

## TECHNOLOGY MEETS CREATIVITY: BRINGING THE HISTORY OF MUSIC TO LIFE THROUGH MULTI-MODAL LEARNING APPLICATIONS

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### ABSTRACT

*Online learning is not new in the education practice, but within the performing arts, such challenges to create stimulating learning experiences within the new model of online technologies have presented unique opportunities to both performing arts students and learning facilitators. Since the explosion in multi-media technologies in the last five years, there has been considerable demand to embrace the benefits of these new technologies while developing teaching and learning environments that foster understanding of the subject matter and an ability to apply this in creative applications within the performing arts fields.*

*This paper outlines the development of an online course in the History of Popular Music offered within the Virtual Conservatorium at Central Queensland Conservatorium of Music. Through an examination of the theory of the Five Dimensions of Learning as developed by Marzano and Pickering (1997) and the Vygotskian approach as outlined by Daniels (2001), the paper will show that a history of music course, such as this undergraduate course that forms part of the core course requirements of the Bachelor of Music/Performing Arts and Bachelor of Music Theatre degree programs at Central Queensland University, can be taught in the virtual environment without compromising the learning outcomes. Furthermore, the paper will show how the literature supports the use of embedded multi-media components, and audio technologies in particular, to accelerate one of the most important learning outcomes: to gain understanding of crucial elements of style within the various genres of popular music in the twentieth century.*

*As the learning facilitator, developer and presenter of the entire course package, this paper, through its comparative analysis of the relevant literature, postulates that a course that brings together audio and video learning materials, online course materials, a fully integrated study workbook and audio compact disc together with live lecture recitals, creating an integrated course package that embraces the technologies of the multi-media age can impart the excitement of the creative spirit inherent in the living, breathing nature of the performing arts while embracing the learning outcomes that are important to a tertiary course of study.*

## The Virtual Conservatorium

In July 2002, Central Queensland Conservatorium of Music officially launched 'The Virtual Conservatorium' offering a post-graduate *MAA on line* and an undergraduate *eBachelor of Music/Performing Arts*. (Whateley, Bofinger, 2003). This has brought about a significant shift in thinking about the function and operations of the organisation known as the Central Queensland Conservatorium of Music. Old models of conservatorium have relied on face-to-face teaching strategies that have been the mainstay of tertiary training in the performing arts for centuries. According to Whateley and Bofinger (2003)

*Universities in Australia (firmly encouraged by Higher Education authorities) are currently concerned with the mind-set, mechanisms and practices that are necessary for universities to re-invent and re-engineer themselves in order to become successful, surplus-making organisations. Central Queensland University is no exception. Given the context of current economic pressures, this surplus making exercise is fundamental to future growth, quality provision and student/staff morale. (p.3)*

The new economy requires innovation and entrepreneurship for any organisation to survive. According to Thorne and Smith (2000), successful organisations in the global marketplace need to focus on the needs of customers that, due to the online nature of the global market place, are often similar despite geographic diversification. Furthermore, successful organisations need to develop a chain of command that allows for the smooth process of goods, services and

information from the organisation to the customer, an essential element that has been built into the structure of the Virtual Conservatorium.

Minkes, Small, and Chatterjee, (1999) agree, and acknowledge that the new economy demands a strong and trusted partnership between the customer and the organisation. The implications for leaders in these organisations, and at the University level this includes not only the senior management but all those involved in the development and delivery of new courses in the Virtual Conservatorium, is that leadership teams need to promote a two-way flow of ideas, trends and preferences that will keep the partnership dynamic, cutting-edge and satisfying both from the point of view of the customer and the organisation.

The effective use of technology is critical in the development of the Virtual Conservatorium and empowers each partner with the means to work effectively in this new environment and maintain the clear lines of communication that are essential between customer and organisation. (Dimmock and Walker, 2000). Technology remains at the crux of the delivery of courses within the Virtual Conservatorium and this paper considers the pedagogical and delivery issues of one such course, the History of Popular Music, and the implications for other academic courses of the Virtual Conservatorium.

### **An overview of the History of Popular Music course**

This particular course, the History of Popular Music covers the popular music of the twentieth century from ragtime and early blues, the music of vaudeville, operetta, through the jazz era and into the era of rock and roll and all its various sub-genres to the present day. The main focus of the course is the study of the music itself through all these periods. The various stylistic developments of the music and the impact of technological and social change through the twentieth century forms the core knowledge base of this course.

