

The Teaching/Learning Center and Technology

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Abstract

The Teaching/Learning Center (T/LC) at Jacksonville State University supervises JSU student tutors in a one-to-one tutorial with area schoolchildren. The tutorial comprises Level II of the Clinical Experiences Program in the College of Education and Professional Studies. The T/LC was established so that pre-service teachers could experience working with a child in the age group and subject area in which they plan to teach. Technology has been an important aspect of the tutoring program since its inception in 1982. The technology used by the tutors has changed with the advances in hardware and software.

Technology at the Teaching/Learning Center

Level II of the Clinical Experiences Program for teachers in the College of Education and Professional Studies (CE&PS) at Jacksonville State University includes an on-campus, one-on-one tutorial that is facilitated through the Teaching/Learning Center (T/LC). The T/LC was established to provide JSU College of Education and Professional Studies (CE&PS) students experience in tutoring a child in the age group and subject area they plan to teach. Alabama legislators have referred to the T/LC as the "center for two learners," since both JSU students and children from the community benefit from the T/LC practicum. The T/LC is a division of the Instructional Services Unit (ISU; <http://www.jsu.edu/depart/edprof/isu>), which consists of the Learning Resource Center (LRC), the Multimedia Instructional Laboratories (MIL), and the T/LC. The ISU supports all levels of the Clinical Experience Program by providing technological tools as well as traditional instructional media.

The T/LC practicum is Level II of a sequential clinical program that involves various settings to help prepare the pre-service teacher

for the classroom. The Clinical Experience Program at JSU has five levels. Level I consists of students completing college classroom experiences. These experiences include writing unit and lesson plans, modeling teaching strategies with peers, participating in discussions, and implementing other active learning exercises. Level II provides opportunities for tutoring and mentoring through the Teaching/Learning Center and the JSU Child Development Center. Tutors plan the content of the tutorial and the methods of instruction based on the academic needs of a child. Level III requires the pre-service teachers to observe and interact with students at a local school setting. For Level IV, the pre-service teacher performs the traditional teacher internship, usually called student teaching. Level V is the support to new teachers provided by the College of Education and Professional Studies for their first two years of employment. This support can involve JSU professors mentoring the new teacher, providing assistance, or recommending the teacher return to JSU for additional coursework.

Social interaction is an important component of the learning experience, and tutoring is definitely a social interaction. In this practicum, the tutors know the subject matter. The tutors differentiate instruction according to the needs of the child that they are tutoring. This is the first time that pre-service teachers apply their understanding of concepts taught in child development classes. They also assess the tutee's academic work and adjust their instruction to remediate any weaknesses.

Tutors do not have a set plan of study for their child. They must be prepared to help their tutee with various learning skills. Through the resources available at the college, a tutor can use various tools to facilitate their interactions and create engaging activities. If there are behavioral issues with the tutee, the tutor has only one child to motivate to behave acceptably. The tutor has the opportunity to communicate one-on-one with a child in the age group that they plan to teach and the opportunity to plan learning experiences in specific academic areas.

For pre-service teachers, these first academic interactions with students begin with the Level II Clinical Experience. The practicum is also about empowerment. Tutors create tutoring plans based on the tutees' performance, academic attributes, and grasp of subject matter mastered in previous meetings (Mager, 1984). The tutoring plan consists of three sections: a performance objective, a list of materials, and an evaluation and reflection of the session. Tutors indicate on the lesson plan a minimum of four teaching materials for the tutorial. Most tutors include Internet sites and educational CDs, utilizing technology

to allow the tutorial to include a rich mixture of media and branch to other relevant topics. Technology helps the tutor to change the activities based on the tutees' needs during the tutorial session. Tutors can adjust the session to remediate an academic need or to move quickly through a topic mastered.

One goal of the JSU Clinical Experience Program is to prepare teachers to use a variety of teaching interventions and learning resources in their teaching. The Learning Resource Center (LRC) maintains teaching materials and grade level curriculum guides for all levels of clinical experiences. Tutors can choose from many games, manipulatives, books, and references for tutorials. Technology is the most popular choice among the interventions and resources available to tutors.

The use of technology to supplement academic pursuits has become a part of the educational paradigm (NCLB, 2002). The Level II practicum once was considered to be on the cutting edge for making computers and software available to support the tutorials. Now, computers in the classroom are considered normal. The interaction of tutors at JSU with technological tools is now a fundamental aspect of teacher preparation. Technology's role in education has changed dramatically over the last few decades. The College's teacher preparation in technology has evolved. The Interstate New Teacher Assessment and Support Consortium (INTASC) includes technology in Principle #6, which requires the teacher to use knowledge of verbal, non-verbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. The CE&PS currently views technology as a way to enhance, increase productivity, and promote creativity in teaching. This represents a paradigm shift from Principle #6 as it was listed in 1992 (<http://www.ccsso.org/content/pdfs/corestrd.pdf>).

Ten years ago, technology was not always available or useful in schools. Today, most teachers, tutors, and tutees are digitally literate (Partnership for 21st Century Skills Report, 2003). The CE&PS has embraced the notion that, "Information technology will change teaching and learning profoundly..." (Massy & Zemesky, 1995). In the tutoring setting, tutors and tutees are comfortable with and motivated to use technology.

