Running head: COMPOSITION FOR NON-TRADITIONAL MUSIC STUDENTS

A Pilot Study determining the feasibility

of a music curriculum geared toward

inexperienced (Non-Traditional) music students in the

high school level.

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Abstract

This study sought to determine the feasibility of establishing a curriculum for high school students not participating in a music curriculum, nor having had any musical training or experience since grade school. The study took 6 high school students and taught them to compose two different pieces of music using the Windows based looping software ACID PRO. Students were shown the basics of using the program and taught a few basic musical concepts including form and structure. Students were very successful using the program, and wrote music in a variety of styles. Students reported extreme ease of use and great enjoyment with the composition software and with the actual creative process. These results support the creation of a music curriculum for non-traditional music students.

I. **Teaching music to non-traditional students**

A. **Why?**

In developing this project, I came across a startling statistic. Based on an informal survey I conducted, and my own teaching experience, I found that on average, only twenty percent of public high school students are involved in some kind of music curriculum at any given time in high school. That such a vast majority (in most cases) of students were not exposed to any kind of music education throughout high school was extremely disappointing, yet intriguing as well.

This population of students not involved in a music performance organization, nor having had any general or classroom music classes since elementary school, interested me. A Classroom Music Technology seminar I was a member of designated this population "Non-Traditional Music Students". Was it practical or even possible to formulate an effective curriculum geared toward Non-Traditional music students? Could they be taught to write different kinds of music and critique and analyze it? What kinds of software are usable and would yield results with this population? Will using a computer to teach these concepts assist in recruiting students and motivating them? This type of task is daunting enough with students who have been playing instruments and studying music since elementary school, let alone students who haven't been exposed to it since then.

Unfortunately, there are several perceived barriers preventing these students from participating. Primarily, lack of experience, lack of interest, and lack of resources and time needed to teach beginning musical concepts to high school students have stood in the way of exposing this population to musical exploration.

Fortunately, students are a lot more advanced than teachers might give them credit for. Their technical savvy, computer literacy, and uncanny ability to figure out software they've never seen before often exceeds that of the teacher.

Recent advances in music technology particularly geared towards the educational sector have allowed us to leap over many of these barriers and allow, encourage, and even simplify the creative process with inexperienced students.

Putting all this together presents a very appealing situation for a music teacher, a vast resource of musical potential in our own school! The idea of using technology to allow Non-Traditional music students to create and evaluate music is appealing on many levels: it requires the use of computers and other hardware, it provides opportunities for cross-curricular assignments, and it enables students who otherwise would not have had the opportunity to create music.

B. How?

A key element in maximizing the effectiveness in teaching these new concepts is the utilization of the educational strategy *constructivism*. It entails students discovering principles on their own with the instructor acting more as a translator[1] as opposed to someone spoon-feeding the information to the student. Jonassen explains constructivism as the belief that "learners construct their own reality…an individual's knowledge is a function of one's own prior experiences."[2] In using computer applications to teach composition for example, the results are immediate and require little background

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[1] Bruner, J. (1966). Toward a Theory of Instruction. Cambridge, MA.: Harvard University Press.
[2] Jonassen, D.H. (1991) Objectivism versus constructivism: Do we need a new philosophical paradigm? *Educational Technology Research and Development*, 39(3). 5-14.

knowledge to work with, allowing students (with a basic framework) to creatively explore and create their own product, thereby learning the concepts on their own.[3]

Another indispensable element is to allow the students to use their own creative energies to develop (or construct) a legitimate piece of music, keeping in mind that the effectiveness is lost if the students are given free reign with no guidance.

C. Has it worked in the past?

In the Fall of 2004, I conducted a study at a local high school investigating the effectiveness of teaching composition to Non-Traditional Music Students using PG Music's Band in a Box program. Students were shown the basic parameters of the program and taught a few basic concepts of form and structure, then composed a jazz/rock tune using the program.[4] Overall, the experiment was successful, and certainly demonstrated that it has a place in the high school curriculum. The pieces written by the students were of decent quality, and went beyond their expectations, and the students themselves enjoyed the experience. I believe the greatest success of the program was that the students learned valuable information about how jazz and rock music are structured, and actually had the opportunity to compose music.

In researching this venture, I contacted several directors and educators of nationally-renowned music technology programs and asked them a few questions regarding NTM students in a music technology program. The teachers contacted are all

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[3] Webster, Peter. (2004). Creative Thinking and Musical Technology. Technology Strategies 2nd Edition. (TI:ME).
[4] Composition Project, Lexington High School, November, 2004. Corey T.J. Beirne, Illinois State University.

pioneers in classroom music technology pioneers, and were very gracious with their advice.

