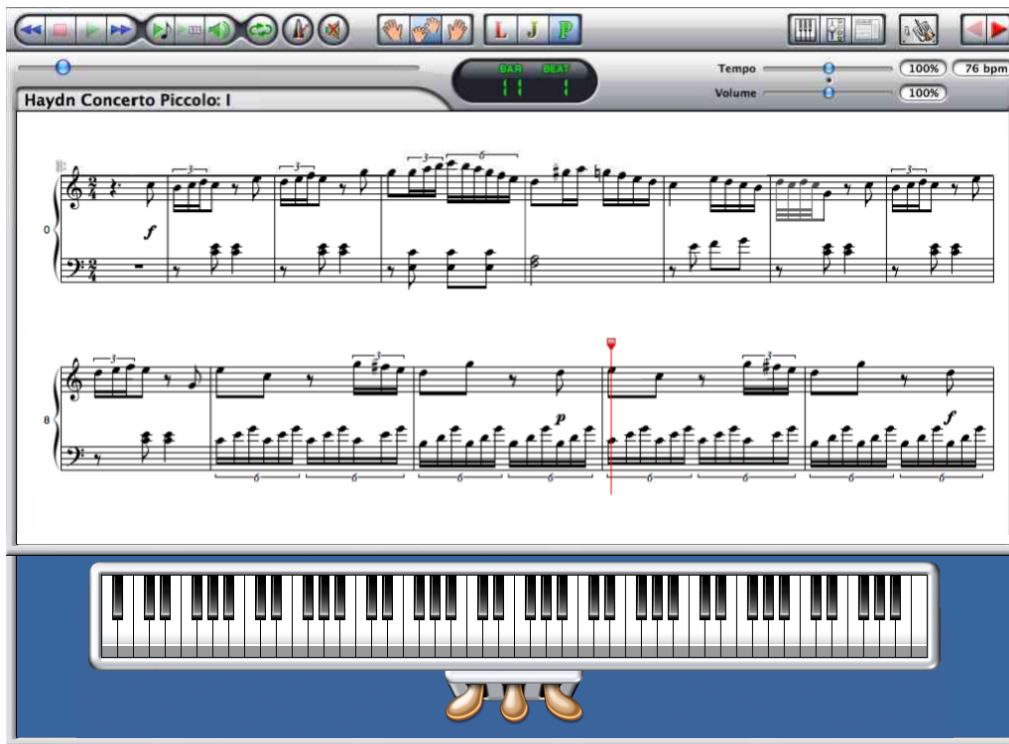


PIANO PEDAGOGY TECHNOLOGY PROJECT GUIDE



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The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.

Alvin Toffler

Rethinking the Future



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OVERVIEW

This guide is intended for the college piano pedagogy instructor or similar person who teaches or supervises the work of students in the area of piano pedagogy. It contains a number of technology-based, piano pedagogy projects for piano and piano pedagogy majors.

It is our hope that this guide will assist teachers in creatively mentoring their students while the students, themselves, explore the rich educational possibilities provided by modern music technologies. The basic idea is this:

- Assign students the task of undertaking a technology-based project that runs for a substantial portion of the semester.
- The students, themselves, pick their topics. (It is recommended, however, that the teacher encourage choices that result in a wide variety of topics covered by the class as a whole.)
- Each project should employ modern technologies in a creative way and have a useful, pedagogical outcome.
- While working on the project, students should be expected to apply knowledge and skills acquired during the course, itself.
- Students should be expected to learn how to use the technologies in question on their own.
- As the end of the term approaches, class time should be provided for students to present their projects to the class thus enabling everyone—including the teacher—to learn from the experience.

The projects suggested here assume that students have the following resources:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme* (software from TimeWarp Technologies)
- *Classroom Maestro* (software from TimeWarp Technologies)

- *Internet MIDI* (software from TimeWarp Technologies)

In some cases, additional resources may be necessary, such as access to particular collections of pedagogical MIDI files, a music sequencing or notation software program for editing or creating MIDI files, webcam, or a broadband Internet connection.

We make no claim that this guide is comprehensive. Indeed, there are similar, creative projects that can be undertaken that use audio recording devices, Internet-based resources, and other software programs. This guide focuses specifically on project ideas that are facilitated by software from TimeWarp Technologies.

Regardless as to whether you use any of these projects as specified here, we hope that you will find this collection to be an inspiration to your work with the next generation of piano teachers.

What follows are the projects themselves.

NOTE: In the context of this document, the term teacher refers to the student teacher (i.e. piano pedagogy student) and the term student refers to the student who is being taught by the piano pedagogy student.

REAL-TIME, LONG DISTANCE LESSONS

Project Description

It has become increasingly common for teachers to teach students long distance in real-time, using video conferencing and connecting the teacher piano to the student piano over the Internet. Long distance, real-time teaching is a crucial skill in the 21st century, not only because of demand in remote locations, but also because of scheduling and transportation conflicts that arise with students in nearby locations, teacher travel, and a variety of convenience factors.

During the course of this project, the pedagogy student will master the necessary technology tools for real-time, long distance teaching. In addition to teaching a student long distance, by necessity the pedagogy student will also train the long distant student in the use of these tools.

For this project, the pedagogy student should set up a long distance teaching situation with a single student. (The pedagogy student may wish to set up a similar, in-person teaching situation with another student for comparison.) Because the pedagogy student will need to integrate technology tools seamlessly in this process, he or she will also develop effective lesson planning skills in preparing for long distance lessons.

To prepare for the project, the pedagogy student will need to become familiar with the necessary Internet connections via *Skype* and *Internet MIDI*, learn how to integrate *Classroom Maestro* for the purpose of facilitating musical discourse, and help the piano student (and others in the piano student's home) prepare an appropriate lesson environment in the remote location. In addition to the technological knowledge gained in this project, other benefits may include:

- learning how to create effective lesson plans
- developing exemplary time-management skills
- understanding the piano student's home practice environment

Equipment

In order to complete this project and teach face-to-face lessons over the Internet in this way, the student teacher (i.e. the pedagogy student) and the remote student will both need:

- laptop computer

- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Internet MIDI*
- *Classroom Maestro*
- webcam
- *Skype*
- broadband Internet connection

In addition, *Home Concert Xtreme* may prove to be a beneficial program for the student to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become facile with real-time tools for long distance piano instruction
- become capable of instructing (long distance) a student in the use of these tools
- learn to teach long distance in an effective manner
- obtain the experience necessary to evaluate this medium for piano instruction

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the lessons themselves
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of the teaching techniques learned
- audio or video piano recordings made by the student who was taught

- written or aural commentary from the student who was taught, discussing the long distance lessons from the student's perspective

TIME-SHIFTED, LONG DISTANCE LESSONS

Project Description

It has also become increasingly common for teachers to teach students long distance in a time-shifted fashion. Typically this means that:

- the teacher prepares short, videos lessons for the student and posts them on the Internet, perhaps in a private location
- the student watches the lessons, practices, and provides a video response for the teacher to view and analyze
- the teacher responds to the student with follow-up video lessons
- *et cetera*

Many piano pedagogy students will want to add this type of teaching to their offerings when they establish their own teaching studios. In some cases, a teacher may use this type of instruction exclusively and in other cases use it supplementarily.

