On A Shoestring:

Creating Multimedia for Classroom Use on a Limited Budget

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Abstract

This action research study examines the creation of a one-semester course designed to give student teachers the tools necessary to create their own multimedia projects that they may use to teach in their classes. It was found that a modification of the required assignments scheduled during the semester is needed in order to give the student teachers a more focused course. Additionally, teaching practice using the projects that are created during the semester should be provided to allow the student teachers a more meaningful application of their work.

Keywords: multimedia, video, audio, constructivism, course design

Introduction

The use of technology in the classroom is increasing and expanding at an exponential rate. The cost to produce nearly-professional quality multimedia projects has plummeted in recent years. Teachers can take advantage of this fact to produce their own multimedia projects that they will then use to teach lessons, with the projects being much more focused to the lesson than multimedia that the teacher may obtain from other sources.

Today's students are, more than ever, connected to technology and visual communication. This is unlikely to change in the near future. Teachers should take advantage of and harness the familiarity that their students have with visual technology in order to more effectively deliver their lessons.

This study seeks to find out to what degree self-produced multimedia is useful to teachers. The caveat is that multimedia projects are often time-consuming to produce, so the time invested must also be weighed against the potential benefits of using the projects in a classroom.

This study could show that teachers at schools with limited financial resources can produce videos themselves to use as effective teaching aids. These self-produced videos would be an alternative to buying an expensive textbook series or other professionally-produced videos. The study may also show that when teachers make their own videos, they can control exactly what is in it, thereby enabling them to teach exactly what they want. They can also make the topics or themes more relevant to students because they can tailor them specifically to the students' lives, rather than downloading a video that was produced somewhere else in the world that is more difficult for the students to relate to.

Area of Focus Statement

The objectives of the project are:

- To design a course on the creation of self-made multimedia for pedagogical purposes

- To explore how undergraduate students in bilingual education programme can create their own multimedia material for pedagogical purposes.

Research Questions

- How can students develop self-made multimedia material for pedagogical purposes?

- What kind of technology is available to make instructional videos? What are the criteria for adapting existing material when creating multimedia resources?

- What are the stages and content involved in the syllabus of an elective course for the creation of multimedia resources?

- How effective is the use of self-made multimedia material for pedagogical purposes?

Theoretical Framework

Much of the value of this project is drawn from the benefits of constructivist learning theory. Nikitina (2010) describes constructivism as the idea that "people construct their understanding and knowledge of the world around them" (p. 90). Under constructivism, students will "create their own new understandings on the basis of an

interaction between what they already know and believe and ideas and knowledge with which they come into contact" (Richardson, 2003, p. 1623-1624). As Yilmaz (2008) notes, "Knowledge cannot exist outside our minds; truth is not absolute; and knowledge is not discovered but constructed by individuals based on experience" (p. 162).

These notions were taken into account when planning the class used for this research. I intended to use the knowledge that students had previously, specifically as relates to their abilities with the computer software, as well as the familiarity, conscious or not, of their knowledge of things like story structure. The point was for the students to work on meaningful projects, so they would be able to take the tools I was giving them (instruction relating to multimedia creation) and, in the future, have the ability to apply it to whatever subject area they end up teaching. The class was designed to be hands-on, with a minimum of actual classroom lecture time. Yilmaz (2008) outlines the implications of meaning-making thusly:

- Learners are intellectually generative individuals (with the capacity to pose questions, solve problems, and construct theories and knowledge) rather than empty vessels waiting to be filled.

- Instruction should be based primarily on developing learners' thinking.

- The locus of intellectual authority resides in neither the teacher nor the resources, but in the discourse facilitated by both teachers and learners. (Maclellan and Soden as cited in Yilmaz, p. 163)

Many of the projects undertaken by the students were done in groups, partly due to the complexities of the division of labor required in planning, shooting and editing a digital video project, but also to take advantage of what constructivist learning can offer. With several students working together, the interplay of ideas and shared experience enriches the lesson for all involved. As Nikitina (2010) writes,

constructivism "champions a learner-centered approach to teaching, advocates learning in meaningful contexts and promotes problem-based activities where the learners construct their knowledge through interaction with their peers" (p. 90). Again, I gave them the tools and let them explore what they were able to create with those tools.

