*Blackboard and Wikis and Blogs, Oh My: Collaborative Learning Tools
for Enriching Music History and Music Theory Courses*

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Just as Dorothy had to overcome her fear of lions and tigers and bears in *The Wizard of Oz*, so too have collegiate faculty been encouraged to use new computer-mediated tools in their teaching to facilitate student learning, such as Blackboard and wikis and blogs. Oh my. Despite their somewhat off-putting names, these tools have the potential to radically alter the way college students learn and faculty teach, with the end result being greater learning by students. This paper presents an overview of how these technological tools work together to enhance learning and teaching, surveys the pedagogical research on which they are based, and more specifically, demonstrates how two music faculty at Temple University have incorporated these Collaborative Learning tools into their teaching of music history and music theory courses.

Broadly speaking, Collaborative Learning is "a situation in which two or more people learn or attempt to learn something together."[1] More specifically as it is utilized in teaching, Collaborative Learning is an environment where learners work in small groups to exchange information and to seek a consensus on a particular topic or question, resulting in an increased understanding by all participants.[2] Typically the questions are complex, often having multiple answers or even possibly no one "correct" answer, and as a result, they require that the group negotiate among themselves the best possible solution by sharing information, viewpoints, and ideas.[3] Since there is more than one person involved in the process, each group member brings a unique perspective to the task based upon prior knowledge and current skills, with the expected outcome being that everyone learns in the process since everyone is challenged to grow in areas of deficiency

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[1] Dillenbourg, *"What Do You Mean,"* 2.
[2] Johnson et al., *Active Learning*, 3:16.
[3] Bruffee, *Collaborative Learning*, 21.

while simultaneously contributing to the group in other areas of personal strength or knowledge.[4]

Numerous studies have documented broad gains in student learning within environments encouraging collaboration, shared group knowledge, and deep learning based on social activities stressing shared inquiry.[5] However, few studies have focused specifically on Collaborative Learning among students enrolled in music classes.[6] One reason for this discrepancy may be due to the emphasis on traditional "conservatory" approaches where students work and learn on their own using techniques passed down through generations of traditional music pedagogy. Even music theory classes tend to emphasize an individualized approach in which each student develops particular skills at his or her own pace.

Collaborative Learning is based on research by Jean Piaget and Lev Vygotsky, where cognitive reasoning and development are said to occur through social interaction.[7] The goals of Collaborative Learning include enlisting students as active participants, sharpening problem-solving skills, sharing a wide range of possible choices, and reflecting practice in the real world.[8] Additional goals include having students work together to solve problems and to discover new information, and to process what is solved or discovered within each student's personal understanding of the material. Learning occurs through active participation rather than passive acceptance of information.[9]

Additionally, Collaborative Learning is one of several theories of learning that collectively share common roots in Constructivism. From a Constructivist's viewpoint, no one learns information identically or in the exact same way.   Rather, students interpret information individually, creating a unique, personal interpretation of information filtered through the lens of one's prior experiences and previously

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[4] Johnson and Johnson, *Learning Together*, 48.
[5] Roberts, *Computer-Supported Collaborative Learning,* 2.
[6] Crook, *Collaborative Experience*, 67.
[7] Johnson and Johnson, *Learning Together*, 39.
[8] Folio, "Working Bibliography,"
http://astro.temple.edu/~cfolio/GP.bib3.htm
[9] Panitz, "Collaborative Versus Cooperative Learning,"
http://home.capecod.net/~tpanitz/tedsarticles/coopdefinit.

acquired knowledge.[10]   Viewed another way, students share the pooled resources of their collective knowledge to achieve greater individual understanding.

A closely related, though distinctive, paradigm is known as Cooperative Learning. The two paradigms of "Collaborative Learning" and "Cooperative Learning" are pedagogically related, but they are not synonymous.[11] Cooperative Learning is _teacher centered_ and seeks to produce a "correct" response scripted by the instructor who is in complete charge of the class at all times.   Collaborative Learning is _learner centered_ and seeks to empower students to discover information by working together within groups. Cooperative Learning utilizes more traditional numerical measures to measure student achievement, while Collaborative Learning focuses less on structure and more on discovery learning within small groups of students.

Examples of Collaborative Learning projects include peer tutoring, collaborative project work, writing peer reviews, classroom consensus group work, and consensual response to lectures.[12] All of these scenarios are entirely appropriate for the music history and music theory (henceforth, "music studies") environment.

