YORK UNIVERSITY
TEACHING PRACTICUM

JOHANNA DEVANEY

A DOSSIER SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN
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Approaches to Teaching

1.1 TEACHING PHILOSOPHY

Digital music is an intersection of the technical and the artistic. While this statement is true to varying degrees of most musical endeavours, the particular challenge of the digital music medium is working on both levels simultaneously. The challenge of teaching digital courses is finding ways to linearly explain and demonstrate these distinct levels, and their relationship, in a clear and concise manner. I have been fortunate in my time at York to have the opportunity to act as course director in a range digital music courses.[1] My teaching philosophy and objectives, as they currently stand, are a reflection of the fact that all my teaching experience is in this particular field of music. A first-year survey course, *Introduction to Electronic and Digital Music*, provided the widest range of teaching experiences and is the best context in which to discuss my teaching philosophy and objectives.

My overriding objective when teaching a digital music course is to create a learning environment where theoretical knowledge is reinforced and internalised through hands-on experience. In the *Introduction to Electronic and Digital Music* course the students were provided with a solid foundation of acoustics theory and descriptions of practical technical procedures before they began to explore the artistic possibilities of the relevant music software. My role as a teacher in this context was both as a lecturer imparting facts and expanding concepts, and as a facilitator for the practical application of these facts and concepts.

This objective is rooted in my philosophy that while it is possible to make use of digital music tools with only a rudimentary knowledge of their underlying structure and methods of functionality, the only way to be innovative and creative is with a detailed technical knowledge of the tool. Technical knowledge allows the user to work effectively with the tools, rather than to become bogged down in a "trial and error" cycle. Theoretical knowledge of the procedures performed by

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[1] : These courses include a predominately studio based course, *Engraving and Notation*, a primarily theoretical course, *Pedagogical Applications of Computer Software in the Contemporary Music Curriculum*, a historical theory course, *Introduction to*

the program parallels the acquisition of language, it is the vocabulary and the grammar of music and it is only once these aspects have been mastered that the act of writing can take place. My aim is to demonstrate that while there is a subjective or emotional aspect to the compositional process, the compositional process itself, both as a whole and in detail, must be understood for the compositions to rise above the realm of the derivative. That it is only with basis of technical understanding that people can explore and augment their creative expression through technology.

A second component of this philosophy is the need to present a systematic historical context for various technological developments. While it may seem initially meaningless to the contemporary digital sample-based composer to examine the early tape techniques of the *Musique Concrète* school, the knowledge of such lineage is a key for understanding this medium. It is easy in the contemporary computer based culture, where new development in digital music occur on an almost daily basis, to think that knowledge of the developments of the last ten or fifteenth years is sufficient. Just as twentieth-century art music composers needed to understand not only late nineteen-century compositional practices, but also those of the medieval and renaissance periods in order to truly break from the common practice tradition, so too must contemporary digital music composers understand the roots of their medium.

My other major teaching objectives are to stimulate the student's interest in the subject area and to impart not only the knowledge of the subject area but also the relevant critical skills than can be transported to other areas. While the acquisition of theoretical knowledge and technical know-how is valuable, without the broader context only part of my learning goals for my students have been achieved.

I have found the combination of various types of activities and assignments to be an effective way of reinforcing the underlying theoretical concepts of digital music. The assignments

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Temperaments, Alternate Tunings and Microtonal Tuning Systems Using Computer and Synthesizers, and a first year survey course,

range from the reflections on theoretical aspects of the course material to compositional assignments that deal with specific digital music techniques. Supervised lab time is a key component as it allows me to interact with the students while they work individually. Email has also been a massive boon in this regard as students were able to email me questions throughout the week when they explored course material at home on their own systems. Likewise, the course website and mailing lists proved other electronic means for me to communicate with the class.

Introduction to Electronic and Digital Music. For more details see Section 2.1 Classroom Teaching.

