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# Teaching, Learning and Research: Linking High School Teachers to Information Literacy

Stephanie Davis-Kahl, *Illinois Wesleyan University*

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Stephanie Davis-Kahl
sdaviska@uci.edu
Stephanie Davis-Kahl is the Research Librarian for Education and Outreach
at the University of California Irvine Libraries.

Lisa Payne
lmpayne@uci.edu
Lisa Payne is a Library Assistant in the Reference Department and Co-Coordinator of the
Compton Teachers Information Literacy Institute at the University of California Irvine Libraries.

Abstract: The Compton Teacher Information Literacy Institute (CTILI) is a teacher professional development program funded by the Compton (CA) Unified School District and delivered by the University of California at Irvine Libraries' Department of Education and Outreach. Teacher professional development, university and library outreach activities and influences are discussed to give background on CTILI curriculum development. Institute goals and objectives are outlined, as is our curriculum remodeling effort after a mid-year assessment. Plans for future institutes are included.

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## Teacher Professional Development

Professional development for teachers is of high interest to teacher educators, policymakers and teachers, both in California and nationwide. Researchers have found that teachers' idea of effective professional development is an "opportunity to reflect on their work and to discuss their teaching and learning with colleagues." [Tafael and Fischer, 2001] Further, linking professional development efforts back to student learning helps all participants to invest more fully in the process and contribute more value to the outcome. Effective professional development takes place when teachers are encouraged to take risks, try new strategies in the classroom, and to report back and share with colleagues.

One example of such a program is the Beginning Teacher Support and Assessment (BTSA) program for new teachers in K-12 California public Schools. BTSA

emphasizes the importance of interaction between new and experienced teachers and the tenet that all teachers develop skills throughout their careers.  Using portfolios, and reflective assessments and classroom observations, new teachers set goals and track their progress with the help of a mentor.  A professional development model for experienced teachers is Ohio's Youngstown State University's M.S. in Chemistry Education, which incorporates the National Science Education Standards (NSES) for professional development into the course curriculum.  Youngstown State added the concentration in chemistry education based on their assessment that neither graduate education nor graduate chemistry programs fulfilled the NSES standards.  Their solution was to incorporate "pedagogical content knowledge and action research" into the curriculum along with pedagogy and content. [Bretz, 2002] Both BTSA and the Youngstown State programs have several elements in common: a recognition that teachers need to develop continuously not only as teachers but as learners; teachers value their colleagues feedback and perspectives; and knowledge or practice gained from professional development programs should be applied back to the classroom.

**UCI Outreach Programs**

The University of California at Irvine (UCI), has a strong tradition of outreach to the community.  Academic departments and student clubs sponsor events, and several departments have established academic programs that bring students from the Orange County area onto the UCI campus to experience university life over a summer.  In general, area students benefit greatly from the university's contribution to their academic life.  Area teachers, too, benefit from the university's interest in developing and retaining an intelligent and diverse student body.

UCI, like other research and comprehensive universities in California, dedicates both staff and funds to support area teachers professional development by creating and administering programs through UCI's Center for Educational Partnerships, the UCI Department of Education, and several departments across the university that incorporate a teaching component in their curricula.  Successful programs include the Irvine Math Project, the California Reading and Literature Project, ArtsCore, and the UCI-Santa Ana Teachers Institute.  Funding comes from school districts, the University of California Office of the President, the National Science Foundation, and other state and federal sources.  Instructors and administrators include members of the UCI faculty, members of the Orange County Department of Education, area teachers, CFEP staff and faculty from other California State University and University of California schools.

**UCI Libraries Outreach**

The UCI Libraries have a history of outreach as well, employing a librarian to be solely responsible for outreach to campus units as well as to the community.  In 2002-2003, the newly established Department of Education and Outreach (E&O) at the University of California, Irvine's Libraries had an opportunity to participate in a teacher professional development program.  E&O was established by University Librarian Gerry Munoff in July 2001 to address the growing need for programmatic approaches and administration for the Libraries' education and outreach initiatives.

The department mission is threefold: address student learning developmentally and sequentially as appropriate to the student's level and discipline in order to build information literacy, critical thinking, and life-long learning skills; provide a variety of venues, modes, opportunities, and activities in order to recognize and accommodate

different learning styles and capitalize on the teachable moment; and actively seek and respond to outreach opportunities in order to have a positive influence on the academic careers of students. The Department coordinates library workshops for students and faculty, course-integrated instruction for the Writing Program and for the Humanities Core course, and provides instruction training for librarians. Outreach activities include holding an Open House during Welcome Week for new students, participating in Honors Experience Day, which recruits Honors students to UCI, and partnering with the Undergraduate Research Opportunities Program. E&O also provide training and education to librarians and library staff. Recently, members of the Counseling Center facilitated a session about the undergraduate student pressures and needs on campus, and every fall, staff from the Disability Services Center provide customer service awareness training. Currently, the Department is providing support and resources to three librarians who are developing discipline-based information literacy curricula, and the departmental advisory group recently completed a month-long exploration of how to market information literacy to faculty, students and campus administrators.