Collaborative Learning is particularly well suited to social interaction using computers, since in this forum, students do not have to be physically or even temporally present in the same location to share information and learn from one another.[13] Consequently, researchers have increasingly examined the ways in which computers mediate communication within small group instruction and the learning environments that best foster Collaborative Learning in a computer-mediated environment.[14]

Computer-mediated learning tools, such as the Blackboard online learning environment now found on many college campuses, offer music faculty new opportunities to communicate with students, to allow students to communicate with each other, and to collaborate

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[10] Newby et al., _Instructional Technology_, 34.
[11] Panitz, "Collaborative Versus Cooperative Learning," http://home.capecod.net/~tpanitz/tedsarticles/coopdefinit.
[12] Bruffee, _Collaborative Learning_, 21.
[13] Crook, _Collaborative Experience_, 28.
[14] Littleton and Häkkinen, _Learning Together_, 28.

together through such activities as wikis and blogs to encourage Collaborative Learning activities. Wikis are Web-based collaborative authoring tools where students create and edit online information together on a particular topic. Blogs are web-based, asynchronous journals created by one or more authors on a topic that appear online in reverse chronological order. These two resources provide music faculty with powerful and flexible new teaching tools that stress interactivity, shared knowledge, and group learning in music.

For those of us who already have embraced this technology, it is difficult to imagine a world in which one would have to teach without these tools.   Even if only used as a repository for online access of important course documents and Internet resources, media files, and exchange of electronic documents between teacher and student, Blackboard can be a real time saver for faculty.   New in Blackboard versions 6 and 7 is the inclusion of blog and wiki tools. These new tools provide a collaborative environment for music history and theory faculty who wish to expand their traditional lecture-type assignments into assignments where students share ideas and seek greater understanding by working together. While not all assignments in music history and music theory may be appropriate for Collaborative Learning, assignments that emphasize critical thinking, active involvement in learning, and socially negotiated problem-solving skills are good candidates for Collaborative Learning.

One of the many advantages of these tools is that students contribute entries on a password-protected web site that their classmates will read, resulting in an audience for their work that goes beyond just the teacher and includes their peers. Knowing that classmates will be reading their entries places new accountability on each student for accuracy and relevance for what they write. Additionally, the students benefit from reading other students' entries, making the assignment collaborative and a shared learning experience. Students learn from one another based on what each has to contribute to the group.

A second advantage is that students can interact and learn from one another outside of traditional classroom walls[15]; in today's modern collegiate music student environment, where students seem to be sandwiched between classes, lessons, rehearsals, and gigs with inflexible schedules, these tools enable students to interact anywhere

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[15] O'Donnell, *Introduction: Learning with Technology*, 2.

and anytime. Another advantage is that students who are intimidated working in face-to-face groups may feel more comfortable working collaboratively in an online format.[16] Finally, the communication occurs within a socially non-threatening educational atmosphere, and enables students to explore a topic in depth outside of class time, thereby increasing the overall time on task.

The benefits of Collaborative Learning are many, including the following list as identified by Ted Panitz and reiterated by Tim Roberts in his valuable text *Computer-Supported Collaborative Learning in Higher Education*.[17] Collaborative Learning can:
- Promote critical thinking skills
- Involve students actively in the learning process
- Improve classroom results
- Model appropriate student problem-solving skills
- Develop a social support system for students
- Build diversity understanding
- Establish a positive atmosphere for modeling and practicing cooperation
- Increase student self esteem
- Develop a positive attitude toward teachers[18]

Thus, Collaborative Learning can be a powerful tool for building problem-solving skills using real-world models of interaction and negotiation.

A major aspect of Collaborative Learning assignments is that the role of the teacher changes dramatically from traditional models. In a Collaborative Learning model, the teacher does not function as the "sage on the stage," but rather serves as a coach, guiding students toward discovering information for themselves and toward making new intellectual connections that are assisted by their peers and based on previous knowledge. The challenge becomes not covering the material *for* the students, but uncovering the material *with* the students.[19] As a consequence, many instructors are reluctant to use a collaborative approach to teaching because in this model, the instructor is not imparting knowledge to students in the traditional classroom format,

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[16] Ibid.
[17] Roberts, *Computer-Supported Collaborative Learning*, 2-4.
[18] Ibid., 2.
[19] Johnson et al., *Active Learning*, 4:3

but rather is guiding or coaching groups of students in projects that may not have a clearly articulated outcome as indicated on Table 1. In effect, the teacher loses some control.