1.2 TEACHING PRACTICE

The impetus behind my course design decisions is to create a course that effectively delivers and reinforces the material through a variety of methods, methods that facilitate the explanation and exploration of concepts from a number of different angles. To this end I incorporate numerous types of classroom interaction. A single three-hour class would typically include a lecture, written quizzes on previous weeks' material, and music listening. In an ideal world each class would also include hands-on lab time to allow the students to explore possible artistic of technical concepts, but due to a disparity between the number of students and the number of computers this was not possible. Specific sessions were designated as lab sessions and the class was divided into sections so as to allow each student time to work on the computer alone.

Assignments were important vehicles for relating the theoretical knowledge garnered from to the lectures to the artistic practices explored in the lab. The role of the assignments became more significant as lab sessions often occurred a week or more after the relevant lectures. Rather then try to achieve the combination of the technical and the practical within a single assignment, which would likely be unduly complicated, I implemented numerous small assignments that highlighted important issues of technical knowledge and artistic application which proved to be a more effective strategy. The spacing and order of these assignments was key in the successful implementation of this approach.

Overall my approach to teaching is relatively relaxed, though this is likely a result of the types of courses I have taught so far. These courses have been ones that are deal with subjects that are of personal interest both to me and to a large number of my students. Taking a slightly less formal approach to lecturing, such as integrating topics arising from classroom discussion to guide the content of the lecture, I am able to convey my enthusiasm for the subject.

The overall structure of *Introduction to Electronic and Digital Music* was developed organically. As this was the first time I had taught this course I regularly asked for informal feedback from the student, particularly in regards to their opinions on the pace of the delivery of the material, the divisions of the class time, the assignments, and the listening and reading material. Midway through the year I used the 'one-minute paper' technique to gather more detailed feedback (see Section 3.3 for the results of this survey). I also sought informal feedback from the department chair who observed my class at various points in time and completed colleague evaluations with a fellow graduate student in adherence to the Centre for the Support of Teaching guidelines.

The course web site proved an invaluable resource for my teaching. It was the perfect medium for tying together some of the seemingly disparate sections of the curriculum. There was no prescribed text for the course, the web site provided me with a medium to present two online tutorials, which also distributed in lecture in printed form. On the course web site I also provided links to various web sites that would be of interest to those students who wished to pursue topics further. I set up a mailing list but it didn't work as well as I had hoped, ultimately it functioned more as an announcement list than a discussion list. I did find that email interaction with my students was more popular/effective than my office hours – due to the computer-based nature of the course.

1.3 PROFESSIONAL DEVELOPMENT

Participation in University Teaching Practicum

- **Philosophy and goals of higher learning**
  "Developing a personal teaching philosophy" February 19, 2002

- **Ethics, human rights and equity issues in teaching**
  "Plagiarism: Problems, Policies & Prevention" February 18, 2002

- **Learning theories and learning differences**
  "Teaching Musicianship I" - TA Day 2001
  "Teaching Musicianship II" - October 29, 2001
  "Teaching Musicianship III" - November 7, 2001
  "Teaching Musicianship IV" - November 27, 2001

- **Lecturing**
  "Planning and Delivering Effective Lectures" March 28, 2001

- **Small group techniques**
  "Generating Interest and Energy in Tutorials" November 7, 2001
  "Teaching Small Classes: Tutorials, Lab Groups, etc." November 15, 2001

- **Collaborative learning, and/or other active learning strategies appropriate to the discipline**
  "Prompting Collaborative and Active Learning" TA Day 2001

- **Methods for teaching critical thinking and writing skills**
  "Teaching Critical Thinking Skills in Science" May 4, 2001

- **Course Design**
  "Introduction to Course Design I" February 5, 2002

- **Teaching with Technology**
  "Using listservs successfully as a teaching tool" TA Day 2001

- **Assessing student learning**
  "Grading Assignments and Exams" October 31, 2001

In addition to the time spent during the workshops the materials provided me with additional information and a springboard for further reading. I also found the "Voices from the Classroom" book useful as well as the web resources linked from the CST page.