In addition to learning the pedagogical advantages and disadvantages of long-distance, time-shifted teaching, piano pedagogy students who undertake this project will address a variety of mundane issues, such as video and audio quality, camera positions, and privacy. The pedagogy student will likely discover that certain teaching goals (such as modeling posture or demonstrating expressive interpretation) can be effectively achieved in a time-shifted context.

Pedagogy students who complete this project will also learn to become well organized and articulate in all aspects of their teaching and will become better teachers in traditional real-time, live teaching situations.

For this project, the pedagogy student should set up a long distance teaching situation with a single student. (The pedagogy student may wish to set up a similar, in-person teaching situation with another student for comparison.) When preparing lessons, the pedagogy student should consider keeping the videos lessons short and to the point. The piano student who views the lessons will be able to take advantage of the usual video playback options of pause and rewind and will be able to watch these instructional videos as many times as needed.

Equipment

In order to teach time-shifted lessons over the Internet in this way, the teacher (i.e. the pedagogy student) and the remote student will both need:

- laptop computer
- digital video camera
- broadband Internet connection
- a private Internet location for sharing videos, such the private areas of YouTube, Facebook, Vimeo, or similar services

In addition, the pedagogy student will need tools for creating instructional videos, such as:

- appropriate video screen-capture/editing software, such as:
 - *ScreenFlow* for Macintosh (www.telestream.net) or
 - *Camtasia Studio* for Macintosh or Windows (www.techsmith.com)
 - *QuickTime Pro* (www.apple.com)
- other video-editing software, such as:
 - *iMovie* for Macintosh (www.apple.com) or
 - *MovieMaker* for Windows (<http://explore.live.com>)
- *Home Concert Xtreme*
- *Classroom Maestro*

NOTE: Excellent examples of time-shifted instructional videos can be found by doing an Internet or YouTube search for “Mario Ajero” and/or “piano podcast.” Dr. Ajero’s instructional videos make exemplary use of multiple camera angles as well as interactive on-screen music notational, animated musical keyboard with pedals, and musical analysis.

Objectives

In order to complete this project successfully, the pedagogy student should:

- use video technology to create efficient, repertoire-driven lessons for a particular student

- become facile with combining various computer technologies to produce seamless, coherent instructional materials
- master pedagogical concepts of modeling and efficient exposition

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- a written report of pros and cons of time-shifted teaching
- video documentary evidence of some of the lessons themselves
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of the teaching techniques learned
- audio or video piano recordings made by the student who was taught
- written or aural commentary from the student who was taught, discussing the long distance lessons from the student's perspective

HOME-CHECKUPS VIA THE INTERNET

Project Description

Encouraging efficient at-home practice is an important issue that teachers must address. Regrettably, normal weekly lessons are often too short and too infrequent for many students, making it a big challenge for students to develop efficient practice techniques on their own. Ideally, the piano teacher should be able to have more frequent contact with students in order to insure that their practice efforts are on track.

Fortunately, the Internet now makes it possible for a teacher to check up on students between lessons by way of short, video appointments. The basic idea is that the teacher establishes a video conference with the student between lessons and actually watches the student practice. This technique enables teachers to help students avoid practicing mistakes, while promoting more efficient practice and motivating students to practice more often.

To undertake this project, the pedagogy student should set up regular weekly lessons with one or more piano students. In addition, the pedagogy student should plan a regular series of short, between-lesson checkups using the Internet and the tools listed below.

Prior to conducting these checkups, the pedagogy student will need to establish a video connection between his or her own teaching location and that of each piano student. This is usually established quite easily with *Skype*, a program that is available for Windows and Macintosh computers.

For added effectiveness and an improved listening experience, the pedagogy student may use *Internet MIDI* to connect the teacher and student instruments. If *Internet MIDI* is equipped with *Classroom Maestro*, the pedagogy student will have an additional tool for interacting with the student and demonstrating musical concepts.

Finally, it will be crucial to help the piano student (and others in the piano student's home) prepare an appropriate practice environment in the remote location.

For comparison, the pedagogy student may wish to set up a traditional teaching situation that does not include the home-checkups via the Internet.

Equipment

In order to complete this project, both teacher (pedagogy student) and student need:

- laptop computer

- webcam
- *Skype*
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard if *Internet MIDI* is used

The following optional set of equipment may add effectiveness to the project:

- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Internet MIDI*
- *Classroom Maestro*

Objectives

In order to complete this project successfully, the pedagogy student should:

- become facile with technologies used for these home-checkups
- become capable of instructing the student in the use of these tools
- use the Internet and appropriate tools to meet with a regular student 1-2 times between weekly lessons for 5-10 minute intervals.
- during these home-checkups, assist the pupil with practice techniques, field questions from the student, and make sure the student avoids learning incorrect notes or rhythms.
- obtain the experience necessary to evaluate this medium for supplementary piano instruction

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- a detailed log of student “checkups.” The log should include dates, times, and topics discussed

- a written report comparing the effectiveness of teaching with Internet checkups compared to traditional lessons that do not include Internet checkups
- video documentary evidence of some of the checkups themselves
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of an Internet checkup and teaching techniques learned
- audio or video piano recordings made by the student who was taught
- written or aural commentary from the student who was taught, discussing the Internet checkups from the student's perspective

NEW MIDI ACCOMPANIMENTS FOR PEDAGOGICAL REPERTOIRE

Project Description

Since the late 1980s, publishers of piano teaching materials have been offering MIDI and CD audio accompaniments for their method materials and solo pieces. MIDI accompaniments are generally much more flexible than audio accompaniments because you can mute tracks, rebalance tracks, change the tempo, and transpose easily. And, they work with intelligent, interactive score-following software, such as *Home Concert Xtreme*.

MIDI accompaniments have proven themselves to be incredibly useful because they:

- function as a musical metronome, helping the student to establish a sense of pulse and play in time
- teach the student to learn how to go forward if a stumble occurs
- train the student to listen carefully to ensemble parts
- play expressively (assuming that the accompaniment is expressive)
- inspire the student's musical imagination with the orchestration
- motivate the older beginner by providing a complete and sophisticated musical experience for even the simplest of piano pieces

As useful as MIDI accompaniments are, not all MIDI accompaniments meet high musical and pedagogical standards.

This project provides pedagogy students with the opportunity to examine the MIDI accompaniment concept in detail, to learn to create musically inspired and pedagogical useful accompaniments, and to test the results with students.