The primary goal in the Virtual Conservatorium is that students will acquire knowledge and it is the role of the organisation to create the means whereby students will effectively and appropriately acquire that knowledge. Daniels (2001) argues that 'learning occurs

through engaged participation in the activities of knowledge communities' (p. 103) and that students are best prepared for life in a knowledge society when they receive an education that fosters:

- flexibility
- creativity
- problem-solving ability
- technological literacy
- information-finding skills
- a lifelong readiness to learn. (Daniels, 2001, p. 103)

Various technologies and pedagogical strategies are used to engage the students thus providing a learning environment whereby they may acquire this knowledge. Whateley and Bofinger (2003) state that 'Virtual' courses are offered using some or all of the following delivery models:

- Innovative and interactive on line delivery;
- Intense periods of study (weekends, after hours);
- Industry recognised leaders (Professional musicians, Administrators etc)
- Synchronous communication (video conferencing)
- Asynchronous communication (video, email)
- Stylised print material – commercial quality of presentation
- CD self contained learning packages (similar to online course material for students not online)
- CAL ("Computer Aided Learning" where the software teaches, trains and also examines the students if required. Staff can then be accessed via email tutorials/video conferencing)
- SMS (Short Message Service) text message for student contact (p. 5)

The History of Popular Music course has been designed with these multi-modal delivery models in mind and includes various elements designed to maximise student learning while maintaining a high degree of flexibility in the delivery, allowing students to study anywhere and at any time without having to relocate permanently to any of the physical campuses associated with Central Queensland Conservatorium of Music. (Whateley and Bofinger, 2003, p. 2)

## ELEMENTS OF THE DESIGN AND DELIVERY OF THE HISTORY OF POPULAR MUSIC COURSE

### **Innovative and interactive on line delivery**

The website for this course is built on the common platform of the Virtual Conservatorium and features several important sections each with various levels of interactivity. Firstly, there is a 'Getting Started' page that lists all the important features of the course including the study materials students will need, important dates for start and completion of the course, and introduces students to the mode of delivery of the course. An important feature of this page is its friendly approach and the emphasis on the availability of personal communication with the lecturer on any aspect of the course.

Secondly, there is a page that outlines the specific assessment requirements of the course, the due dates and the weighting of each assessment item toward the final result. There are four assessment items in this course and their use in the student's learning program is discussed later in this paper.

Thirdly, the lecturer is introduced with a photo and her academic biography so that the students are familiar with who is guiding them through the learning experience. It is important that students have a sense of academic trust (Marzano and Pickering, 1997, p.21) so that they approach their learning feeling comfortable with the academic abilities of the lecturer of the course. This sets students up with the right attitude and perceptions so that effective learning can then take place

After this, the students move to the interactive part of the website where they can learn about the core content for each of the ten topics presented in this course. Each topic outlines the main technological, social and historical developments of the period and the specific impact these have had on the development of popular music in the western world. Each topic lists further resources that the students may access through the University library to assist in their learning. In particular, these include video documentaries on some of the important composers and performers of popular music during the twentieth century, documentaries on the impact of historical and social change on the

development of popular music, jazz and music theatre and historical and current music performance videos of which the University library has a large array.

### **Stylised print material**

A key element of the study package for this course is a workbook that accompanies the ten topics of the course as presented online. Students are first required to study the online study materials for a topic then work through each topic in the workbook where they are required to answer questions based both on the online topics and derived from the listening to the music examples on the audio compact disc.

The workbook also allows for the students to work at their own pace within the time framework of the course. The course profile outlines a suggested study schedule but students are free to tailor the learning modules around their work, family and social commitments. This is one of the principle tenets of the Virtual Conservatorium.

Furthermore, to aid the students in their learning, a full set of answers to the workbook are made available online through the website. Students can use these answers to check that they are indeed on the right track with their answers and can also gain some indication as to the depth that is required when giving answers to the workbook questions.

