The preparation of qualified teachers with knowledge and skills in the areas of English as a Second Language (ESL) and technology is an important issue in urban educational reform. This paper addresses components that one teacher preparation program is implementing in training multicultural, urban public school teachers in this critical shortage area. The Technology and TESOL degree works with existing courses in both disciplines which offer appropriate material for a unique combination degree to meet the specific needs of teachers who desire to use technology effectively in teaching ESL. All courses share the common theme of students' achievement with language acquisition through the integration of technologies into the teaching and learning process. The project engages students in inquiry and conversations about language acquisition and technology integration. Participants receive such services as systematic and ongoing advisement; literacy and test taking skills training; opportunities to participate in electronic bulletin board, bilingual chat room, and list serve discussions; access to multicultural lesson plans; and interactive multicultural Web based portal learning space. They also attend interdisciplinary conferences and workshops. Participants are exposed to a variety of ways to use technology in teaching second language learners. (Contains 9 references.)
The preparation of qualified teachers, with knowledge and skills in the areas of English as a second language and technology is an important issue in educational reform in urban public schools. This in a time when the demand for certified, qualified, well-trained English as a second language teachers continues to increase due to the significant increase of linguistically and culturally diverse students. Current data are available indicating that culturally and linguistically diverse students continue to comprise a large number of children receiving an education. In Florida alone, approximately one million Hispanics, 100,000 Haitian immigrants, and thousands more from the Caribbean and other parts of Latin America, contribute to making Miami one of the most culturally and linguistically diverse cities in the United States. These significant demographic changes have increased the necessity to address the educational needs of children from diverse cultural backgrounds.

In addition to the number of culturally and linguistically diverse students served in Florida’s public schools, the State is under the mandate of the LULAC et al Consent Decree. In 1990 the State of Florida, through its Department of Education (DOE) and various organizations including Multicultural Education, Training, and Advocacy, Inc.
(META), and the NAACP, entered into an agreement by signing LULAC et al v. SBE Consent Decree, Section 233.058, Florida Statutes, and Rules 6A – 6.0900 through 6A – 6.0909, Florida Administrative Code (F.A.C.I.). This Decree, also known as the META Consent Decree, establishes specific requirements for the services provided for the limited English proficient (LEP) students, as well as training requirements for instructional and administrative personnel. One of the most salient training requirements imposed by the META Consent Decree targeted elementary and special education teachers. These teachers were required to obtain an ESOL Endorsement.

The Master’s Degree in Technology and TESOL program in the School of Education of Barry University in Miami Shores, Florida proposed: (a) to ease the shortage of certified teachers with an ESOL certification in an urban school district; (b) to enhance the professional knowledge and skills of teachers educating culturally and linguistically diverse students, and enable them to better meet their students’ need; and (c) to improve technology skills that will enable the multicultural teachers to use technology and appropriate software to better reach these students.

As teacher educators we emphasize the knowledge base of the use of technology in the classrooms; however, are we addressing the English as a second language component in our programs? Are we preparing teachers that are technology competent? Do teachers in urban settings have the necessary training in technology and English as a second language theories and related knowledge base? How do we begin training teachers in urban public schools? How do we prepare teachers to teach English as a second language through the use of technology? There are too many questions and too few answers. Our proposed paper will address components that our teacher preparation
program is implementing in training multicultural urban public school teachers in a
critical shortage area.

Cummins (2000) believed that “information technology has considerable potential
to promote language learning in a transformative way when it is aligned with a pedagogy
oriented towards promoting collaborative relations of power in the classroom and
beyond” (p. 539). What does this imply? It implies that ESL programs that use
information technology can enhance language and literacy development more
successfully than those that do not promote the use of technology. Historically the field
of ESOL has followed a traditional instructional design paradigm where a great deal of
emphasis is placed on the sequencing of instruction (Willets, 1994). This concern with
sequencing has created major problems in the instruction of many students, in particular
the older learner who happens to be a beginning student of English. “The development of
hypermedia, multimedia, and computer simulations forces us to think of new paradigms
that do not rely on sequential learning.” (Cafolla & Kauffman, 1994, p386).
Furthermore, the interaction that using a computer necessitates enhances language
learning. This interaction brings about a twofold benefit improving second language
learners technological savvy and English language development.

Cummins (2000) describes a framework for academic language learning through
the use of information technology focusing on meaning, language and use. For example,
when referring to meaning it is all about making input comprehensible (Krashen, 1999)
and developing critical literacy (Nieto, Botelho, & Rudman, 2002; Shannon, 2002). In
addition, when focusing on language it is about the awareness of how language forms and
its uses and the critical analysis of language forms and uses (Delpit, 1998). Subsequently,
the use of language to generate new knowledge, create literature and art, and act on social realities will encourage students to become critical thinkers.

There has been an enormous challenge to incorporate technology in all aspects of education from kindergarten to college. However, in some cases, students are arriving at the college level with limited knowledge of writing skills and computer literacy skills. The University of Nevada, Las Vegas developed a program using technology to teach research methods, techniques, and writing skills for English as second language learners. A study conducted at the University of Nevada revealed that their students lacked the research skills needed to succeed in the student’s educational programs. Moulton and Holmes (2000) had been focusing on language acquisition while giving attention to developing students’ ability to conduct research and write research papers. They concluded that the “use of computers was another obstacle for many students” (p. 28). They further confirmed that “with the use of computer growing daily, this may become less of an obstacle in the future; but until then, English as a second language classes should, perhaps, include more training in the use of computers, not only because computers are a learning tool, but also because they are becoming an integral part of today's world.” (p.28). Therefore, as educators in teacher preparation programs we need to incorporate the use of information technology into our programs in order to have successful teachers who can incorporate the information technology in teaching English as a second language.
Core Curriculum

The Technology and TESOL degree utilizes strategies of two sides of the same coin called communications. Existing courses in both disciplines offer appropriate material for a unique combination degree to meet the specific needs of teachers who desire to use technology effectively in the teaching of English as a second language.