To complete this project successfully, the pedagogy student should:

- survey a number of collections of pedagogical MIDI accompaniments in order to assess their strengths and weaknesses
- assemble a small collection of teaching pieces
- create MIDI orchestrations using General MIDI sounds or another suitable sound set

- optimize their MIDI accompaniments for display within *Home Concert Xtreme* (appropriate quantizing all parts, adding fingerings, dynamics, articulations, and text instructions)
- test their MIDI creations by teaching several lessons using these materials with *Home Concert Xtreme*

Pedagogy students should be encouraged to explore a variety of musical styles when creating their orchestrations. If deemed appropriate, pedagogy students may be allowed to use an auto-arranger program (such as PG Music's *Band-in-a-Box*) as a way of generating a first draft accompaniment which the pedagogy student ultimately edits appropriately.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- a MIDI software editor (i.e. a MIDI sequencer), such as Cakewalk's *Sonar*, Steinberg's *Cubase*, Mark of the Unicorn's *Digital Performer*, Apple's *Logic*, Sagan Technologies's *Metro*, PG Music's *PowerTracks Pro*, et cetera
- optionally, an auto arranger program, such as PG Music's *Band-in-a-Box* (which can generate useful material upon which the student can build a musical orchestration)

In addition, *Home Concert Xtreme* may prove to be a beneficial program for the student to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become familiar with a number of collections of MIDI accompaniments and be capable of expressing educated opinions about their musical and pedagogical worth
- become skilled in creating musically and pedagogically useful MIDI accompaniments
- become facile in the use of MIDI accompaniments in a lesson, using *Home Concert*, *Xtreme*
- obtain enough teaching experience with the newly created accompaniments to be able to evaluate them musically and pedagogically

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the lessons that were taught using MIDI accompaniments
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of the newly created MIDI accompaniments and the teaching techniques learned
- audio or video piano recordings made by the student who was taught using the newly created accompaniments
- written or aural commentary from students who were taught using the newly created MIDI accompaniments, discussing the learning experience from the student's perspective

METHODS WITH MIDI: A COMPARATIVE STUDY

Project Description

Nearly all of the major piano methods for young beginners, older beginners, and adult beginners have accompaniments available as MIDI files and often as audio files as well. In general, the MIDI accompaniments are much more flexible than audio accompaniments because you can mute tracks, rebalance tracks, change the tempo, and transpose easily. And, they work with intelligent, interactive score-following software, such as *Home Concert*, *Xtreme*.

In the case of many methods, the MIDI accompaniments are available for primary method books as well as for supplementary and repertoire books which may encompass:

- folk tunes
- TV themes
- movie themes
- classical works and arrangements
- pop hits
- Broadway shows
- Christmas and other holiday music
- hymns or other religious works

These MIDI accompaniments have proven themselves to be incredibly useful because they:

- function as a musical metronome, helping the student to establish a sense of pulse and play in time
- teach the student to learn how to go forward if a stumble occurs
- train the student to listen carefully to ensemble parts
- play expressively (assuming that the accompaniment is expressive)
- inspire the student's musical imagination with the orchestration

- motivate the older beginner by providing a complete and sophisticated musical experience for even the simplest of piano pieces

Unfortunately, not all MIDI accompaniments meet high musical and pedagogical standards.

For example, when you mute the accompaniment tracks of certain MIDI files, you may find that the piano part was not recorded in a musical fashion. In other cases, you may find that a rock accompaniment applied to a classical theme is not musically appropriate. Or, you may find that certain accompaniments actually interfere with the learning of the music.

This project provides pedagogy students with the opportunity to examine the MIDI accompaniment concept in detail, to teach students using MIDI accompaniments, to develop a successful pedagogical repertoire of techniques for using the accompaniments in lessons, and to become a discriminating teacher who is able to choose materials wisely for the piano student.

To complete this project successfully, the pedagogy student should:

- survey a number of collections of pedagogical MIDI accompaniments in order to assess their strengths and weaknesses
- choose 2 or more sets of accompaniments to use in lessons with students
- teach several students over a period of several weeks, using MIDI accompaniments
- develop a facile manner of using MIDI accompaniments with *Home Concert Xtreme* during the lessons
- provide the students with an opportunity to practice independently using *Home Concert Xtreme* and MIDI files in an independent setting and observe the results

At all times, the pedagogy student should have clear goals for the lessons and should provide clear practice goals for the students.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer

- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*

In addition, *Home Concert Xtreme* may prove to be a beneficial program for the beginning students to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become familiar with a number of collections of MIDI accompaniments and be capable of expressing educated opinions about their musical and pedagogical worth
- become creative in the use of MIDI accompaniments in lessons using *Home Concert Xtreme*
- become facile in the use of MIDI and software tools within lessons so that lessons proceed in a streamlined and effective manner
- obtain enough experience teaching with MIDI accompaniments to be able to evaluate them musically and pedagogically

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the lessons that were taught using MIDI accompaniments
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of lessons that employ MIDI accompaniments
- audio or video piano recordings made by the student who was taught using MIDI accompaniments
- written or aural commentary from students who were taught using MIDI accompaniments, discussing the learning experience from the student's perspective

LESSON PLANS USING MODERN TOOLS

Project Description

It is important for piano pedagogy students to learn to be well organized teachers who are capable of teaching in an effective manner, taking into consideration the particular learning styles and musical needs of their individual students. A useful way to become such an organized and effective teacher is to undertake the task of creating well conceived lesson plans for each student.

Fortunately, the modern teacher has a variety of technology-based resources to assist with this process.

For example, a teacher can use the specific features of *Home Concert Xtreme* to teach a piece of literature and in the process easily demonstrate analytical concepts, promote efficient practicing, and improve reading fluency.

When pedagogy students plan lessons, they should include all relevant tools to help them complete their objectives, such as written, audio and MIDI materials, classroom activities, and computer software. *Home Concert Xtreme* and *Classroom Maestro* can be creatively used to integrate all of these resources, simplifying planning for the teacher and adding motivating factors for the student, as well.

As new lesson plans are created, *Home Concert Xtreme* and *Classroom Maestro* can be used in every step of the process. Especially in a repertoire-centered, one-on-one setting, these tools can focus students on sequential progress and clarify less tangible concepts, such as expression and style.

For example, a teacher might assign Burgmüller's *L'Arabesque* in order to teach chord progressions, melody and accompaniment texture, and the technique of quickly shifting hand positions. To accomplish these lesson goals, the teacher might:

- plan a chord review using *Classroom Maestro*
- help the student analyze the expressiveness of his/her playing using the keyboard velocity meters in *Home Concert Xtreme*
- require self-assessment of dynamics and rubato using the performance playback feature in *Home Concert Xtreme*

- set up a repeat loop for a short section of music which includes position shifts using the loop feature in *Home Concert Xtreme* and then gradually increase the playback tempo of the accompaniment
- use playlists in *Home Concert Xtreme* to organize lessons for individual students

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- *Classroom Maestro*

Objectives

In order to complete this project successfully, the pedagogy student should:

- plan to teach several students over the course of several weeks
- become familiar and facile with the technology tools used in this project
- use these technology-based resources to create efficient lesson plans that result in students:
 - becoming more focused on expressive markings and performance directions in the score
 - becoming aware of the steadiness of their playing
 - learning to play with effective rubato
 - learning to analyze the dynamic expressiveness of their own playing

- developing their own strategies for working on short sections of music at a slow tempo and then gradually increasing the tempo as their playing becomes more confident

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- submission of the lesson plans to the course instructor
- video documentation of instruction that used these lesson plans, or lessons observed by pedagogy instructor
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of lessons that employ these lesson plans
- audio or video piano recordings made by the student who was taught using these lesson plans
- written or aural commentary from students who were taught using these lesson plans, discussing the learning experience from the student's perspective

MIDI FILES FOR IMPROVISATION

Project Description

Many (perhaps most) piano methods lack a sustained and rigorous approach to teaching the art of improvisation. And many teachers feel uncomfortable teaching improvisation at any level beyond the most elementary exercises.