SUMMARY OF TEACHING CONTRIBUTIONS

2.1 CLASSROOM TEACHING

FA/MUSI 3460 3.0 *Engraving and Notation*

(Fall 1999, Fall 2000, Summer 2002) – Course Director - Enrolment 36, 30, 20

This course deals with aesthetic, theoretical and practical considerations involved in the production and printing of publication quality music scores. Students will develop skills in manipulating small and large scores, page layout, part extraction, and the preparation of examples for publication.

FA/MUSI 3220 3.0 *Introduction to Temperaments, Alternate Tunings and Microtonal Tuning Systems Using Computer and Synthesizers*

(Winter 2000) – Course Director – Enrolment 16

This course deals with the historical, theoretical, aesthetic and practical aspects of various alternate and microtonal tuning systems. Mathematical relationships, practical applications, sonic characteristics and compositional aesthetics will be discussed. Historical studies will begin with the structures of the classic Pythagorean model from ancient Greece and proceed to detail the work of Renaissance theorists (Zarlino and Vincentino), common Baroque systems (Werkmeister, Kirnberger, Vallotti and Young) and various ethnic models (Bali, Java). Contemporary tuning designs (1/4 and 1/8 tone) will also be investigated. Other topics will include the harmonic series and instrument specific overtone series, Equal Temperament and the 12th root of 2, Just Intonation, Pure Major, Pure Minor, Mean Tone, Pythagorean comma, beating, cents, stretch tunings. Vincentino's archicembalo and other real time microtonal performance instruments, microtones, brass and choral performance tunings in vertical harmonic structures. Students will be encouraged to create original systems and to perform and compose music using various temperaments.

FA/MUSI 3470 3.0 *Pedagogical Applications of Computer Software in the Contemporary Music Curriculum*

(Winter 2001) – Course Director – Enrolment 24

This course explores the recent and growing use of music software in teaching traditional subject areas such as ear training and rudiments, musicianship, theory, history and analysis. Students will develop considerable expertise with various educational software packages which have the potential to be pedagogically useful. Commercially available software packages will be discussed. Additional areas of study will include: Standard MIDI Files, General MIDI, Developing Sequences for Rehearsal, Teaching Improvisation using MIDI, Intelligent Accompaniment Instruments, etc.

FA/MUSI 1140 6.0 ***Introduction to Electronic and Digital Music***

(Fall/Winter 2001/02) – Course Director – Enrolment 47

This course deals with the historical, technical, and aesthetic aspects of electronic music systems in theory, composition and performance. Work includes the theory and analysis of acoustics, sound recording, classical tape techniques, synthesizers, ficrophones, mixers and various digital and analogue devices and methods.

For each of these course I created a course website (examples of which are available on the CD-ROM included with this dossier). These course web sites were an effective means for relaying information to the students concerning the organization of course, lecture material, assignments, tests, and exams.

2.2 TEACHING-RELATED ACTIVITIES

Senate Library Committee – Graduate Student Representative (2001/02)

Senate Committee on Academic Computing – Graduate Student Representative (2001/02)

Working Group on Technological Accessibility –Student Representative (2001/02)

My participation on the committees/working group exposed me to a number of University Senate guidelines and programs. The extensive review of the various faculties' computing plans undertaken by the Academic Computing committee was a particularly valuable experience as it demonstrated quite clearly the various levels on which the university functions. The working group's study of web accessibility proved to be useful in the design of my course web sites as I became aware of issues around visual impairments that I had been unaware of.

