PROGRAM DEVELOPMENT AND EVALUATION OF A DISTANCE LEARNING GRADUATE DEGREE PROGRAM IN MUSIC EDUCATION: PERSPECTIVES FROM STUDENTS AND PROFESSORS

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This presentation illustrated the development, implementation, and evaluation of a distance learning graduate degree program that meets a critical need—the professional development of music educators. The partnerships and processes required to design, maintain, and evaluate the program were described. A full complement of courses has been offered since 2001, with two "classes" of music teachers graduated. Collaboration among faculty in Curriculum & Teaching, Music, and Educational Foundations has been essential. Successful distance learning is a team effort and requires advance planning and ongoing external support. Various models of interaction were used to meet the needs of each music course. Professors have found it challenging to teach in these modes since most courses include both on-campus and distance learning students and enrollments are greater than before. However, distant learners bring diversity of thought and experience to the community of graduate students and a higher level of scholarly discourse. The staff's experiences and data from course evaluations, student questionnaires, and exit interviews drive continuous revision of courses. Students have responded favorably to the program's organization, quality, convenience, practicality, and student camaraderie.

The Distance Learning Master of Education in Music Education program at Auburn University was designed to address a critical need—the professional development of music educators. As K-12 school calendars have expanded, fewer music educators in Alabama (a largely rural state) are able to attend traditional on-campus courses. Requests from teachers for distance courses had increased, and when the university made grants available to start distance programs, it seemed feasible to initiate a program. A trend of decreasing graduate enrollment gave further impetus to the development. The design and development of the program involved a number of partners and took18 months to plan and initiate.

Program Development

A number of factors were considered in the program design. A survey of existing programs did not reveal any complete degree programs without summer residencies exceeding a week in length. Music education graduate programs offered through distance learning in nearby states were text-based, using asynchronous technologies, and charged substantial out-of-state tuition penalties. Nearby three-summer programs prompted us to design a program that could be completed in three consecutive summers. Scagnoli (2003) and experiences of the special education distance-learning faculty at Auburn indicated that orientation and some face-to-face personal interaction were important, so an on-campus summer seminar was included as a requirement of the M.Ed. program.

The Music Technology Distance Master's program at the Indiana University—Purdue University Indianapolis (Rees, 2005) had shown how synchronous video delivered through the Internet combined with chat could work well for music instruction. Synchronous technology allowed instructors to teach and interact with on-campus and distance students simultaneously. The special education department at Auburn had already been using the university's Real Server to teach through live streaming video. Although the video and audio equipment for the program was inexpensive, staff and maintenance were critical to success. The university devised a tuition system that returned most tuition income to the departments that offered distance learning, to make distance learning programs self-sufficient. The flexible tuition was based upon the market, projected enrollment, and program expenses. We determined that we could offer instruction at a competitive cost and cover program needs.

The program expenses were affordable because of the resources available from a number of university divisions. Before the program was proposed, letters of support were obtained from information technology, the library, and the bursar's office. The degree program included coursework in the music department and in educational foundations as well as music education courses in the curriculum and teaching department. Approval and support were sought from each participating academic department to ensure that courses would be offered to make the three-summer program possible. Other divisions such as the Learning Resources Center and Distance Learning also pledged support.

The extensive program approval process resulted in full accreditation. The university approval process was intended to ensure that on-campus and distant students receive the same quality of instruction. Description of the program, budgets, and individual course syllabi were approved by the department, college, graduate council, university curriculum committee, and provost's office, Care was taken so courses met state department of education competencies. The program earned accredited by NASM, NCATE, and SACS.

Courses have been offered since Summer 2001, with two "classes" of music teachers graduated. The department of educational foundations has offered support courses in research and educational psychology and the special education department has offered a survey of exceptionalities course. Our departments, the Department of Curriculum and Teaching and the Department of Music, have offered the courses listed below.