Table 1. Old versus New Teaching Paradigms		
	Old Paradigm	**New Paradigm**
Knowledge	Transferred from Faculty to Students	Jointly Constructed by Students and Faculty
Students	Passive Vessel to be Filled by Faculty's Knowledge	Active Constructor, Discoverer, Transformer of Own Knowledge
Faculty Purpose	Classify and Sort Students	Develop Students' Competencies and Talents
Relationships	Impersonal Relationships Among Students and Between Faculty and Students	Personal Transaction Among Students and Between Faculty and Students
Context	Competitive / Individualistic	Cooperative Learning in Classroom and Cooperative Teams Among Faculty
Assumption	Any Expert Can Teach	Teaching Is Complex and Requires Considerable Training[20]

During the past several years, we experimented with using wiki and blog assignments in our music history and music theory courses at the Boyer College of Music at Temple University, a large, metropolitan university in Philadelphia. Some of the assignments were refined and expanded in the 2007 fall semester, and continue to be used in our courses today.

In a music history class on the Preclassic, Classic, and early Romantic eras, the students completed three wiki assignments during the semester.   For the first group project, students had a two-part assignment based on Chapter One of Joseph Riepel's 1752 treatise entitled *Fundamentals of Musical Composition.*[21] The second wiki assignment featured Daines Barrington's account of Wolfgang Mozart

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[20]Ibid., 1:7.
[21] Joseph Riepel, "Fundamentals of Musical Composition", 749-761.

as a young boy and several letters written by Wolfgang to his father. The third wiki assignment covered the article "Beethoven's Ninth Symphony: A Search for Order" by Maynard Solomon and included questions related to Beethoven's symphony based on the article.[22]

In Part One of the Riepel assignment, the students were to read the chapter, discuss it face-to-face and/or online with the members of their group, and respond collectively as a group to five open-ended questions about the Riepel chapter.
- Students were divided into five groups of five students each.[23]
- Students were encouraged to assume one of five roles:
  - Group Leader (the person who makes sure everything is running smoothly and that everyone is doing her or his job),
  - Scribe (who begins to post the group's responses, though all members are encouraged to join in adding to the posts once the scribe posts some introductory material),
  - Multimedia Expert (one who includes graphics and/or audio files, and makes certain any links to the Internet work properly),
  - Fact Checker (one who makes sure that the information is factually accurate),
  - Proofreader (one who checks spelling and grammar).[24]
- Based on previous semesters' experiences with this type of group assignment, the students were permitted 15 minutes in each of two class periods to interact face-to-face, but the remainder of the interaction was to occur outside of the classroom either through face-to-face meetings or by using one of several collaboration tools available in Blackboard.[25]

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[22] All three assignments and a grading rubric are available at http://astro.temple.edu/~kreinber/cms/wiki.html.

[23] One group numbered six students due to a course enrollment of twenty-six students total.

[24] In the group numbering six students, the students were encouraged to discover a new group role, but in Assignment One, two students decided to share one of the roles.

[25] The online group tools within Blackboard include a Discussion Board, a file transfer utility, an e-mail utility, and a live "chat" area, all of which are only accessible to the members of that particular group.

- Though all five groups were working on the same Riepel chapter and set of questions, no one group could view the work of any other group during the ten day working period.

After the ten-day collaboration period ended, all five groups' work became "live" so that everyone in the class could view and read each of the five groups' wiki collaborations. Though responses in all five were similar, none was identical and there were some surprising differences. Certainly, the visual appearance and tone of each group was quite distinctive.

In Part Two of the assignment, each student had five additional days to read all five of the group responses and to submit a one to two page reflective paper answering the following questions:
- What role did you play in your Group?
- How were the various Group responses similar or different?   Did anything strike you in particular or catch you by surprise?
- Which among the Groups did you feel did the best job overall? Explain your response.
- In reading the other Group responses, is there something about your Group's work that you now wish you could change? Explain your response.
- What did you learn personally from this assignment?

The student comments in Part Two were thoughtful and insightful. It was quite clear that the students thought deeply about what they had learned in this type of assignment. And, while most of the class resisted the assignment at first, upon further reflection, nearly all of the students recognized the value of this type of group work. Moreover, a number of students commented that they learned the most by reading the other four groups' work and comparing it to their own group's responses.