### **Custom designed audio resource materials**

The printed workbook also comes with a compact disc that contains ninety-nine examples of music that support the study for each topic of the course. The most important learning outcome for this course is for the students to be able to aurally link the style of the music with the period and recognise the important musical characteristics of each period and each genre within those periods. Many students are aware of some of the genres of music covered in this course, but few are familiar with them all. The development of the music student into an aurally aware musician who is able to understand a broad range of musical styles and is able to articulate verbally and in writing the important stylistics characteristics of this music gives this course its importance as a core requirement of a music degree at the undergraduate level.

## **Custom designed video resource materials**

One of the unique features of this course that make it stand out from regularly delivered history of music courses at the tertiary level is the inclusion of regular lecture recitals, given by the lecturer, to support the individual, self-paced learning of the student enrolled in the course. There are plans to deliver these lecture recitals in real time to all off-campus students via synchronous video streaming, but in the first year of the Virtual Conservatorium, it has not been possible to achieve due to technological difficulties with the University server. Potentially, the ability to provide video-streamed concerts and lectures will have great impact on the delivery of these types of courses and will serve to revolutionise the delivery of courses within the Virtual Conservatorium. Students will really be able to study anywhere and at anytime. The current technology provides students off-campus with a video CD of the recital so that they can view it at a later date.

Supporting this program of lecture recitals, there are interactive program notes on the course website allowing students to further their knowledge of composers and stylistic elements of the music as they are presented in the lecture recitals.

## **Information literacy initiatives**

An important goal of this course within the Virtual Conservatorium is to facilitate critical thinking (Brookfield, 1987) and help students become critical thinkers and independent learners. The Information Literacy assignment has been designed specifically with this in mind and forms the basis of the students' research for this course. Since this course, the History of Popular Music, is the first academic course undertaken by students enrolled in the music degree programs at the Central Queensland Conservatorium of Music, students face their first essay and research assignments in this course and it is important at the outset to establish good habits for research and referencing.

The Information Literacy assignment is the first assignment that students undertake and they are required to actively and competently search library catalogues, online databases and the internet to source information and evaluate it for its validity and usefulness for the main research essay. Once information is sourced and located, students need

to know how to reference the material for inclusion in their research assignment, both as an in-text reference and as part of the Reference List at the end of the essay.

This process of becoming an information-literate student has challenged many of the students quite seriously and many have found the assignment of great value in the early part of the tertiary education.

### **Synchronous and asynchronous communication**

Whateley and Bofinger (2003) outline the importance of creating a vibrant learning community through the Virtual Conservatorium model even though students are separated by distance. The Soviet scholar Lev Vygotsky studied the importance of the social context when investigating how people learn. He purported that language, and in particular, writing gave us a way of understanding how humans interact with the world. (Schultz and Hull, 2002)

His work has had profound effects on educational researchers and has led to important theories regarding the design of social contexts for learning (Daniels, 2001, p. 119). The design of instructional environments has been influenced by neo-Vygotskian work and Daniels suggests that there are five main principles of design:

- classrooms invoke multiple zones of proximal development
- a community of academic and eventually scientific discourse is developed
- meaning is negotiated and refined
- ideas are seeded and appropriated
- common knowledge and distributed expertise are both essential. (Daniels, 2001, p. 119)

This model for a learning community is one that has been firmly established within this course of the Virtual Conservatorium. The 'classroom', online and anywhere, allows each learner to pursue different sequences and progress through the various parts of the course at their own pace. This 'virtual classroom' creates a setting where multiple, overlapping zones of proximal development are created and nurtured. (Daniels, 2001)

The students in this course interact with their lecturer through synchronous and asynchronous forms of communication and thus

develop a dialogue where learning can be advanced and discourse developed. The most effective asynchronous communication tool is email and the lecturer makes regular contact with the student group encouraging them in their progress through the course, offering tips on how to work through the processes of the various assignments, how to study effectively for examinations and how to get more meaning from the online course materials, the workbook and musical excerpt CD.

### **Pedagogical underpinning of the course design and delivery**

Robert Marzano and Debra Pickering, through the Mid-Continent Regional Educational Laboratory (McREL), have developed a learning-centred framework for instructional planning known as the 'Dimensions of Learning'. Their model states that there are five dimensions of learning that interact with each other.