- Choral Conducting I & II
- Instrumental Conducting I & II
- Graduate Ensemble
- Choral Arranging I & II
- Instrumental Arranging I & II
- Wind Band Literature
- Advanced Choral Literature
- Evaluation of Program in Music Education
- Organization of Program in Music Education
- Curriculum & Teaching in Music Education
- Research Studies in Music Education

- Applications of Technology in Music Education
- Digital Media Production for Music Education
- Introduction to Orff-Schulwerk
- Guitar Class Methods

Models of Instructional Design

In order to offer the full complement of courses for an M.Ed. degree, instructors recognized the need to explore models of design that would best meet student needs and allow flexibility in delivery of content. Several researchers have examined the developmental needs of adult learners (e.g., DeCorte, 1990; Hayes, 1993; Knowles, 1990) finding that due to the diversity of life-experience and learning perspectives, instructors should place emphasis on the social construction of knowledge coupled with use of a variety of teaching strategies. Tennant and Pogson (1995) suggest the following strategies:

- Encourage students to attend to and reflect on experience.
- Have peer groups work together on common issues or problems with opportunity for the exchange of ideas.
- Expose students to situations that create ambiguity or conflict when existing frameworks for understanding are shown to be inadequate—with support for resolving the conflict.
- Recognize student achievement.
- Place students in situations requiring new responses and actions.
- Provide students relative freedom from internal and external constraints and anxiety, and encourage them to explore and take risks.

In particular, these strategies are most effective when a recognition of and accommodation for the social and psychological learning environments are considered in course design. While these strategies were designed with a traditional learning format in mind, they are particularly challenging when placed in a distance-learning context. Instructors have found that adaptations for peer group interaction, and efforts to provide freedom from external constraints and anxiety have required the greatest attention when working with distance students. With this background, across all of the course offerings instructors have found the greatest success when they facilitate distance and on-campus students in small group and whole class discussions, adapt the number and format of exams and presentations in response to student accessibility to varied technology resources, and focus on projects that involve peer interaction.

Implementation

Instructors have chosen a variety of technologies to address the needs of both on-campus and distant learners. In the following section, faculty and staff discuss how they have used technology and adjusted instruction to best address the demands of courses' contents, student learning, and faculty teaching style.

Digital Media Production for Music Education

Two course management systems were used to deliver the courses: WebCT and Live Classroom. Faculty used WebCT or both WebCT and Live Classroom. Distance and on-campus students had access to and assignments on the management systems. WebCT tools that we have used include: Syllabus, Content Module, Discussions, Mail, Chat, Calendar, Quizzes, Assignments, Student Presentations, Student Homepages, and My Grades. Live Classroom tools used were: real-time multi-way audio conferencing, voice messaging, live display of slides, student polling, and desktop sharing. Most courses featured live streaming video transmitting on-campus instruction to distant students. During broadcasts the video source was switched by an assistant to show either the instructor, the on-campus students, the material displayed on the instructor's computer, videotapes, or materials on a document camera. As students viewed the video stream, they participated in discussion using the text-based Chat tool.

The course Digital Media Production for Music Education focused on developing multimedia for music teaching. The size and resolution of the live video stream was not sufficient to show the level of detail required for instruction in software operation. Instead of requiring distant students to attend on-campus labs, desktop sharing was used for interactive instruction during labs. The instructor's computer desktop was projected for on-campus students and shared with distant students through Live Classroom. As students viewed the desktop, they were able to participate in the discussion. All students were able to ask questions in real time and to display and discuss their own software projects. Desktop sharing also enabled the professor to watch distant students operate their computers as the professor gave directions. The archiving feature of Live Classroom provided a way to store the desktop sharing sessions and discussions so that students could return to the videos at any time to review how to operate software.

Music Education Courses

We have found that courses designed around lecture and discussion can adapt easily to the distance learning format. Conversely, courses involving demonstrations of pedagogical techniques, use of visual examples typical to classroom teaching (e.g. song charts, flashcards, pictures, examples of student work), or use of classroom instruments are difficult to present within the constraints of a distance format due to clarity of the visual field and the transmission delay between the live classroom and at-home computers.

Professors have found that inclusion of one class meeting (either during orientation or during the midterm seminar) in which all students can attend live, is a helpful approach. For example, as a part of an Introduction to Orff-Schulwerk seminar, the students were required to attend a two afternoon meetings and an all-day workshop at the end of the orientation week, before the class began to meet through live-streamed video. Professors also used opportunities such as the orientation week to allow for peer interaction and community building experiences. As the students interacted with peers and with their instructors, classroom experiences and all communications related to the course were enhanced.

