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# Towards a Paperless Choral Class

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# Towards Paperless Choral Class

Interactive Qualifying Project

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## Introduction

Worcester Polytechnic's glee club has been a tradition since it first started in 1874. Since it began as a group of men this tradition has grown and changed over the years. Alden voices, the all-female chorus, was added and now there is a combined chorus of both male and female called festival choir. On top of those WPI has added a few a cappella groups to the mix as well. Among these are Simple Harmonic Motion (all-male group), Technicords (all-female group) and audiophiles (male and female group). Also at this point there is one other a cappella group that is being added, but it is still in the process of being added to the above list. With this many choral groups it is difficult to keep a paper track and cd track of everything that has, is being, and will be sung.

By looking through all the documents that have already been added it is easy to see that in order to not only keep a more organized office, but a more green space music needs to be documented somewhere else. One way that this was done was by creating a site where both sheet music and cd's can be downloaded onto to archive all the music together. Downloading sheet music had to be organized and archived online in order to be used from the site and also to leave less of a paper trail. The CD's were also downloaded onto iTunes University this way they could be accessed by the students that were in the class.

The idea behind this was to allow students, professors and graduates to have access to music that they used or CD's that they sang on. There have been years of CD's with different vocal groups from the school. Many graduate students had been asking to have access to these songs that they were singing in. By uploading them onto a site this was supposed to allow them to have access to the music and not have to lend the CD's with the possibility they could be

taken or lost. There is only a couple copies of each CD's so if one gets lost then a lot of the time the entire CD will be gone with no back up to get that music back. By having it online then the original CD can be kept safe and it can also be backed up onto a hard drive and online so that if something did happen the music would not be lost forever.

### Background

Music has been a huge part of society dating back as far as the medieval period (0-1400 A.D). The earliest form of music was more of a chant. This style of music was created with voices only, no instruments and only men. All men who were a part of this would sing in a monophonic tone, this is where all the parts were sung in unison. There were no harmonies or chord progressions. The melody that was created had small intervals and a very limited range for the voices to go. Long phrases were created in one of three ways; syllabic, neumatic or melismatic. A syllabic style was when each syllable of a word would get its own note as opposed to neumatic where the syllable would be given a small group of notes to be sung on. The most variation came when melismatic style was used; this is where a longer group of notes was given per syllable.

It was not until the Renaissance Period in 1400 A.D that women and instruments were added to music. Having this addition allowed there to be harmony between the different voices and instruments. There was also an introduction of rhythm into the music, which turned it from chants to a similar style still heard in church. More and more styles were being developed during this time as well. There were different forms of melody being used such as; transposition, canon, augmentation, diminution, inversions etc. By adding these forms the voices began to

have harmony instead of sounding like one voice there was a blend of many. This was the beginning of having a choral group as it is perceived today.

Through the baroque, classical and romantic periods the music created began to take more of a contemporary form. More instruments and voices were added to make a fuller sound and blend more into a uniform piece. These points in music history were great stepping stones that lead up to the kind of music that is heard today. Now a days music is created with three parts; melody, harmony and rhythm. Each of these three parts added together allow there to be different sounds that come together as one united sound. Since the renaissance period the human voice has been one of the most important instruments used in any kind of music. This even holds true in the most popular music today. One of the best ways to challenge this style of music is through choral arrangements. By having so many voices come together it is important to understand that a choir is not a group of solo singers, but an ensemble of voices coming together as one.

## **Chorus**

Choral is derived from the Medieval Latin word *choralis* meaning “belonging to a chorus or choir”. This term has been a popular way to describe a group of singers. The use of this term dates back to the early 1400’s, when music switched from being just a chant to a group of men and women singing together with melody and harmony. Both the terms chorus and choral derive from the same root, but are passed along in several different forms. The major difference is choral is used as an adjective to describe what a chorus will do, which is singing together in harmony. For the purposes of this report the term choir will be used, as it pertains to church or school more than a theatrical context.

## **Impact of Printing**

Music has impact on many things, not just the way it sounds. Learning music can be done by listening or it can be taught to be read. Reading music is one of the skills that set a lot of musicians apart, but with this there is a huge impact on the environment as well. Hundreds of thousands of pages of sheet music are printed a year. Since 1754 when the first high quality printed score came along people have been using that as a way to put their ideas of music down so others can read it. This method is very useful especially to help get their ideas from in their mind to others who can make the music a reality. Although this is useful to the music industry and for musicians to convey their work, the impact of using so much paper has an effect on the environment.

The problem not only comes from the use of paper but also the use of the ink and the energy needed to print all these sheets. It is speculated that about two percent of the greenhouse gases that are emitted because of the consumption of paper. Since this is a huge factor not only on the environment but on the cost of getting the prints to go though, there are other ways being looked at as alternatives to printing. Some ways to avoid this are the kind of paper being used and the ink that is used as well. There are labs that are studying more cost effective and environmentally friendly ways to continue printing. One alternative that is also being looked into is the idea of a paper-less alliance. Already there have been software's that have been created to allow the same ability of paper but not having things be printed on actual paper. Apple has been a contributor to this alliance, and although it is not completely finished they allow access to upload paper copies into a set document to be used online as opposed to having things be printed out.