*All learning takes place against the backdrop of learner's attitudes and perceptions (Dimension 1) and their use (or lack of use) of productive habits of mind (Dimension 5). (Marzano & Pickering, 1997, p. 5)*

They further state that

*When positive attitudes and perceptions are in place and productive habits of mind are being used, learners can more effectively do the thinking required in the other three dimensions, that is acquiring and integrating knowledge (Dimension 2), extending and refining knowledge (Dimension 3) and using knowledge meaningfully (Dimension 4). (Marzano & Pickering, 1997, p. 5)*

The design of the History of Popular Music course within the suite of courses offered by the Virtual Conservatorium is built around this model of learning. Marzano and Pickering indicate that the learning process is complex, yet the Dimensions of Learning model offers a way of understanding the way that students learn and this can be applied in this course.

To create an appropriate backdrop to learning within this course, the course structure and the structure of the learning materials on the website contain some order and clarity. According to Marzano and Pickering, the first dimension of learning is enhanced when the classroom climate and classroom tasks are orderly, interesting, and

valuable to the students and presented with clarity. (Marzano & Pickering, 1997, p. 6) They further go on to state that it is important that students feel that they have established a relationship with the lecturer (Marzano & Pickering, 1997, p. 11) and this is achieved through the asynchronous communication discussed earlier that is an essential element of the delivery of courses through the Virtual Conservatorium.

The lecture recitals also provide a forum for getting to know the lecturer as they are presented in a friendly and informal way with the specific goal of making the student feel involved in the course. Marzano and Pickering (1997) state that the lecturer should

*Exhibit a sense of enthusiasm about the material you present. If you are excited about the content, students may share your enthusiasm (p. 22)*

The lecture recitals are used to bring to life, through the medium of live performance, the enjoyment and spirit of the works being studied, and to gain some insight into the creative spirit of the composers of these works. The works are linked with interesting and amusing stories about the composers, their pieces or the times they lived in.

*Provide anecdotes and interesting 'asides' related to the information being presented. Although students may not initially be interested in the content, you might pique their interest with an anecdote. (Marzano and Pickering, 1997, p. 22)*

A particular strategy I use in these lecture recitals is to take one of the famous songs of the period (such as 'Let's Do It', the song written by Cole Porter in 1928) and change the lyrics for a verse to make it humorous within the context of the student's lifestyle and thus show that these 'old' popular songs are still relevant today.

The second dimension of learning as outlined by Marzano (1997) concerns the acquiring and integrating of knowledge. A course of instruction needs to organise the knowledge and provide meaning for the students so that they can internalise this knowledge for themselves. (Marzano and Pickering, 1997, p. 7) The online study materials for the History of Popular music course provides for this dimension of learning as students are able to conceptualise the music being studied in terms of the social, technological and historical context for its development

in the twentieth century. The workbook and accompanying musical excerpts CD also aids in this dimension of learning as it gives an auditory meaning to the concepts of music being studied.

Marzano's third dimension of learning identifies the importance of extending and refining the knowledge. As students grapple with the acquisition and integration of the new knowledge, this third dimension of learning indicates that this knowledge is extended and refined through strategies that identify similarities and differences, compare, classify and summarise using inductive and deductive reasoning. The History of Popular Music workbook and musical excerpts CD is the key element in creating this strategy for the students of this course. They are asked to listen to excerpts of music, compare them with previously heard examples, classify the styles according to set criteria that have been identified in the online learning materials and then summarise these stylistic characteristics as begin to gain a deeper understanding of the musical elements involved.

Once a student begins to acquire, integrate, extend and refine their knowledge they need to apply this in a meaningful way. Marzano's fourth dimension of learning (Marzano and Pickering, 1997) looks at the meaningful application of knowledge and this is one of the main purposes of the assessment program within the course. The summative assessment is divided into four parts and each part requires the student to apply their knowledge in ways that are communicated clearly to others, in this case, the lecturer.

The Information Literacy Assignment and Research assignment provide the student with the opportunity to investigate deeply one area of their choice related to the History of Popular Music course. Topics for investigation are set by the lecturer each time the course is delivered and students choose from investigations such as the role of music in society during World War II; the development of the integrated musical in the 1950's; or the role of the Motown recording label in bridging the racial divide in American society in the 1960's. These are just a sample of the topics available. However, in order to fully research these areas, the earlier learning processes need to have been investigated. Marzano and Pickering (1997) state that the fourth dimension of learning involves students in strategies of decision-

making, problem solving, invention, experimental inquiry, investigation and systems analysis. (Marzano and Pickering, 1997, p. 7). These are all learning processes that are addressed as students begin their preliminary research through the Information Literacy Assignment and then bring the research to fruition in the research essay itself.