Professors have discovered that specific adjustments in delivery are required in the distance format. Problems with technology were common and often beyond the control of the university or the student. We experienced interruptions due to power outages, loss of cable transmission, and weather conditions. Students also encountered momentary interruptions, and sometimes they

dropped in and out of class without the means to communicate the problems they were having. In those cases, instructors have found it critical to continue "as-if" everything is functioning properly and all students are present. We also assigned a teaching assistant to monitor the chat room and assist students in problem solving issues with technology. When the problem was corrected, the student could review the portion of the video they missed without interrupting the instruction for the rest of the class. In addition, it was useful to post materials and a topical outline before class. If any of the students had an interruption, they could reference the outline and join the class in progress with the least amount of confusion possible.

Pacing is a critical issue in distance teaching. Discussions require extra time, and were best facilitated when the instructor announced that in a few minutes the class would discuss a certain question or topic. The "heads-up" announcement allows the distance students equal time to think about their responses and prepare to join the class, either in a chat discussion or via live-voice interactions. Professors have also found that explanations that are clear for the students "in the room" may not be clear for the students at home. Whether problems arise from the delay in transmission or loss of non-verbal cues, students in the room frequently ask and answer questions before similar questions are typed in the chat room. To address this difficulty, instructors have found that anticipating questions on assignments, readings, or projects is a useful strategy.

A final area of consideration in music education courses is the effective use of visual examples. Instructors have found that while PowerPoint presentations are clear and easily followed by the students at home, other forms of visual examples or demonstrations require special preparation. For example, if an instructor wished to use an overhead as an example of a classroom assessment tool, the font may be clear in the live classroom but it may not be readable through the video transmission. The same challenge occurs when drawing diagrams on the board during class discussion or when displaying a song poster or flashcards that might be used during a general music experience. We have found that posting PDF files of these examples before class is the best solution. However, when that was not possible, or when the instructor was modeling a particular technique, we have asked the teaching assistant or one of the on-campus students to monitor the camera and adjust as needed. In addition, instructors have also described what the students in the room saw. When instructors anticipate and adjust the details of instructional delivery, the quality of class instruction can be effective with both on-campus and distance students.

Graduate Formal Analysis

Formal Analysis focused primarily on individual analysis projects. The "required text" for this course was a list of 20 scores, all from the Dover miniature score series. Having all students purchase the same editions facilitated communication and discussion. Each student was assigned two pieces to analyze and present to the class. All students were responsible for listening to a recording of every composition (provided online) and making initial assessments of the form of the pieces their colleagues would be presenting. Each student was required to submit a written response to each presentation. The responses had to be on topic, but not over a page in length.

There were two main areas of technical concern for this course. The first was the recordings provided by the instructor. When multiple sources were available, they were provided to the class. Two methods made the recordings available to the students. The first method was posting a link to an appropriate recording in the *Naxos Music Library* (to which the university subscribed). The second, and more common method, was to provide an mp3 file in a secure (password protected) WebCT page. The second technical concern, providing for the various audio sources both in the classroom and for the distance students during class, was more complex. Because it was a blended course, with some students attending on-campus and others viewing the streaming video, this area required the most support from outside sources. The technical assistants available in the classroom were vital to success in this area. The sound from the streaming audio was often delayed by different amounts for students in different locations. This created issues for class participation described more fully below in the discussion of chat room issues.

A sound quality issue was encountered in distant students' presentations. Live Classroom was our primary method of communication when distance students presented their analyses. This platform worked well with the spoken word, but it lacked the necessary resolution to adequately transmit music. The solution we implemented was to switch to streaming video at the end of each student presentation to play the recording. The disadvantage was that small excerpts could not easily be used in presentations by the distance students. The instructor and students presenting live from the classroom were able to use short examples without switching back and forth between Live Classroom and streaming video broadcasts.

There are two main areas of concern with the use of the chat room: tone and time. Tone in this context refers to the overall tenor of the conversation, while time is primarily concerned with the technical issue of delay in transmission. The first year this course was taught the chat room was the primary mode of communication, but it was often hidden from view during the class. The result was that the students quickly fell into the habit of using that screen more for personal communication than for class and subject related topics. It was also difficult to get real feedback on the content of the presentations, as the students were reluctant to criticize their peers in such a public, and archived, forum. The solution to this problem was to reduce the chat room to an area that was monitored by the graduate assistant. The primary function of this room became requests for technical assistance from distance students who were having trouble with their connection. In order to get the feedback that a class discussion would ordinarily provide the students were required to respond to the professor via email with their opinion of each analysis. The email responses were intentionally kept short, averaging just under half a page, and provided what would ordinarily be expected from a thoughtful in-class discussion.