This is not surprising if one considers the fact that in an improvisation, one must be responsible for:

- melody
- rhythm
- harmony
- structure
- accompaniment
- inspiration

That is quite a burden!

However, when a student improvises while playing along with MIDI accompaniments, the student can focus on a single issue, such as a rhythm pattern or a 5-finger melody, and still enjoy a musically complete experience. The reason that the improvisation sounds complete is that the MIDI accompaniment tracks provide the structure, establish the pulse, and provide other musical elements that complete the piece.

When the student is relieved of the burden of providing all of the musical elements of a complete composition, the student has an opportunity to relax, focus on a musically achievable goal, and feel good about the result. Over time, the student can take musical responsibility for an increasingly large number of elements of the improvisation.

You'll find a good example of this concept in *Improvisation Guidelines for Music Pathways*, an improvisation curriculum created by George Litterst using MIDI files from the *Music Pathways* series. You can download *Improvisation Guidelines for Music Pathways* from this location:

www.timewarp.tech.com/Pages/Educators/TWSS_Educators.html

If you examine this improvisation course in detail, you'll notice the following:

- The MIDI files taken from the *Music Pathways* series are not used in book-order. Instead, they are grouped according to the improvisation task to which they are best suited.
- When using the MIDI files to improvise, the original solo part should be turned off. The reason is that *the student is going to improvise a new solo part*.

NOTE: The student should not be allowed to look at the original piece for which the MIDI accompaniment was created.

- In some cases, it is necessary to turn off one of the accompaniment tracks because the track is so interesting that it interferes with the student's own improvisation.
- The musical challenges are progressive and range from playing simple rhythms on a single key to two-handed improvisations with changing harmonies.

This project provides pedagogy students with the opportunity to confront the issue of teaching improvisation skills on a regular basis, in a fun context, and in a sustained and progressive manner.

To complete this project successfully, the pedagogy student should:

- outline a short, progressive course of improvisation study, clarifying the musical challenges in a manner similar to the outline found in the *Improvisation Guidelines for Music Pathways*

NOTE: The idea is not to create an enormous course of study but rather to create a short course of study that focuses on a limited number improvisation issues in a progressive manner.

- survey a number of collections of pedagogical MIDI accompaniments in order to select a group of MIDI files that would be appropriate for this project
- assign a number of files to each of the specific musical challenges in the outline
- develop a facile manner of using these MIDI accompaniments for improvisation with *Home Concert Xtreme* during the lessons
- teach these improvisation exercises to several students over a period of several weeks, using MIDI accompaniments and *Home Concert Xtreme*
- provide the students with an opportunity to use *Home Concert Xtreme* and the MIDI files in an independent setting and observe the results

At all times, the pedagogy student should have clear goals for these improvisation lessons and should provide clear practice goals for the student.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*

In addition, *Home Concert Xtreme* may prove to be a beneficial program for the student to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- develop an effective teaching approach to the art of improvisation using MIDI tools
- become familiar with a number of collections of MIDI accompaniments and be capable of adapting them to the task of teaching improvisation
- become skilled in the application of MIDI accompaniment tools during lessons
- become creative in the use of MIDI accompaniments for the purpose of facilitating improvisation, using *Home Concert Xtreme*
- become facile in the use of MIDI and software tools within lessons so that lessons proceed in a streamlined and effective manner
- obtain enough experience teaching improvisation with MIDI accompaniments to be able to evaluate this approach musically and pedagogically

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the improvisation lessons that were taught using MIDI accompaniments
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of improvisation lessons that employ MIDI accompaniments
- audio or video piano recordings made by the student who was taught to improvise using MIDI accompaniments
- written or aural commentary from students who were taught to improvise using MIDI accompaniments, discussing the learning experience from the student's perspective

MIDI FILES FOR SIGHT-PLAYING

Project Description

An easily accessible collection of sight-playing materials is a must-have for any new teacher. Having such a collection in digital format, organized by level and reading concept, saves valuable lesson time and makes the resources easier for students to use independently.

In this project, the pedagogy student will create a such collection by drawing from the wide range of free and commercially available MIDI recordings of teaching literature, as well as optionally creating some original MIDI recordings. In addition to publisher websites, online and local music stores, the pedagogy student may consult www.classicalarchives.com or www.timewarpstech.com for information on finding MIDI recordings of standard literature.

When creating this collection, the pedagogy student should keep in mind that some recordings are more beneficial than others for sight-playing purposes. In order to assemble a useful collection of MIDI files, the pedagogy student should answer these questions:

- What is the target skill level?
- Is the music obscure enough to be useful as reading material with students who play by ear?
- If there are accompaniments in the MIDI files:
 - are the accompaniment tracks musically motivating? Do they provide the student with a sense of forward motion?
 - are the accompaniments helpful in giving aural cues to the piano student?
 - are the accompaniment parts distracting or even aurally misleading? (NOTE: Accompaniment tracks can be muted or adjusted using *Home Concert Xtreme*'s mixer feature.)
- Have the left hand and right hand parts been recorded on separate tracks so that they can be viewed on separate staves in *Home Concert Xtreme* and thus used independently?
- What pedagogical objective(s) have been met?

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- MIDI recording software (sequencing software or notation software with MIDI export feature)
- access to MIDI file collections

Objectives

In order to complete this project successfully, the pedagogy student should:

- review teaching literature, sorting by level and annotating with information regarding reading concepts (rhythm focus, specific intervals, *et cetera*)
- locate MIDI recordings of selected works using commercial or public online resources (Classical Archives, publisher sites, library holdings, *et cetera*), and organize MIDI recordings into a single computer folder
- create MIDI files for works that are not available in MIDI form:
 - using MIDI recording software or notation software with a MIDI export feature
 - recording LH and RH parts onto separate tracks and quantizing appropriately
 - adding accompaniments where appropriate
 - observing applicable copyright laws

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- an annotated list of sight-play materials

- live demonstration of the ability to access appropriate sight-play material on demand
- video documentary evidence of some of the sight-play lessons that were taught using these resources
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of the teaching techniques used in this project
- audio or video piano recordings made by the student who was taught using these resources
- written or aural commentary from students who were taught using these resources, discussing the learning experience from the student's perspective

TEACHING KEYBOARD ENSEMBLE LITERATURE

Project Description

Learning an ensemble piece or chamber work can be a challenge for any pianist for any of a number of reasons:

- Many piano students reach college age with very little ensemble experience.
- Pianists typically have many more notes to learn than the other members of the ensemble.
- During the learning process, the pianist generally practices alone but must find a way to become acquainted with the other parts and to practice effectively with those parts in mind.