Literature Review

The creation of multimedia projects such as digital video is increasing in today's classroom, and a number of articles have been published describing studies that measure the effectiveness of the use of multimedia in a teaching environment.

Carney and Foss (2008) conducted a study that examined the creation of video projects using two different methods. The study was done in a short-term intensive English program in Japan. One method involved four pairs of students produced a total of four short films. In the second method, one large group of eight worked together to create one longer film. The results of their study showed both advantages and disadvantages to both methods.

With the first method (four short films made in pairs), "the instructor's role was limited" (Carney & Foss, 2008, p. 16). This method mirrors the approach I took in my project, as it is more closely aligned with the tenets of constructivism. It also has the benefit of requiring students to learn and be involved in more steps of the process, from planning to writing and editing, thereby facilitating a more balanced learning. The idea is that students would, in the future, be able to produce a project on their own if the situation called for it. I felt that it would be necessary to ensure that each student was well versed with all the steps, or at least familiar on a basic level, in order to achieve a minimum level of proficiency.

The negative aspect of the first method was that "the instructor was unable to work closely with students who were rehearsing intonation and pronunciation" and therefore "the student actors are at times difficult to understand" (Carney & Foss, 2008, p. 18). This was also occasionally an issue with the multimedia projects in my research. More oversight and assistance with aspects such as pronunciation can make a difference in the final product.

The advantages of the second method were essentially reversed. The instructor spent more hands-on time with the students so the final product appeared more polished. However, this method "led to some students not being involved at all in certain tasks. Some students learned nothing about video editing; others did nothing to create costumes; and others were not involved in writing the script" (Carney & Foss, 2008, p. 18). I wanted to avoid a situation in which a student could potentially finish the class without the skills necessary to edit video, or the ability to effectively use a camera, or any of the other skills the students learned and practiced.

Dumova (2008) studied the integration of a digital video production and editing assignment and how it affected the learning motivation and engagement of the students involved. The study was conducted during two consecutive years. The first year was used as a pilot study. A total of 26 students participated over the course of the two years. The students were upper-division students at the University of North Dakota, in the United States. The students were tasked with shooting a live event, digitizing the footage, editing it then uploading to the web as a video podcast. They used a mini-DV camcorder, Apple's iMovie editing software, Quicktime Pro multimedia authoring software and G4 Macintosh computers.

An important finding in Dumova's study was that "digital video exercises should be linked to overall course goals and intended learning outcomes" (2008, p. 69). In my class, I attempted to maintain cohesion with the overall course goals by, whenever possible, require that students include a theoretical lesson plan for a class for which they would use their multimedia project. I felt this was key to maintaining focus for these students who are also future teachers.

Another finding in Dumova's study was that "the instructor should provide leadership and effective management in order to capitalize on the availability of low cost and easy to use technology" (2008, p. 69). As our school does not have the resources to provide mini-DV camcorders and Macintosh computers with iMovie software, we used what was available to us: consumer-level handheld cameras and Windows Movie Maker, which is included as part of the Windows operating system. Regardless of whether we were to have access to more professional-level equipment, I also feel that it is important to use equipment that these students are most likely to have access to in their future careers, possibly in public school systems with very limited resources for technological tools.

Dumova also stressed the importance of clear expectations and specific criteria for project evaluation (2008, p. 69). This can be challenging, as the quality of a final multimedia project is often very subjective. Whenever possible, students in my study were given concrete criteria for what was expected in their final product, but it was also common to have a general "overall quality" score in the grading.