In a music theory class in which music analysis was an important part, the students engaged in approximately one blog per week. These blogs served as substitutes for what were formerly called "Study Questions," in which the students were required to answer and hand in some analytical questions about a piece of music before discussing the piece in class. These questions helped them to become acquainted with the piece so they would be better prepared for class discussion.

Since there were 22 students in the class, they were divided alphabetically into 2 groups of 11: "A to Lee" and "Lie to W." This way, there were enough questions to go around. Neither group could see the other group's blog until after the due date. Students were asked to choose 2 questions (out of about 10) or comment on another person's answer. If a student felt uncomfortable about participating or they had trouble with internet access, they had the option of answering *all* of the questions on paper and handing it in.

One blog in particular will be used as an example of the types of questions asked and the kind of responses that ensued: an analysis of Schubert's "Du bist die Ruh." The questions ranged from those that required a particular answer (about the rhyme scheme of the text and about the form) to more open-ended questions (about the meaning of the poem and about text painting). While the "particular" questions are necessary and useful, the more open-ended questions generated the most enthusiastic comments—even debates. For example, the following are some responses to the question, "Who or what do you think is the subject of the poem?"

- … a tender, nervous young lover …
- … could be about God …
- … someone expressing their passionate desire for a person they love.
- … someone who is intensely loved, possibly God (opinions?)
- … something more spiritual. Maybe even death?
- … [someone] looking to life *after* death.
- … she is thanking whomever has given her inspiration …

There were several imaginative responses to the question about text painting, which also generated more debate:

- … ascending lines represent the ascent to heaven …
- … the *pp* at the end is rather prayer like.
- … [Schubert] tonicizes bVI in the last stanza to reflect the joy and brightness of the text.
- The poem shifts in tone – at first the speaker seems to be simply complimenting the person they love, but by the end the speaker is shouting/begging the other to love them …

The blogs were an effective tool for many reasons. First, the students had always hated handing in the study questions and I hated grading

them. There were always a few questions that they had trouble answering. Also, I was the only person who saw their analysis, although I would occasionally share interesting insights with the class. Most of the students liked the blogs because they could choose the questions that they wanted to answer, they could see what the other students in the class were thinking, and they could express themselves, not just to the teacher, but also to their classmates. They benefited from the insightful comments from the stronger students, and they could assess whether they were on the right track. Several students said (in response to a question about blogs in the course evaluations) that the blogs helped them gain confidence; this was particularly true of foreign students, who were shy about participating in class discussion because of their insecurity about speaking in English. The most interesting result, though, is that the nature of the students' writing became more informal and personal. The following is an example of a student entry (a vocalist) from the same blog on "Du bist die Ruh," quoted exactly, with all original capitalizations:

> WOW. i was so moved by this piece!! it is incredibly beautiful. it's a fabulous example of what Schubert does best, text painting. (in my opinion!) it is UNREAL the way he is so sensitive to the relationship between accompaniment and voice. it sounds so completely natural and as if spoken!

After this emotional outburst, the student provided several specific examples of text painting. The old hand-in Study Questions never evoked this kind of enthusiastic and personal response!

The blogs presented only a few challenges. The main one was that students tended to wait until the last minute to contribute, which meant that many of them made their contributions after midnight. One solution was to read them the next morning or to set a particular time limit. Another challenge was in grading. Instead of receiving individual grades for each set of Study Questions, the students received a midterm grade and final grade based on the quality and frequency of their blogs. This meant printing out all the blogs and sorting the entries for each one. In retrospect, this process required about the same amount of time as it took to grade the Study Questions individually. In addition, a few students either felt uncomfortable participating in the blog (especially the ones who were weak in theory), or they had limited internet access, or they happened to

choose a time when the Blackboard site was down. The solution for this was to give them all the option of handing it in as a written assignment. In summary, the successes far outweighed the challenges.