A very good way to prepare beginning and early intermediate pianists for more advanced ensemble literature is to involve them in keyboard ensembles. In a keyboard ensemble, each participant plays an instrumental part on a MIDI keyboard, such as a digital piano. One student plays the flute part, another plays the cello part, *et cetera*. During the course of learning to perform these ensemble works, keyboard students learn to play steadily, to listen critically while they play, to follow a conductor, and to balance their own part against the other parts of the ensemble.

There are many published sources of keyboard ensemble literature. Fortunately many of these publications come with MIDI files. These MIDI files include separate tracks for each of the instrumental parts. Most of these files are compatible with *Home Concert Xtreme* and can therefore be used in an interactive practice environment by each keyboard player.

By using *Home Concert Xtreme* with these MIDI files and applying creative learning strategies, pupils experience a rewarding and effective way to learn their parts.

In this project, the pedagogy student should complete the entire process of teaching one or more keyboard ensemble pieces to a group class. In addition to mastering the technology resources, the pedagogy student will gain valuable experience in group teaching strategies, including:

- classroom management
- time management

- lesson planning
- appropriate literature choice

Equipment

In order to complete this project, the pedagogy student will need a keyboard lab in which each station includes:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- General MIDI (GM) set of sounds (or another appropriate sound set) in either the MIDI keyboard or in the computer
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- MIDI files for the assigned pieces

Objectives

In order to complete this project successfully, the pedagogy student should:

- choose one or more keyboard ensemble pieces appropriate for the skill level, size, and age of the class
- prepare students for learning the pieces through listening/watching exercises which may include:
 - listening to the complete ensemble as a group using the Play File feature in *Home Concert Xtreme*
 - asking leading questions about melody versus accompaniment, dynamics, expression, and style of the piece
- prepare step-by-step instructions for independent learning using *Home Concert Xtreme*, in which pupils
 - read parts in Learn mode with and without hearing the other parts

- practice in Jam mode, while hearing the other parts, gradually increasing the tempo as playing confidence improves
- assess their own progress using the Performance Playback feature
- manage class time effectively by observing individual student progress and adjusting class activities appropriately
- lead class discussion regarding musical elements found in the piece
- rehearse the works and bring them to a polished conclusion

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- live or video demonstration of a group lesson in which the students use the technology resources to work on their parts
- live or video performance of the student ensemble under the direction of the pedagogy student in which the performance is evaluated for its expressivity, balance of the various parts, and the tightness of the ensemble
- multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- written or aural commentary from students members of the ensemble, discussing the learning experience from the students' perspective

INTERNET-BASED, STUDENT-RUN MASTER CLASS

Project Description

One of the best ways for students to become better learners is to engage in peer-to-peer activities that involve playing, reflecting, and commenting upon each other's performances. For example, a group of students might organize a student-run performance class in which the students:

- meet on a weekly basis
- take turns performing for each other
- discuss the challenges of learning their repertoire
- share learning strategies
- comment constructively on each other's performances

Participation in a regular, student-run performance class is an activity that challenges students to develop:

- practice strategies that help them to meet performance deadlines
- critical listening skills
- the ability to articulate helpful recommendations for their colleagues

Sharing learning strategies is not only a way to learn from one's peers but to crystalize one's own thinking about how to learn and practice.

Now that the technology exists for connecting student pianists with each other over the Internet, it is possible for students at different schools to get together on a regular basis and participate in the same peer-to-peer activities. All that is necessary is the ability to video conference and to connect pianos together via MIDI.

For this project, the pedagogy student should set up a regular, long distance, student-run master class involving pedagogy students at the local school as well as pedagogy students at a distant school. The group should meet on a weekly basis for a period of several weeks. The general expectation is that during these sessions, the pedagogy students will play for each

other, comment constructively on the performances, and discuss relevant musical and pedagogical issues.

Equipment

In order to establish a student-run master class involving students from two different institutions, the pedagogy student—who is the organizer for this project—and a student at the remote school will both need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Internet MIDI*
- *Classroom Maestro*
- webcam
- *Skype*
- broadband Internet connection

Depending upon the size of each student group, the size of each room, and the placement of the pianos, it may be useful to have any of the following:

- DVcam on a tripod in place of the webcam (so that it is easy to pan the room)
- large secondary monitor or computer projector with screen (in order to facilitate the local group's view of the remote location)
- external speakers connected to the laptop (to facilitate hearing the conversation coming over *Skype* from the remote location)
- external computer microphone with a long cord (to facilitate picking up the voices of the students in the local venue)

Objectives

In order to complete this project successfully, the pedagogy student should:

- become facile with real-time tools for long distance piano instruction and performance

- become capable of organizing student musicians both locally and remotely for a common musical purpose
- learn to perform long distance in an effective manner
- learn to interact productively with peers long distance
- obtain the experience necessary to be able to evaluate this medium for piano instruction and performance

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the student master class sessions themselves
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of the long distance master class experience
- audio or video piano recordings of local and long distance performers
- written or aural commentary from other participants in the master class, discussing the experience from their perspective

LEARNING GOOD PRACTICE HABITS FROM THE MASTER

Project Description

Developing musicians are often fascinated by their instructor's own musical life. Observing the instructor's individual practice regimen can be inspiring and educational for pupils at any level. The purpose of this project is to use the Internet and modern tools to make this possible.

This project is simple to execute and is easy to adapt as a supplement to other projects within this guide.

In this project, the pedagogy student simply sets up a virtual "window" into his or her private practice time, by activating a webcam during specified practice times. Making sure to follow appropriate boundaries for privacy, the pedagogy student invites piano students to view practice segments and submit questions for discussion.

In addition to the benefits that are provided to the piano students who observe the practice sessions, this exercise is useful to the piano pedagogy student by providing a situation that requires intelligent and focused practice techniques with clearly defined goals and observable outcomes.