The issues related to time delay were more problematic and have not been totally solved. Because the transmission time to distance students is not instantaneous, and because there is considerable difference between the lag times for different students, real-time chat often created as much confusion as it solved. The experience of having two or three questions pending often caused confusion when an answer was typed. The chat room was often hidden from general view during presentations in order to make room on the screen for presentation materials, which also caused considerable delay in responding to student questions. There is a feature in Live Classroom that allows the instructor to recognize students one at a time for questions. This works

well and it is visible on the screen when that feature is being used for presentations by off-campus students. The difficulties are that the icons are very small and if more than four students are in the room it is necessary to scroll up and down in that field to see all of them. This makes it very easy to miss a student's request to ask a question, causing the same time delay problems as before.

The single most reliable solution to almost every technical issue raised here is actual human support. The presence of a graduate student in the room to work equipment and address technical issues during class solved most problems outright and made even persistent problems manageable. This old-fashioned form of support has been the most important aspect of successful presentation of distance courses. Even when the chat room was hidden on the presenter's and the instructor's screens, there was a third person who was free to monitor chat on a separate screen. The assistants were able to bring questions to our attention in a timely manner and this helped keep the flow of the class smooth and organized.

Choral and Instrumental Conducting

While the problems of distance education might include the lack of face-to-face and hands-on interaction, the teaching of advanced conducting using videos, live video streaming, and on-campus workshops can provide quality educational experiences. The use of videos is an important tool in any conducting class. It is beneficial for students to view themselves in order to evaluate their conducting technique problems and strengths. Auburn students, both on-campus and distance, were required to submit two or three videotapes of their conducting. The videotapes normally included an example of their work in an ensemble performance, an assigned piece of music that all students conducted, and sometimes a review of basic conducting patterns.

On-campus students can benefit from taking the course with the distance students. Distance education students teach in real-world situations across the United States. It was educational and enjoyable for both distant and on-campus students to view footage of real public school ensembles across the country. This year, students viewed bands from West Virginia to Mississippi and choirs from Pennsylvania to Alabama. The professors and the student conductors benefited from viewing the habits that manifested in a real conducting experience. The use of the videos helped create a sense of community. Each student in the class could picture the distance conductors in their home environments and could understand the joys and frustrations the conductors experienced from working in diverse musical situations.

The use of specific assigned compositions allowed the professor to evaluate each student's skill level since all students conducted the same pieces. Students purchased audio CDs or assistants uploaded sound files of the required recordings to WebCT. The recordings were used for student practice and for videotaping conducting assignments. Some students in Advanced Conducting had not had a conducting class in many years, so it was informative for the students to videotape themselves conducting basic patterns as a review of good conducing technique.

The process of using the three types of videotaped assignments was simple. Student mailed their videotapes to the university. The tapes were played in class and broadcasted simultaneously via live streaming video. Students evaluated and took notes while the videos played. The professor

watched along with the class and made comments while the video played. The professor stopped and rewound the video if a specific area of technique needed addressing. Students self-evaluated and commented on any strengths or weaknesses they spotted in their own conducting technique. Peers also provided feedback. Finally, the professor gave an evaluation by standing in front of the screen and physically pointing out areas that need correction. Students were expected to address and remedy those specific areas before the next video assignment.

The midterm on-campus seminar was valuable in reducing transactional distance. All students were required to come to campus for two days to participate in the hands-on workshop. The students performed in ensembles for the conducting workshop. Instrumental conducting students played their own instruments. Choral conducting students brought enough copies of the music for every choir member. In the workshops, students had opportunities to stand in front of their peers and conduct while the professor worked with them. The workshops involved two intense days of instruction and learning, but also provided an enjoyable time for the students to interact and get to know one another. The experiences also helped to build up a sense of community among the students.

Evaluation of the Distance Learning Program

A condition for approval of the distance learning program was provision for program evaluation. Evaluation processes included discussion among faculty and staff, university teaching effectiveness surveys, a questionnaire for entering students, a questionnaire for graduating students, and interviews of graduated students. Although the program evaluation is an evolving process, the data collected has resulted in a number of conclusions about the program's effectiveness to this date.