With two full-time librarians, an administrative assistant, and 10% of one librarian and one library staff member's time, E&O is small, but our size allows for a high level of autonomy, quick responsiveness to inquiries, and the opportunity to experiment with instructional methods and approaches. In addition, the department has been very successful in its efforts to raise money outside of library funds. Currently the department has received approximately $100,000 for its outreach programs.

**UCI Libraries SPIRIT Program**

The School Partnerships in Research and Information Technology (SPIRIT) program is an example of one of the department's successful grant proposals. Funding for this program comes from the University of California School-University Partnership grant, and covers staffing, materials, and transportation for both students and school visits. The SPIRIT program goals are to: teach information literacy and life-long learning skills to high school students, increasing student understanding and confidence in their ability to locate and use information appropriately; facilitate student and teacher access to, and use of, scholarly electronic resources; and assist students in becoming eligible and competitive to enroll at the University of California, to thrive academically while there, and to graduate.

We market this program to area high school teachers and librarians, stressing the importance of information seeking and evaluation as core skills for students, our willingness to collaborate with them, and then follow up with phone calls or emails. Staff from the Department visits interested teachers and librarians at their school to gather information about the teacher's assignment and goals, and how we can build on the school library's existing resources. Our next step is to visit the teacher's class to briefly orient the students to what they'll be doing at the SPIRIT session, answer questions about UCI, about being a librarian, and about applying to college in general. In-between visiting the class and the actual on-campus session, SPIRIT staff create a website for the class built around the teacher's assignment and curriculum goals. The class website contains links to UCI Library databases that would aid the students in learning about their topics, and also functions as a research tutorial in and of itself.

The SPIRIT session is a daylong trip to the UCI campus for the students.  The day begins with an instruction session at the UCI Main Library in our Technology Enhanced Classroom, where students are given instruction on how to best use the resources on the class website to research their topic. Students are given a copy card, how-to handouts, and a folder in which to keep their research results.  Students are then put into groups and given an assignment to do by the end of the session. Usually the assignment is either an oral presentation of what they learned about their topic, or the creation of a poster which teaches their fellow students about their topic.  The research session is followed by lunch in a residential dining hall and then a campus tour if time permits.  Feedback from students, teachers and librarians has been overwhelmingly positive; and our Department has been very positively influenced by our work with the schools.  CFEP was instrumental in helping us gain funding for the SPIRIT program, and it was due to the program's focus and CFEP's growing interest in information literacy that we were invited to the Compton Professional Development Summit in May of 2002.

**Compton Unified School District and CFEP**

The Compton Unified School District has gone through tough times in the past decade, surviving $20 million in debt, state receivership and unsafe schools.  In 1993, the California Department of Education took control of the district due to the dire state of academics and finances in the district.  Since 1993, CUSD has repaid its debt with interest, student test scores have improved, facilities have improved, and in 2002, over half of the schools in the district met their Academic Performance Index growth target [California Department of Education, 2003].   One strategy the District adopted to improve academics was to give teachers time for professional development by

designating one Monday per month as a late-start day.  Teachers attended institutes for

two hours in the morning, and classes began at 10 am.  We were extremely fortunate to

meet every month for nine months during these late-start Monday.  Having this much

time over an academic year meant that our curriculum could be both deep and broad in

our investigations into IL.

The mission of CFEP is: "to stimulate and advance cooperative educational

relationships among UCI and California schools and colleges. Through established

programs and community outreach it seeks to foster community links to improve the

preparation of all students, particularly those from underserved groups, for success in

higher education. In collaboration with schools and colleges, the Center offers special

educational programs and support services to prospective students to enhance academic

achievement." [Center for Educational Partnerships, 2003] Since their partnership began

in 1986, CFEP and the Compton Unified School District have had a strong partnership in

working together to offer teacher professional development.  In the beginning of the

partnership, programs focused on science and math teacher development, but as funding

grew, other California Subject Matter Projects were added in literature, writing and

reading.  From both CFEP and the Libraries' perspective, information literacy seemed

like a perfect addition to the mix of subjects offered to the Compton teachers.