My research would have benefited some by incorporating a pilot study year, as Dumova did with her research. With her study, she found that "The pilot study provided a general undertanding of the research question and indicated that additional

data-gathering techniques were necessary to evaluate the overall impact of the assignment on student learning" (Dumova, 2008, p. 66). With more time to develop and test different strategies in the class, I feel the overall project could have been improved, particularly in the area of expectations and assessment.

Gromik (n.d.) studied the use of Windows Movie Maker in a Multimedia English course at a Japanese university. The students were second-year students from various departments with seven years of prior English language learning experience (para. 14).

His approach was similar to mine, in that he felt that "the less demonstration videographers receive, the more they will experiment with the tools and strategies of filming" (Gromik, n.d., para. 17). In the case of my students, they were already somewhat familiar with the use of video cameras and fairly proficient with Movie Maker, since most of them had used the software in other classes in the past. I showed them some new techniques and potential pitfalls to be aware of, but much of what they did was building on what they already knew, and they appeared to surprise both themselves at times and me, as well, with some impressive projects.

A study conducted by Gareis (2000) describes a project undertaken by English language students in their early 20s who want to study at universities in the United States. The course in question is focused on reading literature then watching and analyzing the film version of the work. More relevantly, the students in this study were tasked with shooting a scene from one of the selected novels or plays.

In this study, Gareis spends a lot of time planning and rehearsing with the students. Perhaps this is due to the literature focus of the class. However, in my study, rehearsal (if there was any) was left up to the students. They made the decision about

how practiced or spontaneous their productions would be. In some cases, spontaneity worked; in others, it did not. For the groups who rehearsed little, it showed in the final product, and they knew it. Successive projects by those groups showed more rehearsal and consequently, a better final product.

Research Design

- Setting- This study was conducted at Institucion Universitaria Colombo Americana, an undergraduate university involved in training future teachers.

- Participants- During the first semester of the class this study is based on (which was used as a pilot study), there were 11 students in the class. The second semester, from which the data was taken, had ten students. Most of the students are in their late teens or early 20s, in their fifth or sixth semester at the university.

- Research Methodology- This was an action research which followed a plan similar to that below:

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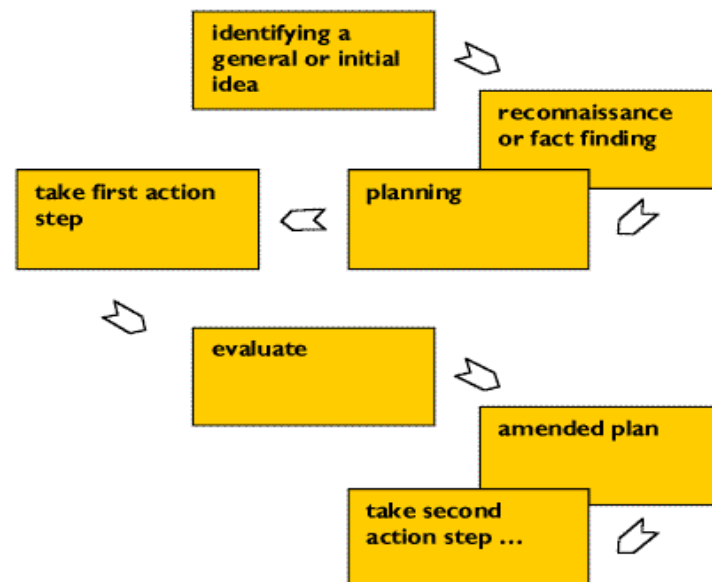
The first step, identifying a general or initial idea, was taken before the first semester that this class was offered. We wanted to study how a class designed around the creation of multimedia would best serve the students in their future careers.

The fact-finding step involved taking inventory of what equipment was available on the facilities, which dictated what projects we would be able to do during the class. Research on previous, similar projects was also undertaken.

The planning step involved creating an outline of what needed to be accomplished during the semester and how the assignments in class would meet that goal.

The first semester was, in general terms, a pilot course and corresponds to taking the first action step in this graph.

The next step, the evaluation, began even before the first semester had concluded, as I saw what worked and what didn't and planned to make changes for the following semester.