EVALUATION OF TEACHING

3.1 MICROTEACHING

3.1.1 Evaluation of Microteaching Video (May 2001)

Once I got past the initial self-consciousness of watching myself on video the experience was not as painful as I had anticipated. The peer-evaluations had been quite favourable but given the context of seven people in a small room discussing our microteaching presentations with each other it is unlikely that there would be much overt criticism. I was quite pleased with the comments regarding the completeness of my sentences and the assuredness of my presence. While watching the video I found myself critiquing to aspects of my lecture style – my volume and the movement of my hands. While the volume was sufficient for the size of the room that the presentation was given in I know that I was in fact consciously projecting my voice throughout and that at that volume my voice would be lost in large lecture hall. Although there I was not speaking at my maximum volume for this presentation it has served to reinforce the need for me to be very aware of this aspect of my delivery. In terms of the movement of my hands I became aware that although hand gestures can augment a lecture to a certain extend there is a point at which they become distracting. I think this line is crossed, at least in my case, when a gesture is repeated a number of times in sequence.

3.1.2 Peer Comments from Microteaching

Session Title: Introduction to the Harmonic Series

Learning Objectives: To gain a basic understanding of the structure of the harmonic series and the tuning of naturally occurring intervals.

Two teaching skills/abilities on which I particularly want feedback:

I. My ability to relate a technical concept in understandable terms

II. My general lecturing style

"Nice relaxed style, clear, comfortable. Nice use of board – might consider combining PowerPoint and board work in your teaching. Were clearly aware of audience, good eye contact – might consider 'checking in' with group every so often and perhaps have questions formed to ask at certain points through the session"

"Amazing how you speak in clear, complete sentences off the top of your head! Some more recapping and repetition helps to give use time to absorb the technical concepts. Good poise and pacing - confident aura. Would a demonstration be possible?"

" Motivation at beginning. (Need of a definition.) Good use of 'looking ahead to future classes by voice changes and moderation. When using board it was better when you added as you talked. Good presence, easy to focus attention on you (posture)."

"You sentences were very clear. Try to not leave silence. Good lecturing (board use) style."

"Very clear articulation. Given my own minimal understanding of music, some more examples might have helped my understanding."

"You seemed very calm and collected – I tip my hat. The material was very difficult, and so I cannot tell much about it either way. I never would have guessed you were aware of being taped. I am left wondering how we could all agree what is out of tune and what isn't."

3.2 COLLEAGUE EVALUATION

3.2.1 Reflection on Colleague Evaluation

I found the colleague evaluation very useful as it was an opportunity to receive feedback on my teaching from someone who was well versed in the area in which I was lecturing. Microteaching had been useful for getting feedback on general issues but, due to a lack of context, hadn't really yielded much in terms of feedback on the effectiveness of the way I was relating technical material. The colleague evaluation took place during a lecture on synthesis theory – one of the more sophisticated and difficult topics covered in the MUSI 1140 course.

Colin offered valuable feedback on the ways in which I could improve the delivery of the material, particularly in terms of providing clearer explanations of very technical concepts. He did remark favourably on the way I paused regularly throughout the lecture to ask if anyone had questions on the material. Generally his comments were in line with both my Microteaching and student evaluations, specifically in reference to my ability to organize the lecture material well and the need to project my voice more.

3.2.2 Colleague Statement

I hereby certify that I, Colin McGuire,
observed Johanna Devaney's teaching
March 12 (19?) 2002 in accordance with
the guidelines stipulated for the
York University Teaching Practicum.

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3.3 STUDENT EVALUATIONS

3.3.1 Reflection on Student Evaluations

I only received formal evaluations from the courses I taught in 1999/2002 (*Engraving and Notation* and *Introduction to Temperaments, Alternate Tunings and Microtonal Tuning Systems Using Computer and Synthesizers*) and 2001/2002 (*Introduction to Electronic and Digital Music*). I have also included the comments I received from the 'one-minute paper' exercise that I implemented in the MUSI 1140 class.

