Meeting in seminar groups throughout their field experiences with other students, professors, and master teachers for discussions can also be helpful in encouraging reflection.

With all of these elements of the scaffold in place, students are more likely to become reflective decision makers who will be prepared to meet the challenge of working with future generations of children. This model does not attempt to include all that is involved in this process but provides an outline of some of the key elements that will make early childhood teacher preparation programs successful.

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