Based on what we learned in the first semester, an amended plan was formed to improve the second semester.
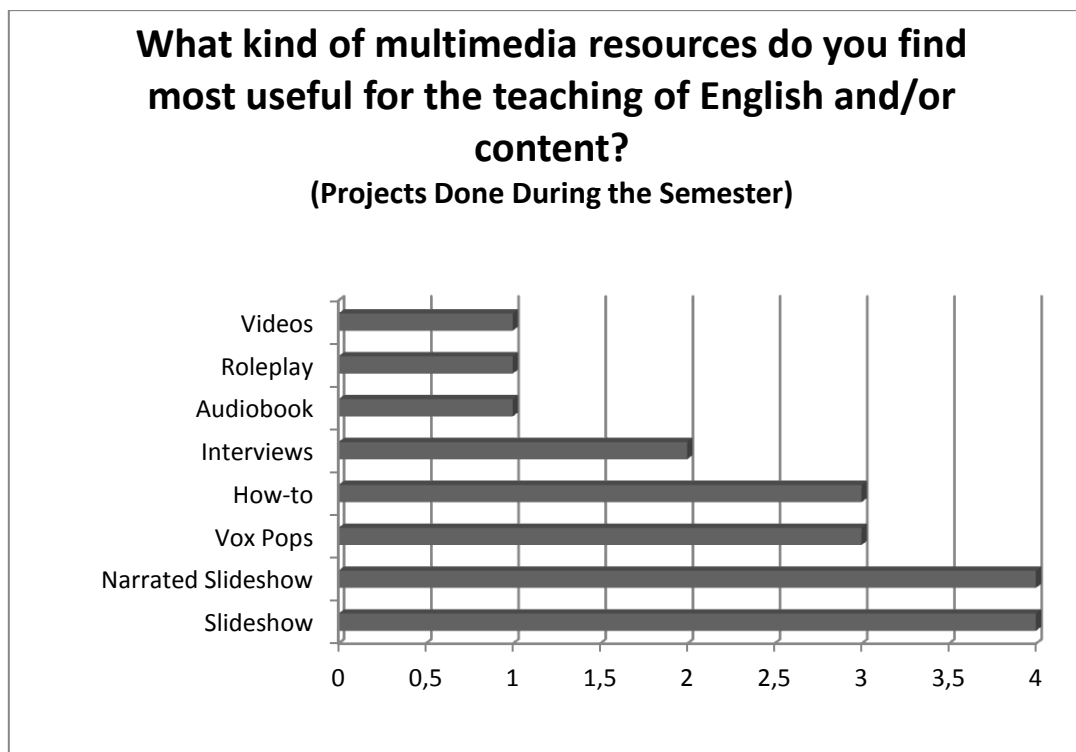
Data Collection Techniques

The main method of data collection to evaluate this study was through a short answer questionnaire. The questionnaire was given at the end of the semester to the seven students who were available. What follows is an outline of the questions given, followed by graphs showing responses to those questions. Selected quotes taken directly from the questionnaire follow the corresponding graphs.

_____

The objective of the following questionnaire is to collect information on how useful undergraduate students find the design of multimedia materials/resources for pedagogical purposes.

Please answer this questionnaire honestly. The results will be used only for research purposes.

1. What kind of multimedia resources do you find most useful for the teaching of English and/or content?

    a.

    b.

    c. *Include other options not made in class. Eg. Games.*

2. What multimedia resources do you consider student teachers should be engaged in making?

    a.

    b. Other? Which one?

3. What are some of the advantages of designing multimedia for pedagogical purposes?

4. What are some of the disadvantages of designing multimedia for pedagogical purposes?

5. Which of the multimedia resources designed do you find most useful for your future practice? Why?

    a.

    b.