The 'one-minute paper' exercises proved to be a very useful way of getting feedback in a large class. I suspect that since the students knew I would be reading the comments immediately they were a little less critical than in the formal evaluations. Although some of the most critical comments in the formal evaluations were surrounding my lecture style and this issue was not explicitly stated in the question for the 'one-minute paper'. The comments about the volume of my voice were quite valid, and it is an issue that I try to be aware of and ask the class to let me know if they cannot hear me. The comments about my accent on the other hand seem more than a little exaggerated.

The overall tone of the 'one-minute paper' exercise was positive while the formal evaluation comments ranged from the favourable to the derisive. I think that there are a number of issues at work here, on the most general level there seems to be different expectations for the course – some of which were met and some which were not. While some people liked the balance between the practical and the theoretical some felt there was too much emphasis on one or the other. The second issue is the amount of experience the students had coming into the class, the course was open to non-majors and some of the lectures based on musical theory were difficult to follow without the sufficient musical knowledge, likewise some students had varying degrees of experience

with computer software. Ultimately I think this second issue would be averted to some degree if the class were small enough to hold in the lab with one student per computer.

The formal evaluations from MUSI 3460 and MUSI 3220 both date from the 1999/2000 academic year. The criticisms in the comments from MUSI 3460 are centred on the lack of computers. This course was taught in a lab environment and thus the lectures were given in a small room, I suspect this is why there were no comments concerning the volume of my voice. The comments from MUSI 3220 were extremely brief, though overall they were positive. The suggestion of a course kit was a good one, and raises an issue that I have encountered with each time I teach a new course: it is difficult to predict the progress through material sufficiently to create a course kit ahead of time. The quantitative analyses of the rated questions were pretty level with each other and the department mean. The only question that provoked a negative response was "The reasonableness of the group size for conducting discussions or critiques" in the MUSI 3460 evaluation, which directly relates to the recurring class size critique in the written comments.

3.3.2 Student Evaluations

I. MUSI 1140 – Informal Question (One Minute Page – January 15, 2002)
II. MUSI 1140 (May 2002) – Formal Evaluation (Comments)
III. MUSI 3220 (March 2000) – Formal Evaluation (Comments & Quantitative Analysis)
IV. MUSI 3560 (December 1999) – Formal Evaluation (Comments & Quantitative Analysis)

MUSI 1140 – ONE-MINUTE PAPER – JANUARY 15, 2002

Please write a paragraph or so on your thoughts how the course is going. Comment specifically on the grading structure (i.e. assignments and tests – including the mid-term take home exam) and the lecture/lab format (i.e. is the balance right or is there too much or one, not enough of the other).

"I'm enjoying the course overall, I'm really glad that we are getting more hands on experience with Reason. I find the grading to be fair and have no problem with it. I found that one-minute composition assignment to be great, and very enjoyable. The mid-term was well organized. I would enjoy if we had more lab time to work on more musical assignments and maybe a basic class on song writing would be nice."

"The course is enjoyable and entertaining. During the first term I was having a difficult time following the work, as the nature of the material was tough. However after the first test the course material seemed to flow comprehensibly, and I have begun to enjoy the course more and more. I look forward to our unit on Cubase and producing music once again in the Electronic Media Lab."

"I find this course and its structure is fine. It was extremely helpful to have the mid-term exam a take-home. It definitely made things much easier. I also learned a lot in this course that helped me out in other courses (e.g. harmonic series). We went through (the harmonic series) a bit, and got to know it, while in my other classes, we only touched on it. The lectures are ok as well. Although I find some things a little bit unclear, most of the stuff I understand. Sometimes though it confuses me."

"I am enjoying the course, but my only thought is the music we study. I could see listening to this back in the 70's, before computers, but I think since we are growing up in a computer age we should learn how to do this stuff with software. Maybe compare a piece from the earlier times to a current computerized song using the same effects."

"So far this class is still interesting. The grading structure for the things marked is good but the remaining upgraded stuff is unknown. The balance in the course is not bad and there should be more step by step practice with the computer software, specifically instruments, rather than self-taught."