## **Apple iTunes**

The iPod first introduced to the public in 2001 brought with it iTunes which had been introduced 2 years later in 2003. Starting out as just a place for music to be sold iTunes was transformed by apple to do more than just sell music. New content and upgrades are constantly being added to this application making it newer and better each year. Some applications that have been added are for games or iTunes now has the ability to find books on it, which can be purchased and read right from an iPod, iPhone, or iPad. Another capability that iTunes has is the ability to make a virtual class using this technology called iTunes University.

This site has the ability to create a site online that students can get access to and use right from their iPad. This site gives teacher the ability to upload documents or music and put them onto this online classroom where students can access these files freely. The site is available for any college or university or even grade school, so it is a great tool that teachers can use no matter where they are teaching from. iTunes University also gives students the ability to access anything from the course right on their iPad without having to print a single page, which is very useful to save time, energy and money. As tasks are completed by students they are able to check off what is being done and re-go through any assignments or audio that they may have missed. Not only can lectures be uploaded onto this site but music can as well, which in this case will allow for storage of music that can be used within the class, so if a student missed something they can go back and hear it. In order for students to access this information though, they need to be invited by the teacher using a code or a URL.



## Methodology

This project was created in order to make a site to allow current and graduated students access to the sheet music and archived CD's available at WPI. By doing this graduate students will be able to access records of when they were in chorus at the school, and be able to have the ability to see the music they used to sing while at WPI. This project was guided by the following objectives:

- Downloading and organizing all sheet music that is currently being held in the WPI music library.
- Downloading all music onto iTunes University for current and graduate students to access.

### **Objective 1: Downloading sheet music**

The music over the years has not been organized or put together well at all, everything was just put in one music closet and left there. A lot of the music had even been forgotten about over the many years that it remained at the bottom of the pile in the closet. A group of four students were assigned the task of organizing, cleaning out and uploading the music onto an online database that would archive the music that had been kept in the closet for so long. This process was created in order to have a way that it could be accessed electronically for future use, and also as a way for it to be organized and found easier.

Many hours were spent taking out and going through all the various sheet music. There is now a slightly better system that has been created to organize this music. The sheet music is still there but downloading it electronically gives a backup set if anything happens to the sheet music.

Some of the music was duplicated so therefore it was organized into groups of the same music and kept together instead of being all separated in an unorganized mess.

## **Objective 2: Downloading onto iTunes University**

Not only was the sheet music a mess but there were a lot of CD's of old choir music, and music that is used in classes. Having a lot of CD's was not an efficient way to archive or hold this kind of music. Something could have happened and if the CD went missing there was no replacement or backup for it. By using iTunes University the idea was to create a way for anyone to access the music through the WPI section of the website. Also by downloading this music it gave a backup just in case something did happen to the original copy it was not lost forever.

The beginnings of this project was to collect and organize all the CD's that were put into a bin over the year, and establish which ones were copies and organize them to be downloaded. Before even starting to download the CD's iTunes University had to be set up for WPI. By following the instructions given on the website a password and username was created for John Delorey. The class was named paperless chorus, with professor Delorey as the instructor. Each CD was then downloaded onto the iTunes library and kept in a separate folder for this project.

Once all of the CD's were added they were organized into groups of class music and recorded music from the choirs at WPI. After iTunes University was fully registered two separate files were created within the class for the paperless chorus. One file was made to keep a hold of all the class music, the other was made in order to hold all the original CD's from the choral groups on campus. Each song was then added to the respective files and saved into iTunes University to be used for later classes. John Delorey was then given access to this site where he can add people to view the contents that are within iTunes University.

## Summary

Music has and always will be an important part of history. It is important to not only learn about different kinds of music and understand it but to keep records of the different kinds of music that come by. In the new age of technology this is a possibility without having to clutter up the closet or fear losing the pieces somewhere in the mess that all the paper and CD's make. By downloading music onto a database it is easy to go back and retrieve any piece that has been uploaded. Also if the original copy gets destroyed for any reason there is always a backup online to go to. It is also a great way to share music with more than just people who are right next to you. Anyone at any time can go on and access the sheet music. Another up side of doing this type of document saving is that it saves paper, ink and other valuable resources. It's also easy to update with new music as well.

Downloading the CD's onto iTunes University is a good thing for a class. The way iTunes University works is that the professor has access and has to grant each individual student access. To be able to share with a lot of people would be difficult using this site, unless the professor wants to grant access to everyone who asks. It is a free website that allows the music to be stored, but not everyone can view and access the music that is in there. This is the major problem that came up when trying to give access out for the music. In order to create a way for music to be uploaded where the public can view there needs to be a different database that it is stored in. This database though would need to be created and go through all the legal actions in order to make sure that all the copy right information is correct. iTunes University currently holds all the archived CD's that have been stored at WPI, but in order to make it accessible to not only students currently but grad students as well another database would need to be used.

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