The tensions existing between teaching and research are an ongoing issue in higher education. A "classroom research" study with a college secondary music methods class was carried out to determine the efficacy of classroom research in the areas of teaching and research. A survey regarding the "dimensions of teaching" was distributed to students, teachers and teacher educators. This survey was used to determine rankings of "dimensions of teaching." Results of the survey were not generalizable, but were used to engage the class in discussion about school reform. Cross and Steadman's "Characteristics of Classroom Research" were used to evaluate the effectiveness of this study. Conclusions are drawn about the place of classroom research as a teaching tool and as research that is rewarded in a university.

"Teaching, Research and Service": Every professor is familiar with these categories that define our professional lives—at least during the tenure and promotion process. The relationship of these three categories has been the subject of much discussion (Cuban 1999; Bok, 1986; Rosovsky, 1990; Cole, Barber & Graubard, 1994) in higher education. The focus of this research tends to revolve around teaching and research, and can be best described within the following three categories:

1. The purpose of the university. One view is that the university exists to teach students. An opposing view is that the university exists to discover and create knowledge. Cuban (1999, p. 13) traces the history and consequences of this dual purpose in his writing about the invention of the "university-college."

2. The successful professor. A successful professor can be good at both teaching and research. The opposing view is that there is no correlation between good teaching and good research. Thus, universities
should find ways to "track" professors and allow them focus on their strengths.

3. Research and the Classroom. Research has direct application in the classroom. What is learned in the lab or in the field will enrich the education of students. However, because of teaching assignments, some professors do not have the opportunity make a direct link between research and the classes they happen to teach.

In Higher Education, teaching and research are the basis of evaluation for professors. However, when it comes to the tenure and promotion process, research and publication is generally valued more than good teaching. This study was a conscious attempt to explore the relationship between teaching and research, and to determine whether "classroom research" can be seen as having both teaching and research rewards.

For the purpose of this study, classroom research is defined by Cross and Steadman as "ongoing and cumulative intellectual inquiry by classroom teachers into the nature of teaching and learning in their own classrooms" (1996, p.2). Cross and Steadman use classroom research as a way to give greater emphasis to what Boyer (1990) called the "scholarship of teaching." This scholarship involves using "classrooms as laboratories in the study of teaching and learning" (Cross and Steadman, 1996, p.2).

METHOD

In an attempt to interest the seniors enrolled in my secondary music methods course, I decided to involve them in a research project which would gather data regarding people's beliefs about various educational reform efforts. After a class discussion, I realized that I had developed a project that had the potential to stimulate learning in the classroom, as well as provide insight into the relationship between teaching and research.

The class had various opinions about school reform and the philosophy behind it. We used Goodlad's four "dimensions of teaching" outlined in Teachers For Our Nation's Schools (1990, p. 46) to help resolve our disagreements. We became interested in knowing how various groups evaluated the dimensions, and how they perceived schools. After further discussion, we added two more dimensions to the four postulated by Goodlad. These additional dimensions were based on readings the students had done and our own educational experiences. The following research questions were formulated:
1. How do dimensions suggested by Goodlad compare to other possible dimensions?
2. Are there differences between personal rankings and how respondents think schools perceive the dimension?
3. Are there differences in rankings among groups: teachers, teacher educators, college students?

A survey was designed and administered to 56 teachers, teacher educators, and music education majors. The teachers (n=15) were participants in the Wyoming Leadership Associates Program (WLAP) and consisted of professionals in the fields of art, science and administration. The teacher educators (n=7) were members of WLAP and other faculty members in my department. Students (n=34) were members of the secondary methods class (seniors) and two other music education classes (sophomore and juniors) The survey asked participants to rank the four dimensions suggested by Goodlad, plus two others which have received wide discussion in current educational literature. The statements were (an asterisk indicates Goodlad's dimensions):

1. Schools should provide the facilities and supplies that are essential to learning. *
2. Schools should provide all students a disciplined encounter with knowledge.*
3. Schools should enculturate the young into a political democracy.*
4. Schools should concentrate on preparing students for jobs.
5. Schools should provide experience in critical thinking and problem-solving.
6. Schools should provide an effective Teacher-Student connection.*

Participants ranked the statements (6 = most important, 1 = least important) in two ways: (1) importance to them, and (2) importance they thought the items received in schools. For the second rating, teacher educators ranked the items for schools in general, teachers ranked them for their school, and college students ranked them for the K-12 schools they attended.

RESULTS

Means were calculated for the entire group and the subgroups of teacher educators, college music students and K-12 teachers. Because of the limited sample and nature of the data, simple descriptive statistics
seemed appropriate (see Table 1).

For discussion in class, Table 1 was converted to charts. This enabled students to more easily see the rankings, and to compare the various groups (see Figure 1).