A pedagogy student with a group of more advanced private students might also extend this project by having individual students take turns broadcasting their own practice sessions for the group and inviting discussion.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- webcam
- *Quicktime Broadcaster* (www.apple.com) or similar software for streaming audio and video to multiple locations
- a program for group text chat, such as *Skype*
- broadband Internet connection

The students who observe the practice sessions will also need:

- laptop computer or desktop computer
- browser or appropriate software for receiving the streaming audio and video
- a program for group text chat, such as *Skype*
- broadband Internet connection

In a more advanced incarnation of this project in which just two locations are connected, the pedagogy student may wish to employ a piano-to-piano link over the Internet in addition to a video conferencing connection. This scenario requires the following at each end of the connection:

- laptop or desktop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Internet MIDI*
- webcam
- *Skype*
- broadband Internet connection

Objectives

In order to complete this project successfully, the pedagogy student should:

- share effective practice techniques with students by streaming several of his or her own practice sessions over the Internet for piano students to observe online
- clarify the specific practice goals for the benefit of the student audience
- provide some explanation for the choice of practice techniques
- show measurable progress in the course of each practice session
- engage a group discussion by inviting the piano students to submit questions on these practice sessions using a text chat program, a private online forum, or group email

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video screen capture of one or more sessions via *ScreenFlow*, *Camtasia Studio*, or similar software
- documentation of the practice goals and results
- documentation of student questions and the pedagogy student's responses
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- written or aural commentary from the piano students, discussing perceived benefits of the experience

ENGAGING TEACHING PIECES BASED ON UNUSUAL SCALE-TYPES

Project Description

Two of the obligations of a good music teacher are to expose students to a variety of musical styles from various cultures and periods and to inspire and guide the students' as they develop their own creativity.

A good way to involve the pedagogy student in these issues is to ask the pedagogy student to create unusual and musically imaginative pieces that can be used for teaching purposes. As the pedagogy student becomes involved in this creative activity, the pedagogy student will have to focus attention on the inter-related issues of musical style, expression, and sequenced teaching.

When creating a teaching piece that has a unique sound, it is a good idea to start by assembling pre-compositional ideas and musical resources:

- What is the piece about, if anything?
- Is it fast or slow?
- What sort of feelings is the piece intended to evoke?
- What rhythmic patterns will be used?
- What are the technical limitations of the target student?
- What notes will be used?

The last question gets to the heart of this particular project.

The notes that are primarily used in the composition constitute a musical scale of one type or another. This musical scale, in turn, constitutes an important musical building block for the composition. Every musical scale—major, minor, pentatonic, blues, whole-tone, modal, or other—has a special sound or flavor about it. Similarly, any composition that is based primarily on notes of that scale will have a similar flavor.

Would you like to compose a piece that does not have the traditional major/minor sound that we are accustomed to hearing in contemporary pop music or in music from the common practice era? A good place to start would be to use notes of a scale that is not a major or minor scale!

The number of notes in a scale and the scale's distinctive flavor together put limits on the composer's choice of other compositional elements, such as the sing-ability of the melody, the types of chords that can be constructed, and the ways in which those chords function. The scale is not the only musical element that determines the outcome of a compositional effort, but it has a lot to do with setting boundaries around the otherwise infinite possibilities.

The choice of scale type may also affect the listener in certain ways. For example, the use of the Dorian scale may evoke images of the Renaissance era. The use of the whole-tone scale may provide a composition with a feeling of floating.

The number of possible scales—from 2 notes to 12 notes—that can be constructed out of the 12 chromatic tones available on the piano is not limitless, but it is huge. A good tool for exploring the possibilities is Scale mode in *Classroom Maestro*. Using Scale mode, you can experiment by playing unusual groupings of notes within the octave. When you do, you'll find as many as 200 different scale types that have names and many that do not.

For this project, the pedagogy student should:

- plan to compose a dozen, or so, short teaching pieces that have engaging and unusual sounds and that also accomplish defined pedagogical objectives. The pieces can be anywhere from 8 to 64 measures long.
- use Scale mode in *Classroom Maestro* to identify a number of interesting scales, perhaps as many as a dozen, depending upon the scope of this assignment.
- construct a short list of learning objectives for each piece, based on pedagogical issues such as:
 - moving from one 5-finger pattern to another
 - reading notes in certain areas of the staff
 - accompanying a melody in 6ths
 - mastering the dotted-8th/16th-note rhythm pattern
- further define the character of each piece, considering such issues as:
 - tempo
 - mood
 - subject matter

- compose and title each piece based on the forgoing decisions. Use a music notation program to compose the work and ultimately save out a MIDI file that can be used in *Home Concert Xtreme*.

TIP: When saving the MIDI file, be sure to save either a Type 1 Standard MIDI File with the left- and right-hand parts on different tracks or a Type 0 Standard MIDI with the left- and right-hand parts assigned to different MIDI channels. Either solution will result in a MIDI file that should display properly in *Home Concert Xtreme*.

- open each MIDI file in *Home Concert Xtreme* and edit the file as necessary for use in a lesson by:
 - putting in fingerings
 - cleaning up quantization
 - changing enharmonic spelling of certain notes as needed
 - adding a title
 - putting in text comments where appropriate
- teach the pieces to appropriately chosen students using *Classroom Maestro* and *Home Concert Xtreme* as teaching tools.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Classroom Maestro*
- *Home Concert Xtreme*
- music notation program

In addition, a similar setup with *Home Concert Xtreme* may prove to be beneficial for the students to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become aware of the role that a choice of scale makes in the outcome of a composition
- become sensitive to the importance of introducing students to a broad range of compositional styles
- become familiar with the various challenges and inter-related issues that go into the composition of an effective teaching piece
- become familiar with techniques for creating teaching materials in a useable MIDI format
- become facile with *Classroom Maestro* and *Home Concert Xtreme*

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- properly formatted MIDI files that display properly in *Home Concert Xtreme*
- written commentary that describes both the musical and the pedagogical objectives of each piece
- a multimedia presentation by the pedagogy student in which the compositional process and the teaching experiences are described in detail and the pros and cons discussed
- a real-time demonstration of the newly created teaching materials
- audio or video piano recordings of the new materials made by students who were taught by the pedagogy student
- written or aural commentary from students who were taught, discussing the learning experience from the student's perspective

INSTRUCTIONAL VIDEOS FOR YOUTUBE

Project Description

Increasingly, self-taught students, music hobbyists, and amateur musicians are turning to free videos services, like YouTube, to find instructional materials for particular pieces and musical issues that interest them. Given this circumstance, it makes sense that the modern teacher should become skilled in the art of reaching out to potential clientele by contributing to these services.

The pedagogy student can get a head start on his/her teaching career by starting the process of creating a library of instructional videos that will attract a community of learners worldwide. Examples of musical topics that lend themselves to this concept include:

- techniques for pedaling a Chopin Nocturne
- harmonic analysis a Beethoven Sonata
- improvisational piano “licks” that can be applied to a popular song

Although this project entails the creation of just a small collection of video lessons, the project might eventually turn into a small enterprise!

To undertake this project, the pedagogy student should plan to create three instructional videos on a variety of interesting topics that appeal to a wide range of self-taught students, music hobbyists, and/or amateur musicians. Next, the student should review a variety of similar videos on YouTube and make a list of features and issues to be emulated and another list of features to be avoided.