JSU's technological offerings vary from early mainframe-based programmed learning systems to microcomputer software packages. Since education is the second largest industry in the United States, many innovative technology companies have developed software that targets education. Today's offerings are richer in scope and availability with the inclusion of the Internet, web-based systems, and computer-

based instruction (Oppenheimer, 2003). Most tutors are open to using technology in their instruction. In the 1990 work, *MegaTrends 2000*, John Naisbitt explains why computers were introduced into the Level II practicum. Naisbitt observed, "Whenever new technology is introduced into society, there must be a counterbalancing human response that is high touch or the technology is rejected."

Helping children increase their academic skills provides an opportunity for tutors to use technology. In 1982, Apple IIe computers were a part of the T/LC. At that time, students used the Minnesota Educational Computing Consortium (MECC) series of educational software (Oppenheimer, 2003). JSU graduates had technological experiences that they could use and replicate in their own classrooms. The technology interaction has changed during the 25 years of the tutoring practicum. By providing rich sources of technology, future teachers view technology as a viable resource and a means to enhance the more traditional teaching methods. The Conceptual Framework for the CE&PS is to develop "creative decision makers." There are limits to practicum experiences. Technology can be useful in helping overcome fears, anxiety, and impatience of the tutees. The reality of teaching is practiced in a one-on-one tutorial interaction that allows the tutor to incorporate his/her experiences and education with technology, thus meeting the requirements of the practicum.

The tutors' initial interaction with technology in this practicum is based on their previously learned skills. Tutors incorporate technology naturally into their teaching methodology. Pre-service teachers' initial skills with technology are not uniform, so the tutoring practicum can help establish a technology paradigm. For some pre-service teachers, their technology paradigm may derive from past educational experiences, personal experiences, or experiences as a JSU student. Their use of technology is a reflection and recombination of many educational experiences.

Because technology is not the total tutoring practicum, students must choose it as a teaching tool. Tutors combine all of their teaching skills to meet both their student's needs and their own. Sometimes the best tutoring strategies are the consequence of trying to meet the specific needs of a tutee. Traditionally, the development of a teaching style is a process created in authentic situations. A student's teaching methodology in the tutoring practicum is generally imaginative and develops out of perception, sensory experiences, and social interaction with the tutee. As part of the social interaction involved in tutoring, the use of technology is only a subset of academic interactions. The tutoring practicum also parallels whole class instruction, and it is expected that tutors extrapolate from the tutorial experience to their

whole class instruction the methodologies employed. The true importance of technology is a result of an interpretive process that depends on the tutor's experiences and understanding. Early experiences and success using the Internet, CDs, and computer-based instruction software to meet learning objectives can empower and encourage tutors to use technology as classroom teachers.

The T/LC has two computer labs available for tutorials. All computer workstations have Internet access. The computer laboratories' server provides American Learning System (A⁺LS), a curriculum management system and instructional software package. Tutors use this technology to enhance the learning process, to differentiate instruction, to conform to the Alabama Course of Study, and to provide a hands-on computer experience for the students.

The tutors for the T/LC have access to educational CD-ROMs, ranging from encyclopedias to "*Thinking Things*." The CDs, although mostly edutainment, vary in their content and presentation of information. This variety provides experience that can help the teacher ascertain the value of CDs as instructional delivery systems. Learning modules have traditionally been linear, sequential, and methodical. The Internet has a wealth of resources that tutors utilize through browsing, random exploration, and non-directed researching.

Local students in first through twelfth grades come to JSU to be tutored. As of the Fall 2004 semester, over 9,230 tutors have been supervised in the T/LC with more than 5,900 students from 46 different public and private schools receiving services. These students often are tutored in learning and applying basic reading, writing, and mathematics skills. Additionally, tutoring sessions often focus on reviewing for tests and completing school projects.

Research shows that a small proportion of the nation's schools have implemented a variety of educational technologies in ways that motivate and engage students to achieve academic success and reach performance levels consistent with the nation's educational goals (Glennan & Melmed, 1996). Schools have achieved this by using technology to provide students with access to expertise and resources outside of the school, designing learning experiences appropriate to learner needs and abilities, and guiding and managing the learning activities of the students.

In order to provide meaningful, pedagogical instruction with technology, the tutorial approach relies on tutors to manage the tutorials within the tutoring framework and to apply the instruction necessary for a child to learn. Research has shown a strong association between the use of the computer software and student achievement (Murphy et al., 2002).

The experiences tutors have using technology successfully in tutoring sessions can produce effective use of technology in their classrooms. Through this face-to-face interaction, tutors have opened sessions that relate to what the tutee has experienced in a traditional classroom. In the tutor's tutoring plans, the reflection sections often refer to uses of technology both as an instructional source and as a form of reward. In this practicum, traditional and technological teaching methods coexist, and each is chosen by tutors as they deem appropriate. Whether the technology is used as a motivator or a path to academic learning is the choice of the tutor. The choices made by the tutor involve social, technological, and tangible manipulative interactions that lead to keeping the student on task and advancing the student academically. Oblinger has stated, "An essential component of facilitating learning is understanding learners" (2003).

As educators, the CE&PS instructors know that learning requires many different experiences. The Clinical Experiences Program is designed to enable students to take what they have learned and apply their knowledge and skills to the learning process. This involves attitudes and practicum experiences that affect their performance in the classroom. The T/LC practicum incorporates many facets of teaching. Students are placed in roles that require them to think and interact directly with a learner.

If CE&PS students employ a diverse array of methods, including those based on technology, the use of technology as an instructional tool can become integrated into the new teacher's praxis. The Clinical Experience Program approach seeks to help tutors have a more balanced perspective of what it takes to help others learn. The T/LC tutoring practicum provides experience in technology, teaching, interaction, structuring, and service learning opportunities, which can translate into lifelong teaching with technology.

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