Table 1. Mean scores from ranking of the dimensions.
(6 = most important, 1 = least important)

<table>
<thead>
<tr>
<th></th>
<th>Facilities</th>
<th>Knowledge</th>
<th>Democracy</th>
<th>Jobs</th>
<th>Thinking</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>You-All</td>
<td>4.5</td>
<td>4.0</td>
<td>2.7</td>
<td>3.1</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Your School-All</td>
<td>4.9</td>
<td>4.7</td>
<td>3.8</td>
<td>4.4</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>You-Teachers</td>
<td>4.5</td>
<td>4.1</td>
<td>2.9</td>
<td>3.1</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Your School-Teachers</td>
<td>3.2</td>
<td>3.0</td>
<td>3.2</td>
<td>4.1</td>
<td>3.2</td>
<td>3.3</td>
</tr>
<tr>
<td>You-Teacher Educators</td>
<td>3.9</td>
<td>5.0</td>
<td>3.5</td>
<td>3.5</td>
<td>4.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Your School-Teacher Educators</td>
<td>4.0</td>
<td>4.1</td>
<td>1.8</td>
<td>4.3</td>
<td>2.7</td>
<td>4.0</td>
</tr>
<tr>
<td>You-College Students</td>
<td>4.7</td>
<td>3.7</td>
<td>2.5</td>
<td>3.5</td>
<td>4.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Your School-College Students</td>
<td>4.0</td>
<td>3.9</td>
<td>2.8</td>
<td>3.0</td>
<td>3.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Figure 1. "Most important to you" rankings for all participants

Each research question was discussed in the Secondary Methods class. Based on this discussion, three main questions were answered:
1. How do dimensions suggested by Goodlad compare to other possible dimensions? Both "preparing for jobs" and "thinking skills" (not Goodlad dimensions) were ranked higher than Goodlad's "preparing students for a political democracy." This showed that there is room for debate about
essential philosophical positions relating to schools.
2. Are there differences between personal rankings and how schools are perceived? Overall there was a similar profile.
3. Are there differences among groups: teachers, teacher educators, and college students? Yes. Both Teacher Educators and Teachers tend to think that "preparing for jobs" is more important to their schools than to them individually.

The results of the survey were quite interesting to me, to the secondary methods class and to the WLAP cohort. The secondary methods class discussion was lively and deepened by the access to survey results. We discussed the limitations of such a survey (i.e. small sample and lack of generalizability), as well as insights that we could gain about the views of different groups of teachers and learners. The relationship of the dimensions to reform efforts was argued. For instance a student related Goodlad's "School should provide all students a disciplined encounter with knowledge" to reform movements that focus on "core curriculum."

DISCUSSION

Cross and Steadman (1996, p.2-4) list several characteristics of classroom research. Figure 2 summarizes those characteristics, and uses them as a vehicle to report the results that I observed from this project.

The "classroom research" project was successful in many ways. In general it piqued the interest of students in a way that a lecture could not. The project stimulated a lively discussion about research and the interpretation of results, and resulted in increased student understanding of research, school reform, and educational philosophy. The students seemed more interested and involved (compared to previous classes), and their interest and discussion indicated a more complete understanding of complex school reform issues and the importance of those issues to society.

CONCLUSION

At the beginning of this paper I outlined arguments about the tensions between teaching and research. It was my intention to try to understand more fully how those tensions could be negotiated and possibly resolved as I carried out this project. It was also my intent to study the use of classroom research in an examination of the "scholarship of teaching."
Relationship between Teaching and Research

A research project that is closely tied to teaching has the possibility for an extraordinary synergy between the two. Learning by my students was improved, and as with all teachers, I was gratified and excited. The opportunity and the desire to delve into professional literature with which I was unfamiliar also excited me. (e.g. writings by Goodlad). I had renewed enthusiasm for teaching, research, and professional growth.

Figure 2. Cross and Steadman’s Characteristics of classroom research

<table>
<thead>
<tr>
<th>Characteristics of Classroom Research (Cross and Steadman)</th>
<th>Results of Music Methods class Research Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner-Centered  • Focus on improving learning rather than teaching</td>
<td>The “classroom research” project was undertaken to engage and involve the students in school reform issues. I was looking for a way to encourage active learning.</td>
</tr>
<tr>
<td>Teacher-Directed  • Teachers are capable of conducting useful and valid research on classroom learning.  • Teacher becomes active researcher rather than just a consumer</td>
<td>The idea for this project came from me as a result of my professional growth activities and my observation of student learning in my class.</td>
</tr>
<tr>
<td>Collaborative  • Active engagement of students and teachers is required  • Sharing of analysis and interpretation of results  • Discussions with colleagues are deepened</td>
<td>The students and I got excited about the possibility of gathering data and trying to understand it.  As we discussed the project I also discussed it with members of the WLAP cohort. They were eventually participants in the survey</td>
</tr>
<tr>
<td>Context-Specific  • Classroom research sheds light on a specific question in a specific classroom with known students.  • Generalizability is not the issue.</td>
<td>The Secondary Methods Class and their interest (or lack of interest) in school reform was the context for the project.  Increased understanding by the students was a major goal. We did not generalize the results, but used our descriptive statistics as a way to enter into a discussion of the issues.</td>
</tr>
<tr>
<td>Scholarly  • Classroom research is intellectually demanding and professionally responsible.  • It builds on the knowledge base for teaching and requires carefully crafted research questions and design.  • Implications of the research should be considered.</td>
<td>The use of classroom research was built on my experience as a teacher and a researcher. I was able to guide the class to specific research questions.  We considered the survey in the context of our discussion about school reform  I considered and implemented the idea of using research as a teaching tool in subsequent classes.</td>
</tr>
</tbody>
</table>
Characteristics of Classroom Research
(Cross and Steadman)