Discussion among faculty, staff, and students indicated that orientation to the program is important for student success. Students need to become comfortable with WebCT and be oriented to classroom "etiquette" before the beginning of coursework so that they will be successful at the beginning of the semester. We have responded to this conclusion by instituting an orientation day at the beginning of the summer semester. The orientation provided last-minute opportunities to resolve technical questions, registration issues, and advising questions before coursework began. Students and faculty met in person at orientation, which encouraged faculty-student communication later in the semester. Not all students were able to attend, but those who did reported benefits including stress reduction and feeling more a part of the learning community. Other related findings were that the summer midterm on-campus seminar was essential for some music courses' content and that students and professors enjoyed meeting.

The Auburn University Survey of Teaching Effectiveness was administered to on-campus and distant students, however, response rates for distance students has been low. On-campus students completed the questionnaire during class, but distant students mailed the questionnaire to office staff. In one course, distances students were required to complete the survey for a portion of their grade. The response rate was greater, but students complained about the requirement. Another way of administering this assessment needs to be developed, such as a university web-based survey.

An Initial Graduate Student questionnaire was administered to each student at either the summer orientation or when the student first enrolled in courses. Results provided demographic information about the students and information about their motivation. Thirteen distance students and eight on-campus students responded. Most (67%) of the students' ages were between 20-29, 5% were 30-39, 24% were 40-49, and 5% were ages 50-59. Thirteen (62%) of students were male; 8 (38%) were female. The mean number of hours worked per week was 36.90 (*SD* = 19.97). The number of children reported averaged .43 (*SD* = .87). Students' years of teaching experience was *M* = 4.95 (*SD* = 7.78). Most (*n* = 10) were instrumental specialists, 7 were vocal music teachers, and 4 were music generalists. Most students (52.4%) lived within 100-199 miles of campus, 23.8% lived within 10 miles of campus, 4.8% 10-49 miles from campus, 4.8% within 50-99 miles, 4.8 % 300-399 miles, and 9.5% lived 400-999 miles from campus. Three reported that the master's degree was their highest intended degree, six reported intending to ultimately earn an education specialist degree, and 12 reported the doctorate as the highest degree they intended to earn.

Students were asked, "How did you find out about the program?" The majority responded that they learned of the program from a colleague or acquaintance (*n* = 13). Seven responded that they found out from an Internet search, 5 from a brochure, and 3 from their knowledge as a past Auburn student. The three reasons most frequently cited for enrollment in the program were to improve teaching skills (*n* = 17), to increase salary (*n* = 15), and because the program was offered via technology (*n* = 14). The reputation of the program was listed by six respondents, courses offered at convenient times was listed by five respondents, and the convenient location of university was listed by three respondents.

Seven graduates of the program completed a student questionnaire and they were interviewed. The number of questionnaire respondents was not sufficient to warrant reporting results, but the qualitative analysis of the interviews has resulted in a number of preliminary findings. Students reported that group projects are sometime difficult to coordinate, watching video presentations sent in by distance students can be boring, and chat rooms are usually behind the on-campus classroom. However, graduates cited strengths of the program such as: (a) on-campus students learn from peers who are working in "the real world" in various geographical locations, (b) students improve technology skills, and (c) students develop friendships and connections with professionals not normally in their circle of influence. Aspects of the program that facilitate success are the program's organization, quality, and convenience; the flexibility of faculty; the practicality of the content; student camaraderie; and academic advising. Although students reported learning about technology, diversity, research, and philosophy, they tended to locate the learning in a particular course instead of seeing how these subjects might be infused across the program. Growth in personal skills and professional practices were reported in the areas of technology, curriculum, teaching methods, and collaboration.

Summary

Our distance learning program has been a team effort and has continuously required advance planning and support. Various models of interaction and instructional design have enabled faculty to use technology to reach music teachers who otherwise would not have had been able to enroll in and complete a graduate program. Each course required unique combinations of

technology, interaction, and assignment adaptations to address the needs of the content, the students, and the professor. Professors have found it challenging to teach blended courses that enrolled a larger number of both on-campus and distance learning students. However, distant learners have brought diversity of thought and experience to the community of graduate students and a higher level of scholarly discourse. With sustained attention to program evaluation, we hope to continue to provide professional development that meets the needs of our adult learners in music education.

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