Lastly, the pedagogy student should:

- create a script and storyboard for each video
- learn how to use the available tools for creating and editing the videos
- create and upload the videos
- respond to viewer comments

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer

- webcam or DVcam
- *Home Concert Xtreme*
- *Classroom Maestro*
- appropriate video screen-capture/editing software, such as:
 - *ScreenFlow* for Macintosh (www.telestream.net) or
 - *Camtasia Studio* for Macintosh or Windows (www.techsmith.com)
 - *QuickTime Pro* (www.apple.com)
- other video-editing software, such as:
 - *iMovie* for Macintosh (www.apple.com) or
 - *MovieMaker* for Windows (<http://explore.live.com>)

Objectives

In order to complete this project successfully, the pedagogy student should:

- create a YouTube “channel” to which the videos will be uploaded
- draw from his or her own musical strengths, creating short (less than 10 minute) videos for submission to YouTube
- focus on concise musical concepts, regardless of the level of difficulty
- clarify the purpose of each video for the audience
- develop a presentation style that is fun and engaging
- effectively demonstrate musical concepts and scores by combining screen captures from *Home Concert Xtreme* and/or *Classroom Maestro* with live video
- create a professional-looking end-product with titles, transitions and effects
- upload the lessons to YouTube
- encourage fellow pedagogy students to view the videos and post responses on YouTube
- respond to questions and comments from viewers that are posted on YouTube

NOTE: In case there are few or no comments from the worldwide audience during the

timeframe of the course, it is important for other pedagogy students to post comments to which the video author can reply.

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- submission of web links to the videos
- viewer comments posted on YouTube
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- audio or video piano recordings made by a student who was taught using the videos
- written or aural commentary from any student who used one or more videos to learn something new, discussing the learning experience from the student's perspective

TEACHING CONCERTO REPERTOIRE

Project Description

Composers from the Baroque era to the present have provided us with an amazing body of piano literature in the form of piano concerti (including harpsichord concerti that are playable on the modern piano). Most of the great composers for the piano have written pieces in this genre, and, in some cases, a composer's best works for piano have been in the form of a piano concerto.

Regrettably, few pianists ever get a chance to perform a piano concerto with orchestra. Many who do get the opportunity often get just a single chance, perhaps with a student orchestra.

While studying a piano concerto, most students practice alone without the benefit of the sound of the orchestra. During a lesson, a student may enjoy a more complete experience with the teacher performing an orchestral reduction on a second piano. The sound of an orchestral reduction, however, is a far cry from the sound of an actual orchestra.

A well known company has created a remarkable library of orchestral audio recordings of piano concerti—minus the solo part. This makes it possible for a student to practice with the sound of a real orchestra. Unfortunately, the student is stuck with the tempi of the recording and has no flexibility when practicing with the recorded orchestra.

In recent years, another practice alternative has emerged: *Home Concert Xtreme* used with a MIDI keyboard instrument, a musically crafted MIDI file (including the solo and orchestral parts), and a high quality, MIDI tone generator (such as *Garritan Personal Orchestra*).

When practicing a piano concerto using an appropriate setup with *Home Concert Xtreme*:

- the student can experience a very realist orchestral accompaniment at any tempo set by the student
- the orchestra can be configured to follow the tempo of the performer
- the orchestra can be configured to follow the dynamics of the performer
- the soloist can see the piano part on the computer screen and enjoy automatic page-turning
- the soloist can record him/herself and listen to the recording

When working in this way with *Home Concert Xtreme* and other modern tools, one may find that there are a variety of musical issues that arise, such as the need:

- to have the orchestra pause at a fermata and not continue until the soloist is ready to continue
- for the orchestra to pause during an unwritten cadenza and not continue until the soloist has finished the cadenza
- for the orchestra to play *a tempo* following a soloist's *ritard*
- for the orchestra to ignore the soloist in passages where the soloist follows the orchestra

Home Concert Xtreme provides a suite of features for dealing with these issues and for customizing the program's interaction with the soloist when playing a particular piece.

To complete this project successfully, the pedagogy student should:

- locate an appropriate piano concerto MIDI file that is suitable for teaching a single movement to a student

NOTE: The range of possibilities include:

- professionally authored MIDI files from TimeWarp Technologies
 - an appropriately musical MIDI file from another source, such as the Classical Archives (www.classicalarchives.com)
 - a concerto MIDI file authored by the pedagogy student
- choose a compatible set of sounds for the orchestra

NOTE: The chosen file may require General MIDI sounds (which are available on most keyboards) or a more professional sound set such as *Garritan Personal Orchestra*. The latter will generally produce better sounding results if the file is authored with that sound set in mind. Lite versions of *Garritan Personal Orchestra* come with the *Finale* and *Sibelius* music notation programs and may already be available to the pedagogy student.

- optimize the score display within *Home Concert Xtreme* (appropriately quantizing sections, adding fingerings, and adding any useful dynamics, articulations, and text instructions)

- optimize the score-following features within *Home Concert Xtreme*, using the program's Simple Markers, Region Markers, and Following settings as necessary, to:
 - wait for the soloist
 - wait for the Special Signal
 - restore the tempo
 - ignore the soloist
 - limit the range of possible tempo changes
 - engage or not engage the jumping feature
- learn to play the concerto movement using the features of *Home Concert Xtreme*
- teach the movement over a period of several weeks to a student, using the features of *Home Concert Xtreme*

When teaching the concerto movement, the focus should be placed on good teaching and musical motivation of the student.

NOTE: The chosen concerto movement need not be a hard one!

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- *Garritan Personal Orchestra* sounds or a General MIDI (GM) set of sounds as appropriate
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- a musical MIDI file for the chosen concerto movement

In addition, a similar setup with *Home Concert Xtreme* may prove to be beneficial for the student to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become familiar with sources of concerto MIDI files and be capable of expressing educated opinions about their musical and pedagogical worth
- become skilled in the setup of a “virtual orchestra” learning environment
- become facile in the use of *Home Concert Xtreme* for both practicing a piano concerto as well as for teaching one
- obtain enough experience teaching with these tools to be able to evaluate them musically and pedagogically

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of one of the concerto lessons that was taught using the “virtual orchestra” environment
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of practicing and teaching a piano concerto with the “virtual orchestra” environment
- audio or video recordings made by the student who was taught using the “virtual orchestra” environment
- written or aural commentary from student who was taught using the “virtual orchestra” environment, discussing the learning experience from the student’s perspective

SEQUENCED LESSONS FOR YOUTUBE

Project Description

An online teaching presence is becoming a standard part of the modern piano teacher's offerings. By presenting short lessons in the form of YouTube videos (or videos posted on similar websites), a teacher has an opportunity to support his/her current students, may come in virtual contact with students from any part of the world, and may even pick up new, local students as well. The teacher will also enjoy the satisfaction of sharing expertise with the world at large.

For this project, the pedagogy student will choose a standard, intermediate level piano composition and create a series of video lessons that teach the work. In doing so, the pedagogy student will have to organize his/her teaching objectives and develop good techniques for presenting them. In the process, the pedagogy student will contribute to the ever growing body of teaching material for standard literature and will create a turnkey lesson plan for future "live" lessons as well.

To be successful, YouTube videos usually need to be comprised of short, easily digestible segments so that viewers can rewind, repeat, and digest them at their own pace. Keeping this in mind, authors of pedagogical video material should maintain a clear focus on one concept or musical goal for each video segment. Remember, you never know ahead of time who will watch and use these videos!