This program offers an array of courses about teaching English to speakers of other languages, technology integration into the teaching and learning processes for speakers of other languages, and assessing learning with technology. While each course emphasizes a specific body of knowledge, attitudes, and skills, all courses share the common theme of students' achievement with language acquisition through the integration of technologies into the teaching and learning process.

Technology and TESOL applications are areas of professional practice. Practitioners in this field are accountable for planning and leading a learning process and assessing programs and outcomes. Graduate students will acquire not only substantive knowledge but conceptual knowledge, and a disposition to enhance individual learning styles and multiple intelligences, diversity of cultures, variance in language acquisition, and familiarity with technologies. These individually and in connection with each other affect student achievement and measurements of that achievement.

The project engages students in inquiry and conversations about language acquisition and technology integration into the teaching and learning process. This engagement occurs throughout the program, in coursework, through participation in special learning projects, independent research and practical experience. Table 1
represents the Masters of Science in Technology & TESOL Degree Program

Requirements as per Barry University 2002 – 2003 Graduate Catalog.

TABLE 1: Technology and TESOL Core Courses

<table>
<thead>
<tr>
<th>Technology Core Courses (18 credits)</th>
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<tbody>
<tr>
<td>ECT 505 Introduction to Computers/Technologies in Education</td>
</tr>
<tr>
<td>ECT 607 Design and Evaluation of Instructional Systems</td>
</tr>
<tr>
<td>ECT 641 Implementing Technology-Based Instruction</td>
</tr>
<tr>
<td>ECT 653 Telecommunications in Education</td>
</tr>
<tr>
<td>ECT 689 Computer/Technology Applications in Teaching ESOL</td>
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<tr>
<td>ECT 690 Special Topics: Using Multimedia Tools in the ESOL Classroom</td>
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<table>
<thead>
<tr>
<th>TESOL Core Courses (15 credits)</th>
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<tbody>
<tr>
<td>TSL 506 Applied Linguistics</td>
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<tr>
<td>TSL 509 Cross Cultural Communications and Understanding</td>
</tr>
<tr>
<td>TSL 511 Curriculum and Material Development</td>
</tr>
<tr>
<td>TSL 517 Testing and Evaluation in ESOL</td>
</tr>
<tr>
<td>TSL 576 Methods of Teaching ESOL</td>
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<table>
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<tr>
<th>Research (3 credits)</th>
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<tbody>
<tr>
<td>EDU 601 Methodology of Research</td>
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Along with tuition assistance for program coursework, project participants in the program receive a variety of services including (1) systematic and on-going advisement; (2) literacy and test-taking skills training in order to foster participants’ program completion and eligibility to teach English language learners (3) opportunity to participate in electronic bulletin board, bilingual chat rooms, list serve discussion; (4) access to multicultural lesson plans; and (5) interactive multicultural web based portal learning space. In addition, project participants attend on-campus annual
interdisciplinary conferences and off-campus/local interdisciplinary workshops directly related to meeting the learning needs of urban English language learners.

**Using Technology to Teach**

Project participants are exposed to a great variety of ways in which technology can be used in order to better assist second language learners in their path to a solid education. There are many technology based interactive-type activities in which second language learners can engage to assist them in the informal acquisition of a second language, and in the more formal learning of the new target language. Some of these activities include the following:

- **Information Retrieval**: Students have the world at their fingertips with the many databases, bibliographies, encyclopedias, and multilingual dictionaries that are now accessible. These resources can be used for research, as references, and for language learning in general. Interacting with these materials is a wonderful opportunity to develop and/or enhance reading and writing skills.

- **Interactive Audio**: A computer that includes an audio source is a magnificent medium to both teach and assess active listening skills. With the addition of a computer controlled tape recorder or CD-ROM, there are many interactive audio lessons available in the marketplace and on line that have been developed specifically for English language learners.

- **Interactive Video**: VHS players or laser videodisc players provide a wonderful opportunity for interactive video instruction. There are endless possibilities to develop vocabulary. Students have access to a video library that empowers them
to create their own picture dictionaries for a variety of purposes, including assistance with new content.

**Conclusion**

In discussing and sharing with our audience our beliefs on teacher preparation in the areas of English as a second language and technology we need to confer with (Means, Penuel, & Padilla, 2001) the following recommendations:

- emulate the ways in which professionals use technology,
- involve complex tasks,
- require significant amounts of time for completion,
- give students latitude in designing their own products and in determining when and how to use technology
- involve multiple academic disciplines, and
- provide opportunities for student collaboration with peers and outside experts (p. 194)

We are still taking baby steps in enhancing and implementing our program successfully and efficiently. We will keep our readers posted in our findings after our third year of implementation of the Master's Degree in Technology and TESOL for Multicultural Teachers in a Critical Teaching Areas in Urban Public Schools.

**References**


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