Sally Chou, then Associate Superintendent, Curriculum Design and Instructional

Improvement, (now Deputy Superintendent for Instructional Services) facilitated the

Compton Professional Development Summit attended by members of CFEP, members of

the Department of Education and Outreach and faculty from other area universities.  One

of the goals of the CUSD in offering teacher professional development during late-start

Mondays is to develop teacher leaders and teacher expertise within each of the three high schools within the district.  During the summit, each attendee presented their proposed budget, course content, and gave a brief overview of the goals of their course.  For many attending the summit, it was their first exposure to the concept of information literacy, and the reaction to our proposal was met with many questions as well as a high level of interest.

Our proposal had two main pillars and several objectives. First, our mission was to share information, resources and experiences in order to raise awareness of IL among CUSD teachers and to share strategies for developing IL plans in order to encourage teachers to incorporate IL into their curriculum or assignments.  Our objectives included introducing IL concepts and standards, help teachers develop research skills, help teachers develop research assignments, and demonstrate the relationship between IL and the California Academic Standards.  Ultimately, the proposal was accepted and curriculum planning for the Compton Teachers Information Literacy Institute (CTILI) began.

**Curricular Influences**

Our first order of business for the team was to review the existing literature and draw upon others' expertise and experience to create our curriculum.  In our investigations into the teacher education literature, we discovered a school of thought that held that teachers should be active researchers not only of the literature, but also within their own classrooms.  Since teaching research skills was already part of our proposal, we built upon the idea of connecting teacher research to the broader concepts of teaching practice, to professional development and lastly, student learning.  Unfortunately, we

were not able to negotiate access for our teachers to our electronic databases due to contractual restrictions.  However, both the Los Angeles Public Library and the Los Angeles County Library systems provide access to many excellent databases just by entering a library card barcode.  We required teachers to acquire a library card from either system, depending on what was most convenient for them geographically.  In addition, we also gave teachers websites for free resources such as AskERIC and FirstGov, and online magazines such as *Teacher College Record* (TCRecord), *Education Week* and *Education World*.

We were also influenced by the contents of several state documents from the California Commission on Teacher Credentialing, especially the California Standards for the Teaching Profession and the Single Subject Matter Standards.  In general, the California Department of Education has an overwhelming amount of information for teacher and teacher educators, much of which we used to prepare and teach our sessions.

**Curriculum Planning**

Our toolkit already included documents and standards for IL from the American Library Association and the Association of College and Research Libraries.  Most of the articles we used to help us formulate our model came from the school library literature, which has an active and vibrant voice on the topic of information literacy efforts in secondary schools.  In the academic library literature, two examples stood out, most notably that of our colleagues at University of California at Santa Barbara with the Information Literacy and Technology Project.  The other example was a graduate course taught at Millersville University titled "Information Literacy: Creating Active Learners"

aimed at practicing elementary and secondary teachers and librarians [Warmkessel and McCade, 1997].

Another helpful resource was an article in the September issue of the journal *Teacher Librarian* on ERIC Resources for Information Literacy. One resource listed was an online tutorial created by the Bellingham School and was chosen *as School Library Journal's* site of the month for April 1999. The framework of the tutorial was modules with corresponding exercises that incorporated the different types of literacies: media, visual, textual and so on. This provided a framework of how IL could be presented to high school teachers. One of our goals as instructors was to create modules that would build on one another, so that by the end of the school year, teachers would have an understanding of the underlying theory of IL as well as how to apply IL to their classroom assignments.

Although we knew that they would encounter a wide variety of subject areas, we felt confident that IL practices would translate well into any subject area. Our initial curriculum was heavy on theory, reading and discussion so all the teachers would have a common frame of reference for future modules. While we know what we wanted to communicate to the teachers, we also wanted to incorporate active learning not only to hold their interest but also to demonstrate how they could incorporate IL into classroom discussions as well as assignments. Luckily, we had access to networked computers at Compton High School, so our plan to incorporate hands-on activities was quickly realized.

Class sessions focused on the definition of information literacy, how other literacies are related and how they impact information literacy; searching skills and

strategies; multiple intelligences and how IL can be used to play to students' strengths; using government information in the classroom; preventing plagiarism and creating IL elements specifically for Compton students.

**Balancing Theory and Practice**

Our initial plan of concentrating on theory and moving on to practice later in the year was not successful. Much of the information presented to teachers was either too theoretical or redundant with other programs or classes they had taken for their teaching credential.  After a class survey in the middle of the year, we learned that the teachers wanted more hands-on computer time to practice their research skills, more access to teacher resources (primarily lesson plans), and the teachers wanted the reading to be the secondary, not the primary focus of the meetings.