Wayne Splettstoezer, a music technology teacher at Torrington High School in Torrington, Connecticut offers several technology courses geared for students of all ability levels. He notes that most of his students are not involved in other organized musical performance groups, and it "…is always interesting for me to have non-music students sitting next to music students and see how each progresses throughout the course." When teaching to this population, he notes that his most successful strategy is giving custom assignments and breaking them down based on the needs of the individual students. Unstructured, broad assignments are not as helpful to the student, although once the "building blocks" are in place, he finds that allowing free time for creative exploration produces very interesting results.[5]

Dennis Mauricio is the founder and director of a high school-based Music Tech Ensemble out of Chula Vista, California. He runs an extremely prolific and successful Music Technology curriculum through Hilltop High School in Chula Vista. He is quick to point out the advantage to a hands-on, constructivist approach to teaching music technology. Even when teaching basic information such as note reading, Mauricio uses several different learning strategies such as a Power Point presentation, guided note taking, MusicAce, and various websites.[6]

Author and teacher Dr. Sara Hagen of Valley City State University in South Dakota notes that non-traditional students do very well in her music technology curriculum.

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[5] W. Splettstoezer. (personal email communication, February 16th, 2005).
[6] D. Mauricio (personal email communication, February 16th, 2005).

"They are often more creative and if they have computer background, I rarely have to say a whole lot about the how-tos. I introduce features and ways to consider a project, but they generally have an idea coming into the class what they want to produce. I have run a creative sound production class for anyone who wanted to join in, no music background needed, and have had good success with their intents turning into reality."[7]

Although the creative nature of using technology is a priority of these programs, all teachers emphasized the need for "building blocks" to give the students a jumping off point. Splettstoezer specifically mentioned the idea of giving NTM students unstructured exploration time to create a quality piece of music, saying it was "not good". Setting goals and objectives before turning students loose and structuring assignments based on ability and previous knowledge works best. Hagen uses learning outcomes, which were presented in a "must include" format, which was then assessed using either a teacher or self assessed rubric.

Special consideration was also given to students with limited experience, who comprise a large and important part of the student populations in both groups. In Mauricio's class, a separate introductory class exists, while Splettstoezer and Hagen tailor their assignments and projects specifically to the ability level of the students. All teachers emphasized the popularity of the class with NTM students, and noted that they are not as helpless as one might think, particularly in terms of computer literacy.

My main concern, which I shared with these successful teachers, was that the creative aspect of the composition might be lost if the instructional time was too structured, and the end product would lose its artistry. All teachers offered strategies for retaining the creative nature of the compositions, but emphasized structuring the lessons to maximize the learning potential. Splettstoezer says his primary goal when teaching a

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Dr. S. Hagen. (personal email communication, March 9, 2005).

new concept is for his students to have success first, then he finds it easier to broaden their ability.

It is apparent from the comments of these teachers that a quality music technology curriculum will have structured instruction/defined outcomes as well as guided exploration time to produce the best results for all students involved.

II.   Methodology

In planning a sample unit demonstrating the benefits of such a curriculum, the abundance of beneficial software applications were considered. Although there are some outstanding products designed specifically for the classroom (such as the Sibelius Educational Suite), many software applications that would be of great value were not developed with the classroom in mind. In developing an entire curriculum for use in a semester or year-long class, I would attempt to utilize as many different software applications as feasible, most notably Band in a Box, Rock, Rap, n' Roll, Garage Band, Acid, Soundforge, and Audacity. The primary purpose of using this software in the classroom would be to enable students to create, organize, and manipulate sounds into several logical pieces of music in a creative fashion. This was accomplished successfully using Band in a Box at Lexington High School, and for the current research, I wanted to achieve similar goals using different means.

I selected ACID for a trial run because the mechanics of using the program are relatively simple, and its potential for creative output is great. It allows the user to cut and paste small snippets of music onto a grid, then repeat and manipulate the sections ad nauseam. The advantage to this is that, with a few parameters, students have extensive

creative leeway over their composition. The only real task they have is simple cutting and pasting.

In teaching the unit, a constructivist approach will be adopted while presenting the information in order that all three levels of Bloom's Taxonomy of Thinking are covered.

- Level I- Guided note taking for basic information relay

- Level II- Exploratory Software for Application and Synthesis

- Level III- Self and group assessment and critique of student work.

In the first lessons, students will be taught the basic parameters of the program and the definitions of form and structure. Students will also be taught the basic "ingredients" of their piece: bass, drums, melody, accompaniment, and effects.