The other two major pieces of assessment occur under examination conditions at the end of the semester and also require the student to apply their knowledge in meaningful ways. The aural exam includes recognition of those excerpts that were on the CD accompanying the workbook, but, more importantly, requires the student to listen to unheard works and classify the styles of the works by drawing upon their knowledge of musical styles as integrated and developed through the course of study. The written examination at the end of the semester provides a vehicle whereby students can be assessed on acquired knowledge and also their ability to apply it in analytical ways through analysis of musical scores related to the musical styles studied through the course.

The fifth dimension of learning as identified by Marzano looks to the development of productive habits of mind as seen through the ability to think critically, think creatively and think in a self-regulatory way. (Marzano and Pickering, 1997, p. 7). The application of the learning acquired in this course is seen most often in the other practical courses that students will study through the Virtual Conservatorium and through the Central Queensland Conservatorium of Music. As they work creatively and skilfully as performers or composers, they can draw upon some of the knowledge gained through the study of history to become critically aware of musical style, creative with respect to new music and improvisation and so develop into fully rounded musicians and artists.

### **Feedback from students**

The Virtual Conservatorium is a new initiative of the Central Queensland Conservatorium of Music and therefore has only gathered small amounts of data from its chief clients, the students, regarding the design and delivery of courses and the assessment strategies that have been implemented to measure the achievement of students

enrolled in these courses. Anecdotal evidence suggests, at this early stage, that there is a high level of customer satisfaction. Many of the students enrolled in the Virtual Conservatorium are either working full-time or part-time while completing their studies and this mode of delivery has allowed them to stay in places that are economically advantageous to them while still giving them the opportunity to gain a university degree qualification in music, a pathway that until now has not been available unless a student undertook that study on campus. There have also been a number of students who have commenced their studies on campus and then opted to become one of the Virtual student cohort so that they can pursue alternative means of living and working arrangements.

One of the Virtual Conservatorium students is a full-time working musician but he lacks the formal training in music that an undergraduate degree program can provide. His feedback regarding the design and delivery of the history of Popular music course is quite encouraging:

*I have to be honest with you and tell you that I was not thrilled at the prospect of studying popular Western Music for a whole semester. Except for jazz, I never had much of an interest or didn't think much of Western Popular Music. I now realise that it was only because of ignorance on my part. Your workbook is fantastic and I would like to congratulate you on it and thank you for it. It is a source of reference I will keep exploring until I see/ hear/ read every movie, recording and website you mention in it. I feel I have discovered a music world I am now beginning to understand and how what I do as a musician fits in with it... plus I can now sit down and enjoy all those B&W movies with my wife (which she always told me were great, but I never made the effort to find out..... especially the musicals....)*

*I always wanted to study the history of western "art music". Having now done Popular music first, has made my interest in art music even deeper and this is an incredible daily incentive to put all those hours to get the studying done so that I can start the new online materials already there ASAP.' (Student of History of Popular Music, 2003)*

Furthermore, the design and delivery of the assessment tasks has also opened new vistas of learning for students enrolled in this course. Regarding the Information Literacy Assignment, one student found this particularly useful and motivating.

*'Having studied last year at CQU I can honestly say that I didn't use even half of the research strategies I have used already for this subject. When I first read this assignment I thought "If only I had done something like this last year". The truth be told I've never even set foot in the university library and I had no idea that the library catalogue was on line. So suffice to say these activities have not only helped me locate and evaluate information but they have in fact helped in motivating me to research much more thoroughly (with the same amount of effort). I think that the journal and website research has been of great value as I can read through any information as I go but it is great to actually be aware of what books, CD's, music scores etc are available to me. While I do have a better understanding of referencing I still feel a little uncomfortable with this so hopefully this assignment will show whether I have a competent grasp of the concept. I haven't done a lot of in depth work for the next assignment yet so it is a little hard to say exactly what resources have and haven't helped in finding information. Although I can say overall this assignment has been a fantastic developmental exercise for me that will only benefit my studies in the future.'* (Student of History of Popular Music, 2003)

## MEASURING THE LEARNING OUTCOMES

In this particular course of study, formal examination of the learning outcomes takes place mostly through summative assessment processes conducted at various intervals through the semester. These summative assessment items operate within various levels of the Dimensions of Learning (Marzano and Pickering, 1997) but particularly in the fourth dimension of learning that considers the meaningful application of the knowledge acquired through the course of study.