For this project, the pedagogy student will create a YouTube "channel" which is only used for teaching purposes. A dedicated YouTube channel that separates teaching videos from personal material will provide a more professional appearance than a channel that includes other videos, and a dedicated channel will also make it easy for potential students to search for and find the pedagogy student's postings. This video channel will also be a good location for collecting useful videos from other online teachers, as well as reference videos, recordings of performances, or complementary theory or history lessons.

A major goal of this project is to attract one or more students, from somewhere in the world, to these videos. Hopefully, one or more students will find these videos on YouTube and post comments or questions. If so, the pedagogy student should respond to viewer comments by posting responses on YouTube.

By engaging in discourse with multiple YouTube followers, the pedagogy student has the opportunity to encounter a career's worth of student challenges for a given piece. This exercise in problem-solving will help the pedagogy student develop efficient teaching techniques

for common teaching challenges, as well as expose the pedagogy student to the diversity of learning styles that he or she must be prepared to address as a professional.

In case there are no responses to the posted videos within the timeframe of the course, the pedagogy student should also assign two or more students the task of logging into YouTube, learning the piece on their own by watching the video lessons, and posting comments. After allowing these students several weeks to work with the material, the pedagogy student should meet with these students in person and assess the results of their independent work with the videos.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- webcam or DV cam
- *Home Concert Xtreme*
- *Classroom Maestro*
- appropriate video screen-capture/editing software, such as:
 - *ScreenFlow* for Macintosh (www.telestream.net) or
 - *Camtasia Studio* for Macintosh or Windows (www.techsmith.com)
 - *QuickTime Pro* (www.apple.com)
- other video-editing software, such as:
 - *iMovie* for Macintosh (www.apple.com) or
 - *MovieMaker* for Windows (<http://explore.live.com>)

Objectives

In order to complete this project successfully, the pedagogy student should:

- create a YouTube “channel”
- outline approximately 5 concept-based, progressive lessons on an intermediate level piece

- effectively combine live video, onscreen score display, and onscreen analysis to create the video lessons
- create a professional-looking end-product with titles, transitions and effects
- upload the lessons to YouTube
- respond to questions from users via YouTube
- assess the results of two local students who used the videos to learn the piece

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- submission of web links to the videos
- a compilation of user comments from the pedagogy student's YouTube channel
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- audio or video piano recordings made by a student who has subscribed to the pedagogy student's YouTube Channel
- written or aural commentary from a student who learn the piece by watching these videos, discussing the learning experience from the student's perspective

CREATING TECHNOLOGY-ENHANCED PEDAL EXERCISES

Project Description

Manipulating the sustain pedal is a special skill involving an independent foot, a clear sense of musical objective, and the ability to listen to oneself carefully when playing.

For the student who is learning to pedal, the issue is made somewhat more problematic by the various systems of notating pedaling, none of which visually show exactly what the player should do with the foot.

When undertaking this project, the pedagogy student should consider the issues of teaching pedaling in these musical situations:

- playing a piece with the pedal down for the entire piece or for a single section of the piece, perhaps just for the ending.

In this case, the objective is simply to get the pedal down before the pedaled section begins and to release it at the appropriate moment.

- playing a piece in which it is necessary to connect chords with legato pedaling

In this case, the objective is to do the following in a continuous sequence:

- play a chord
 - depress the pedal while still holding the chord
 - play the next chord while simultaneously releasing the pedal
 - depressing the pedal again while still holding the chord
 - *et cetera*
- playing a piece in which it is necessary to press and release the pedal simultaneously with each chord.

In this case, the objective is not to connect the chords but to add extra resonance to each chord.

- playing and appropriately pedaling a piece with eighth or sixteenth notes between the beats (such as Alberti bass accompaniment or a flowing melody).

In this case, without a formulaic approach to the pedaling, the student needs to listen carefully and develop a skilled way to add pedaling without blurring the music.

- play a piece in which half-pedaling is required.

In this case, the context should be pretty simple, not requiring a lot of skilled pedaling but achieving a musical outcome that benefits from half pedaling.

In order to complete this project successfully, the pedagogy student will:

- choose or create a short piano solo for each of the pedaling scenarios described above
- create a MIDI file for each of these pieces, using a MIDI sequencer or music notation program, being careful to create separate left-hand and right-hand tracks that are appropriately quantized for display as readable notation in *Home Concert Xtreme*
- perform each piece using either Jam mode or Perform mode in *Home Concert Xtreme*, pedaling as appropriate, and save each performance as a new MIDI file
- open each saved MIDI file performance in *Home Concert Xtreme* and check for quantization problems, using the quantization feature of *Home Concert Xtreme* as necessary to fix the notation display.

NOTE: If necessary, the pedagogy student should open each saved MIDI performance in a sequencer and clean up the MIDI data so that notes are appropriately quantized.

After having undertaken the steps listed above, the pedagogy student will have created a useful set of MIDI files for teaching pedaling using *Home Concert Xtreme*. These files will not only contain all of the notes for proper notation display, these pieces will also contain an embedded, musical performance with pedaling that will serve as a model for the student.

When *Home Concert Xtreme's* Play File feature is used with the on-screen keyboard displayed (including the pedals), the student will be able to:

- listen to the piece
- watch the music as each measure is highlighted
- watch the animated keys
- watch the animated sustain pedal (which even shows incremental pedaling)

If desired, the pedagogy student may add text comments to the notation display in *Home Concert Xtreme*.

With these tools having been created, the pedagogy student should work with one or more students and develop a method for teaching students how to pedal appropriately while playing each of these pieces.

Equipment

In order to complete this project, the pedagogy student will need:

- laptop computer
- digital piano, acoustic piano with MIDI, or other performance-worthy MIDI keyboard
- appropriate cable(s) for connecting the keyboard instrument to the computer for MIDI communications
- *Home Concert Xtreme*
- a MIDI sequencing program or music notation program for creating and editing MIDI files

In addition, a similar setup with *Home Concert Xtreme* may prove to be beneficial for the student to use at home between lessons.

Objectives

In order to complete this project successfully, the pedagogy student should:

- become familiar the various pedaling issues
- become skilled at choosing appropriate literature for teaching various pedaling issues
- become facile in the use of *Home Concert Xtreme* and sequencing or notation software for both creating teaching materials and for teaching pedaling skills
- obtain enough experience teaching with these tools to be able to evaluate them musically and pedagogically

Criteria for Assessment

The pedagogy student should be able to provide evidence that he/she met the objectives listed above. Evidence may consist of a combination of the following:

- video documentary evidence of some of the pedaling lessons that were taught using the MIDI files and *Home Concert Xtreme*
- a multimedia presentation by the pedagogy student in which the experience is described in detail and the pros and cons discussed
- a real-time demonstration of newly created teaching materials and how they can be used
- audio or video piano recordings made by the student who was taught how to pedal using these resources
- written or aural commentary from student who was taught, discussing the learning experience from the student's perspective