The secondary lessons will consist of the actual composition, which will include such parameters as being at least two minutes long, contain at least eight tracks, utilize the pan and volume bands, contain at least two effects of which one must be found on the internet.

The tertiary and final lessons will be the "show and tell" portion. Students will play their compositions for each other, and analyze the compositions.

The objectives for the lessons are threefold:

- Students will gain an understanding, appreciation, and firsthand knowledge of composing music with a computer program

- Students will compose a quality piece of music and will have a recorded copy,

- Students will feel more confident and less intimidated about creating artwork, regardless of their past experience.

While the first two objectives are measurable and will be assessed with this project, it is my hope that the third objective is achieved as a byproduct of this process as well.

Finally, it should be noted that this basic lesson is in direct alignment with the State of Illinois Learning Standards.

- 26.A.3c   Music: Describe the processes involved in composing, conducting and performing.
- 26.B.4c   Music: Create and perform music of challenging complexity and length with expression.

III. The Lessons

The research was conducted over six class successive class periods. A weekend and a day off separated the second and third class periods, but otherwise, the classes were conducted on consecutive days. The lessons were conducted in a computer lab, on Microsoft Windows based machines. A demo version of the latest version of Sony's ACID PRO 5.0a was used, which was easily downloaded and registered at no cost. The only other equipment needed in addition to standard computer accessories was a quality pair of stereo headphones for each student, which were supplied by the school. No keyboards or additional MIDI devices were needed.

Students were given access to approximately 3,500 loops to select from. Loops were not included in the demo download, and were not available without cost from Sony's website. The loops available for the students to use were organized into three separate "banks." The first bank was the largest and came from an earlier version of ACID owned by the investigator. It was well organized by style (house, acid jazz, techno) and description (percussion, groove, effects, melody). The majority of loops used by the students came from this bank. The second bank was a collection of several hundred of

guitar, bass, and drum loops which were custom recorded as ACID loops. This bank was obtained from a file sharing website by the investigator. The third bank was a collection of about twenty hip-hop effects and loops obtained off an ACID demo website.[*]

The sample used was six high school juniors, all male, who volunteered their time for the study. Five of the students fell into the "Non-Traditional Music Student" category, having received no formal or informal music instruction since grade school. The other student who participated in the lessons was an electronic music student and was interested in learning the basics of ACID, which he was unfamiliar with. This student's work was kept separate from the others. The students were let out of a non-instructional study hall during the school day for the study.

The initial lessons were spent teaching the basics of the program, and allowing students as much time as possible to familiarize themselves with as many loops as possible. Creative judgment cannot be made if there is nothing to compare, so students were initially told to listen, listen, listen.

The primary approach to putting together a first tune was to assemble it in terms of its structure: a bass line, a percussion line, a melody line, and some effects and accompaniment. I explained this to the students and briefly showed them where to find these loops, and played a short demo tune I had written following the parameters given. In addition, I gave them all a written "guide" that explained the information as well. I quickly discovered that this method was ineffective, and students were spending most of the time searching for different loops instead of starting with something and building on it. In addition, nobody was even looking at the handout I had written, and when the

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[*] All aspects of this experiment, including the software and all loops, were obtained through legal means, and are fully registered where applicable.

period was over, what handouts were not given back to me were left on the table. I was reminded of a similar snag encountered by the investigators in the Creative Music Project in Texas, in which a similar study conducted with fifth grade students was stalled when students were ignoring the written handouts and drawing images on sequencers instead of writing music. I changed tactics on the second day and encouraged the students to construct the tune in the same manner, but to keep their tune within the same style or genre, such as house or industrial. This cleared up the stall immediately and students were churning out coherent little pieces much more expeditiously.

Their first assignment was to create a brief, thirty-second piece effectively demonstrating their understanding of the program, and their understanding of the structure of a piece of music. Most students completed this within one or two days, with great success. I was surprised at the variety and diversity of the music created, as well as the creative energy displayed by the supposedly "non-musical" students. One student, who seemed very quiet and almost shy, put together a very high energy, dissonant tune reminiscent of early the 1990's industrial music scene. The teacher assisting me remarked about its similarity to the music of Trent Reznor and Nine Inch Nails. Another student wrote a very dark, heavy tune deceivingly titled "The Happy Little Elves meet the Curious Bear Cub." It utilized effects and distortion in a very resourceful and effective way.

The second assignment was more extensive, building on the first assignment. Students were to compose a piece in binary form using the same elements used in the first piece, but with clear a introduction, A section, B section, and ending. Students were given two full class periods to complete this assignment.