Practical and Relevant
• The purpose of classroom research is to deepen understandings.
• The measure of the project is its contribution to the knowledge and practice of the teacher.
• Findings may be related to theory, and may be published.

Results of Music Methods class Research Project

I gained understanding on four levels:
1. I found students much more actively involved in the learning of school reform by using this research project.
2. I gained understanding of philosophical ideas that are “in the shadows” as we grapple with educational reform.
3. The collaboration with the LAP cohort was a valuable lesson on how various stakeholders view the philosophical underpinnings of school reform. There were College of Education faculty, Arts and Science faculty, K-12 teachers, K-12 administrators, and school board members in the cohort. The discussion of the cohort was a stimulating professional growth opportunity for us all.
4. The findings were related to various theoretical viewpoints about school change.

Continual
• Classroom research requires evaluation of results and raises new questions.
• Classroom research is a process more than a product.

Continual
The results of the survey provided opportunity for a deeper level discussion in the Secondary Methods class. I looked for ways to use a similar approach in my future teaching.

The next time I taught the Secondary Methods class I had the students take the same survey, and used that as the basis for our School Reform discussion. While this was a helpful teaching technique, it did not engage the students the way the original formulation of the survey did for the previous class.

Investment of Resources

Considerable time and energy were expended by me and my students to complete this project. A classroom research project must be realistic—a project could easily get out of hand and overwhelm all concerned. Most professors already have a great deal to do, and the intellectual investment in a classroom research project may not be possible. I have not repeated this particular research activity with subsequent classes, but have had students take the survey and discuss the results as well as the earlier results. The impact of the research is considerably lessened when the class is not involved in formulating questions and designing the survey. The time and investment of resources questions are real, and point to the inherent conflict between teaching and research: both are full time pursuits, and given the constraints of our job, and the clock, it may be impossible to be good at both in a way that is intellectually satisfying.
Is It Research?

What is the place of classroom research in the research world? Is this real research? Will the survey count when my university evaluates me? I do not believe that classroom research is yet seen as being comparable to traditional research that is published in peer-reviewed journals. That may change. Hutchings and Schulman (1999) address the issue and see increasingly better definitions of the differences between teaching and the "scholarship of teaching." There is the possibility of more recognition for those engaged in the "scholarship of teaching." There are increasing opportunities for dissemination of research in local college teaching and learning symposia, conference presentations and new journals. Without such opportunities, there is little hope that classroom research can be viewed as a scholarly pursuit.

In some ways classroom research lives an uncomfortable existence—neither fish nor fowl. Cross and Steadman (1996, p. 11) relate classroom research to both classroom assessment and "traditional educational research." I see classroom research as a point on a continuum between the everyday assessment we do in a class and traditional research. It has elements of teaching and good research. Here is an example:

Figure 3. Classroom Research, Assessment and Traditional Research

<table>
<thead>
<tr>
<th>Classroom Assessment</th>
<th>Classroom Research</th>
<th>Traditional Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>In discussion of the National Standards (MENC, 1994) in a college methods class, the professor asks each student to give an example of how he or she might teach the standards. The professor is assessing understanding and application of the National Standards.</td>
<td>The Professor and the college methods class decide they would like more information about the National Standards and their use in K-12 music. They formulate a project in which each student contacts at least two of their K-12 teachers and asks for a description of how the teachers use the National Standards and a sample lesson plan. The results are shared in the class.</td>
<td>In order to ascertain the use of the National Standards, a national survey is undertaken. The survey is sent to teachers in every state. The sample of teachers accurately represents the teaching population in terms of area of specialization, length of career, school size, and other pertinent variables. The results are published in a music education journal.</td>
</tr>
</tbody>
</table>

A research agenda that is closely tied to the classes a professor teaches would seem to be ideal. However, many of us teach a variety of classes, and it is hard to tie a research agenda directly to all classes. Classroom research offers the opportunity for research to proceed in the context of
our teaching.

Classroom research can have both research and teaching rewards—if the time and energy invested is commensurate with the return. This type of research may be worth doing for the potential improvement of learning, and becomes even more desirable if the recognition of this "scholarship of teaching" is forthcoming from universities and professional journals.

REFERENCES