However, in order to evaluate whether this virtual delivery model has been successful in providing meaningful and valid learning outcomes, other ways of gathering student data will need to be developed and implemented in the future.

Formative assessment has long been an important tool for teachers to evaluate the effectiveness of their students' learning allowing them to refine some of the teaching strategies and delivery models in order to maximise the learning effectiveness for the students. Within the Virtual Conservatorium delivery model, formative assessment could be incorporated into various stages of the course delivery. Monitoring their reaction to various learning experiences provided within the

course will provide a further source of data for assessing the effectiveness of the course package.

One of the focus points of the Virtual Conservatorium delivery model that has not been utilised to its fullest capacity is that of synchronous communication in the form of chat groups. Synchronous communication can take place effectively in classrooms where a teacher can implement aspects of the Vygotskian approach by stimulating the development of academic discourse, allowing meaning to be negotiated and refined through the germination and nurturing of new ideas (Daniels, 2001). While this model has long been a source of much academic research in order to find ways to further enhance the learning outcomes for students, research into the effectiveness of synchronous communication as a tool for implementing aspects of the Vygotskian approach in the virtual environment is still in its infancy. Driven by the demands of both students and institutions to create meaningful courses of study without resorting to the need to be in a particular physical location, the virtual classroom is uniquely placed to gather research data on the effectiveness of synchronous communications models, such as online chat groups, in delivering the learning outcomes of the course of study.

## RESEARCH IMPLICATIONS AND FUTURE PATHWAYS

A qualitative research approach using the tools of synchronous communication (online chat rooms, telephone interviews and face-to-face interviews where possible) and asynchronous communication (email, facsimile messages and letters) will be most useful in determining the effectiveness of the Virtual History of Popular Music course in delivering its learning outcomes. These methodologies can provide accurate analysis of the data due to the relatively small numbers of students actually enrolled in the course. However, this does not rule out the possibility of utilising existing surveys or purpose-designed surveys as a way of gathering data from the students. These surveys could include a set of open questions and/or Likert scaled items (Trochim, 2002) that create the possibility of some quantitative analysis of the research data.

## Conclusion

The Virtual Conservatorium has provided for students in the performing arts an opportunity to join the ever-increasing cohort of tertiary students studying through online technologies. The History of Popular Music course is one course within a suite of courses that form the basis of degree programs within the Central Queensland Conservatorium of Music. This course in its online, “virtual” delivery model, is able to challenge learners, through carefully designed learning components and various flexible delivery systems, to develop attitudes and perceptions that will maximise their ability to learn, acquire and integrate the knowledge inherent in this course of study and then extend and refine this knowledge. Furthermore, as Marzano’s Dimensions of Learning are applied through the design and delivery of the course and assessment materials, students are then challenged to use this knowledge in meaningful ways through ‘powerful habits of mind that enable them to think critically, think creatively, and regulate their behaviour.’ (Marzano and Pickering, 1997, p. 4)

Measuring the achievement of students in the Virtual delivery model is at a preliminary stage, relying primarily on summative assessment items. However, anecdotal evidence gathered so far from some student feedback, indicates that the multi-modal approach adopted in this course of the Virtual Conservatorium has gone some way to generate learning outcomes that mirror those elucidated by Marzano and Pickering (1997) in an environment that captures the essence of the Vygotskian approach as outlined by Daniels (2001). Further research, utilising some of the synchronous communication models of the Virtual Conservatorium and formative assessment processes, will be able to enlighten current and future course presenters and developers of the exact nature of student’s learning using this model thus driving the refinement of the course materials and their delivery to maximise student learning and acquisition of knowledge.

Through the use of technology and innovative teaching strategies, the History of Popular Music can indeed be brought to life through the application of the technologies of the multi-media age in a virtual environment, thus imparting to learners the excitement of the creative spirit inherent in the living, breathing nature of the performing arts.

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