Watching the creative process during these two classes was very enjoyable. Students were still learning the software and listening to new loops, but the process was certainly much quicker than during the first few days. Most of the time was spent in a "trial and error" process, with many re-do's. Some students were not present for both days, or missed some instructional time, and their work is indicative of this. However, as with the first tune written, I was amazed at the creative output of these students. One tune in particular, dubbed *Running with Scissors,* displays a great deal of creative depth in the composer.

For this part of the lesson, students were given a checklist modeled on the technique suggested by Dr. Sara Hagen of Valley City State University. This assessment technique worked remarkably well in my opinion without impeding on the creative output. Elements to be integrated in the piece included the use of certain effects such as volume, pan, or reverse, the inclusion of effects, and the adherence to specific styles based on the adaptation from the first part of the lesson. (see Appendix A)

For the final part of the lesson, the pieces were saved and converted to mp3 files. The class met in the schools recording lab, which was equipped with large studio monitors. All the pieces were played and opinions were anonymously shared about the music, what was good, what needed work, etc. A survey assessing student opinions about the study was also administered.

IV. Results

The results, as expected, support the concept of a class geared solely towards students with limited musical background. Overall, the students were generally

enthusiastic and excited about using the program to create music, and the compositions themselves were very interesting, diverse, and show much creative input.

There were some downsides, mainly with personnel issues. Some students' attendance was inconsistent, a fact which is clear when listening to the compositions who put the time in and who did not. I was well aware that the class was taking place during a study hall, and was careful allow students to study for exams when the time was needed. A required stipulation in the formation of the study was that participation could be terminated by the student at any time, so I was lenient with attendance to encourage more participation. All students who participated were there for the majority of the time, and completed the work assigned in the study.

In the survey administered to students at the end of the lesson, four areas were assessed, as follows:

- Students' general impressions of the unit
- Students impressions of a music technology class doing activities similar to this unit
- Opinions of ease of use of the ACID PRO software
- Opinions about the music they wrote.

Overall, students indicated they enjoyed themselves throughout the unit and felt it was time well spent.

On questions assessing students' general impression of the unit, students reported a mean score of 4.5 on a scale of 5, with 5 being a positive response. All students indicated strongly that they enjoyed writing music with a computer. One student described the unit as "definitely very cool…" and expressed a strong preference toward participating in the study as opposed to being in his assigned third hour classroom (the unit "…kicked the crap out of study hall.")

On questions assessing students' impressions about participating in a music technology class, the responses were mixed. When asked if they thought other students might be interested in a class such as this, the responses were very favorable, a 4.2 on a scale of 5. When asked if the student himself would be interested, the responses were neutral by average, a 3.4 on a scale of 5. I attribute the mixed nature of these responses to the indication that students equated the study more with a fun activity than with a legitimate classroom assignment. (when asked this question, students reported a score of 4.6 on a scale of 5). I don't believe the students realized just what they were doing, and how beneficial it was to them, and therefore did not equate this unit with a legitimate educational activity.

When asked about the software itself, its ease of use, the time it takes to learn it, and its functionality as a compositional aid, students reported overwhelmingly positively. All students strongly indicated that ACID PRO is easy to learn, and facilitates the process of writing music. The electronic music student indicated that although the process was relatively simple, it would have been easier for him if he could input music using his guitar.

Although I felt the music written was of decent quality for beginners, students tended to rate the compositions of their classmates higher than their own compositions. They also indicated that others might enjoy listening to the compositions more than the composer would, which leads me to believe there is still a fair amount of creative inhibition. This may indicate that students are trying to create something that fits more into what their peers would approve of as opposed to what pleases the composer. I look at this aspect as another endorsement of this type of curriculum as a means to boost self-

confidence by fostering uninhibited creativity in students, allowing them to create something on their terms, and not have it fit into a mold.

V. Conclusions

This study, coupled with an earlier similar study using Band in a Box, effectively demonstrates, in my opinion, the validity of establishing a music curriculum for non-traditional music students. Training in music theory or a performance medium such as voice or cello or trombone is NOT synonymous with musical creativity. A performance medium simply serves as a vehicle, and a very effective vehicle at that. Participating in a performance organization has benefits far beyond musical creativity that cannot be replicated on a computer. This in no way excludes other students, who primarily comprise the vast majority of a school population, from participating in a music curriculum, and achieving the pride and sense of accomplishment which comes from creating a piece of music. This study demonstrates that students with limited musical training can, with a minimum of instruction, create a quality piece of music. The quality of the music created with this project coupled with the students' enthusiasm for the subject matter clearly shows it would be a valuable and beneficial part of a high school curriculum.