If you do decide to use wikis and/or blogs in your courses, we can offer several suggestions for success based upon what we have learned thus far:

WIKIS
- Acknowledge that you may encounter enormous resistance to this type of assignment. Students have been trained throughout their schooling to compete for grades, and that they are to work independently and without assistance.   Collaborative Learning is a different model. Acknowledge this up front and publicly with the class.   Reassure them that they are about to learn new things, in ways they probably hadn't considered, by doing this type of assignment.
- Students need to know that the success of their wiki assignment and their grade is based on everyone contributing to the group's effort. Allow the students to put some pressure on the slackers to contribute to the overall success of the group.   Even a student who believes him/herself to be weaker than the others in the group, a non-native English speaker for example, quickly learns that s/he has something valuable to contribute to the others. Let them learn this through the assignment.
- The research indicates, and we concur, that groups should be assigned at random rather than permitting students to self-select their groups. One could, however, group students by major, or applied instrument, or curriculum (such as jazz versus classical), and still maintain a degree of randomness to the groupings. Invariably, one group will probably be weaker than the others. But once the students compare their work against the work of another group, they begin to learn how the others are working and communicating toward a lesser or better outcome, transferring this knowledge to their group effort the next time. For the weaker groups, they benefit by seeing exemplary models. For the stronger groups, they benefit knowing they are on the right track and are challenged to maintain their superiority by providing additional exemplary models.

- Groups should number about 5 members. If less than 5, one person will do all the work. If more than 5, the weaker students can do little or nothing.
- Provide some class time for the groups to communicate face-to-face, especially in the first assignment. Though Blackboard provides many communication tools that allow group discussion boards, group e-mail and file exchanges, and live group chats, the students are typically uncomfortable using these tools at the beginning. Allowing them to talk face-to-face provides a safe zone where they can figure out who will play what role and to negotiate as a team how they will proceed with the assignment.
- Assign roles. This assures that everyone plays a different part, with each contributing to the overall success of the group. This also makes evaluation for the instructor easier once the assignment has concluded since you know who was to do what within the group.
- If you give a subsequent wiki assignment, keep the students in the same groups, but make them change roles. This denies them from falling into the trap of a "comfort zone" role, and it allows them to learn new things from the past successes of others who played a similar role.
- Ask questions that do not have one correct answer. Make them ponder together as a group what their response is going to be and to consider alternate viewpoints that need to be resolved among them.   Let them know that opposing views can be a very good thing because it challenges us to reconsider what we believe and also to look beyond ourselves.
- If at all possible, allow them to include audio and video clips, graphics, and links in their posts to enliven and/or demonstrate their point.
- Assignments should be in two parts: The first being the group effort, and the second being an individual, personal reflection on what worked, what didn't work, what they would change if they had to do it over again, and what did they learn. What a novel concept: to actually ask a student, "What did you learn from this assignment?"   The important thing to stress here is that introspective reflection is a critical component of these assignments because they cause the student to mull over what has just taken place, to consider what they have learned from the others, and to consider what they have contributed to the group's knowledge. Thus, make the second part of the assignment something that allows them to sift through the other

groups' responses, comparing and contrasting against their work what the other groups have done in their work. You will be surprised what you learn from them.
- Finally, let go. Guide them, but let them find the way to answer the questions that has collective meaning to them.

BLOGS
- Provide a timeframe when the posts are to be made. Space them throughout a period of time, such as a month or a semester.
- Require that the students respond to posts of classmates. This makes them read the work of the class and react to something someone else has written. It also makes them realize that others will be reading what they have to say, injecting a new level of accountability into their work since they know their peers will be reading their work.
- If at all possible, allow them to include audio and video clips, graphics, and links in their posts to enliven and/or demonstrate their point.
- Be certain to ask them to document where they located something so we can visit that link or book or location to see it for ourselves. Don't just allow them to take their word for something; make them provide proof and documentation.
- Allow random postings, but tie them in some way to class topics so they remain on track.

Although wiki and blog assignments may not be appropriate for every assignment in music history or music theory, these Collaborative Learning tools have the potential to invigorate traditional teaching.[26] By using wikis and blogs in music history and music theory courses, students are more enthusiastic about assignments, knowing that the process is a shared experience and that the end result will be better because several brains rather than just one have worked together on answering the questions. Students learn not only about music, but also they learn about the important values of teamwork and collaboration. Thus, just as Dorothy, Scarecrow, Tin Man, and Lion

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[26] We should add that the two of us have greatly enjoyed collaborating together on using blogs and wikis in our respective courses, as well as in our preparation of this presentation.

collaborated to achieve their goals in Oz, our students learn the value of collaboration to achieve their academic goals.

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