"The class seems to be going well so far in terms of a good balance between theory and practical application. I feel that the grading breakdown is a little unbalanced. I think the assignments should be weighted a little more. The exams could probably be worth less. I feel the assignments reflect more of what we have learned as opposed to the exams. I think the lecture/lab format is quite effective."

"Course load of assignments (tests) is more than I thought it would be. I have a hard time memorizing terms so this requires a lot of my time. Fewer of these tests would be better. I kinda liked the mid term audio part of the test. I really had to listen to the pieces and so gained a better appreciation of what was happening. As I understand the concepts of the course more and more I enjoy it. Haven't received the take home back yet."

"The grading structure for the course has been fair so far – at times it seems like there are a lot of tests and assignments going on, but the comparative low grade value of each one balances this well. I think the course is progressing well so far – generally the balance between the lectures and lab time ahs been good, though the lab time seemed a bit rushed towards the end of the first term."

"I think there is an even distribution of marks over a diverse spectrum of evaluation methods. The grading structure appropriately reflects the nature of the course (i.e. small projects in lab, take home evaluations, etc.). Is there a possibility of make-up projects?"

"Reason lab was very interesting. I wonder if the listening thing has benefited. It's interesting to know some famous composers but I prefer more skilful things rather than knowledge. The web page is often down and sometimes it's a problem."

"As far as the lab/lectures format, I think they shouldn't be so separated (lecture only for three weeks, lab for two weeks, etc.). I feel that if you figured out a way to split the 3 hour time into lecture and lab this would help because 3 hours of both can get boring. I can't really speak on the grading because I can't remember how it goes (which is probably a good way to approach it anyway)."

"The mic/mixer assignment shouldn't have been weighted the way it was. There seemed to be more emphasis an operating a search engine rather than learning about the functions (which would have worked out better if we were able to play around and experiment with them). Otherwise, it would be nice to have more lab time, and I think the course is good."

"The grading structure seems to be fair. I can't see any major flaws, I think that the assignment schedule is fairly balanced, though I have only remembered a few examples. I have not seen the practical application of the marking structure. Theoretically it seems okay. I am more of a self-directed individual and I personally loved the way it worked the last half of the last semester. I enjoy coming in for one hour and playing with the system and doing the assignments at home. I personally really enjoy this style. It may be unbalanced but it helps achieve my needs."

"I feel that the course is going pretty well. The main problem is with the format of the labs, where we were pretty much left to our own devices in terms of figuring Reason. I had to pretty much figure it out by myself, which took up considerably more time than if there was a sort of lecture at the beginning of the lab at last to briefly explain the features. In terms of the grading structures, I feel it's pretty fair and evenly weighted."

"I have been pretty happy with the grading structure so far, although because we haven't got any marks back in a while, I really don't know how I'm doing. (For example, if I did poorly on the mic/mixer assignment I probably did poorly on the microphone question on the exam). I really like the fact that we had several little quizzes instead of one big test. I though it was so much easier to learn the material this way. And I like the lecture/lab format. And I liked having an hour of lab time where we didn't have to share computers."

"The lectures were interesting but could be more practical and grounded in examples. For instance, having a computer in here, perhaps with a projector of some sort, to demonstrate the abstract theory and sound physical in a modern applicable context. Also more emphasis on how we, the students, can manipulate sound and music using current software should be included in the lectures.

The historical aspect of the material covered is very interesting but needs to be related to our own creative process with modern means."

"I feel that the lectures are far more useful and informative than the lab time. We spent a lot of time using reason and I believe it's likely that that program will be obsolete in a year. I would prefer less lab time. I also did not like the assignment with the microphone and mixer prices, I fail to see the education value in looking up prices on the Internet. I thought the tests have appropriate, and I liked the exam (although how I'm graded on it will affect that!). I think attendance should be part of the grading scheme."