From the beginning the team had intended for this series to be as customized as possible even with the multiple subject areas, so fortified with this new knowledge, the team revamped the curriculum.  Sessions were designed that would lead participants through the lesson planning process, even though this was something that they were already familiar with.  We asked them to build on their existing knowledge by incorporating information literacy strategies and concepts based on the theory we had discussed in class.

The best example (and by far the best session during our institute) was an exercise in which we asked the teachers to build their own model for integrating IL into their curriculum or assignment.  To begin the exercise, the California Academic Content Standards were introduced as a foundation for IL. We also introduced the Correlation of the Library Information Literacy Standards and the Indiana Academic Standards [Indiana

Department of Education, 2003]. This is an impressive collection of documents created by a committee made up of members of the Indiana Department of Education's Technology Leadership School Library Media Specialists and the Association of Indiana Media Educators (AIME). Using the American Association of School Librarians (AASL) Nine Information Literacy Standards, this collaborate committee integrated each IL standard into Indiana's Academic Standards for several areas such as visual arts, business, health, mathematics, and more.

We then asked the teachers to locate the following to fulfill the assignment: the Indiana Correlations that most closely fit their subject area, the California Content Standards for their area of teaching, and the IL standard(s) they wanted to target in their assignment. We had also created several examples of how we as librarians would create research assignments to address student information literacy as models from our perspective. And finally, they determined a method to assess how well the students understood the concept being taught.

**Teacher Reaction**

The teachers became excited because this lesson planning process and integration of information allowed them to see the connections between content, state standards and IL. Several expressed satisfaction in finally seeing all the pieces come together, and others wanted more examples of how they could apply IL to their own teaching practice.

Some of the lesson plans created by the teachers during this particular session were used in the weeks between meetings. Two of the Compton teachers brought their classes to UCI for a SPIRIT session, one to research the Cold War and the other to research authors. Topic, theory and practice all came together in each session and most

importantly, the students understood and applied what we taught them to their topics, using our databases to locate relevant articles and books. The teachers came away from the SPIRIT sessions with a sense of clarity about information literacy and also a sense of what a university library could offer them as teachers. Both students and teachers also expressed a sense of accomplishment that they could use a university library effectively, finding the information they needed online, on the shelf, and in our materials.

**Lessons Learned**

Primarily, we learned that it is important to balance theory with practice. We are dealing with teachers who are in the classroom every day teaching multiple groups of students and there are limits on their time so we need to make their time with us productive on more than just the theoretical level. To that end, customization is key. From the beginning we need to present examples and activities from several subject areas so that they can begin to formulate how to apply information literacy immediately in their classrooms.

It is important to realize that technology is a challenge for the teachers in their classrooms, not because of their lack of knowledge, but because access is limited. Many classrooms have only one or two computers and few school libraries have enough computers to conduct a research session for 30 students at once. Our teachers had to think creatively about how best to provide access to their students in addition to teaching them the research skills.

Another lesson we learned from the teachers in CTILI was the value of *learning as you go*. Gathering feedback from the teachers as we went through the year enabled us to make changes that increased the value of our program to the teachers we were serving

and to teachers we will collaborate with in the future.  We were fortunate to have a group of teachers who were dedicated to teaching and willing to share their experiences and thoughts on teaching with us.

**Future Institutes**

We have submitted a proposal for a second Compton Teachers Information Literacy Institute for the next academic year, and plan to use much of the same materials and teaching format.  However, in the next cohort, we will require teachers to participate in the SPIRIT program so they will have a firm idea of how and why the CTILI content leads directly to enhancing the research skills of their students.  Also, we will have more of a balance of theory and practice and more exercises and assignments applying the concepts we discuss in class.  We also hope to incorporate more of our colleagues' expertise in specific subject areas, bringing them in as class speakers and research experts.  One major drawback of this year's institute was that no librarians signed up for our particular institute.  However, the Compton High School librarian was a participant in the Technology Literacy institute due to an installation of 18 computers in the library. We will invite school librarians to participate or to be guests if they cannot participate in the monthly sessions.

**Conclusion**

The CTILI program has been a satisfying and challenging experience.  As staff in an academic library, our approach to information literacy was quite different than that of our teacher colleagues.  We learned from them as much as they learned from us about the constraints of the public school system and their approaches to problems we never consider in a university setting.  Facilitating discussions with the teachers helped us to

better articulate IL and to take it outside the academic library context to which we are

accustomed.  The teachers also had creative ideas of how best to use IL in different

situations, for different types of assignments, and in different subject areas.  Overall, the

CTILI experience was a positive one and we are looking forward to improving the

program for another year.

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