6. Which of the multimedia resources designed do you find least useful for your future practice? Why?
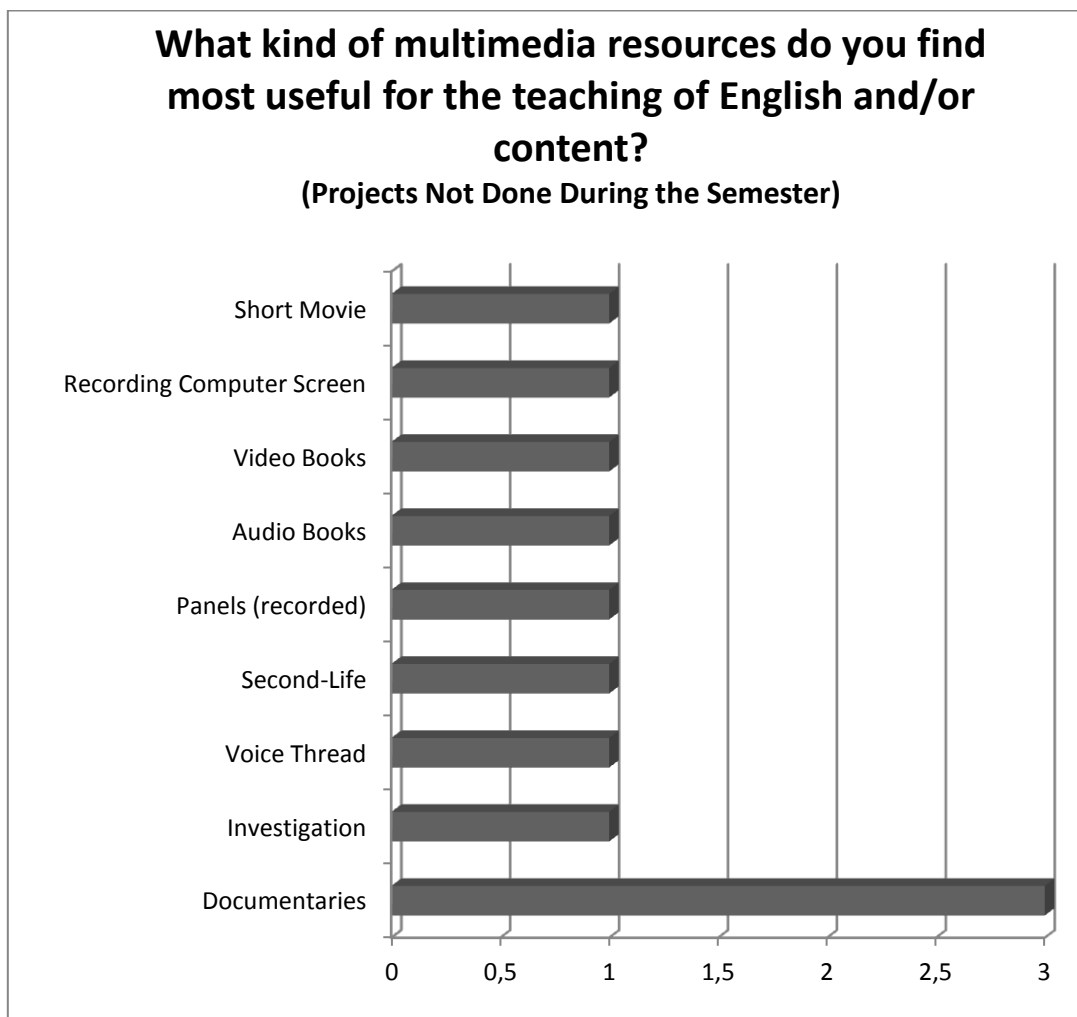
    a.

    b.

7. Bearing in mind technology offers the opportunity to download some multimedia resources already made,

    a. Would you use already made multimedia resources to your own teaching context?

        Yes _____ No _____ Why?

    b. Would you rather create your own multimedia for your own teaching context?

        Yes _____ No _____ Why?

8. Would you recommend this class to another student? Why?

9. Do you feel the equipment used in class was adequate?

What kind of multimedia resources do you find most useful for the teaching of English and/or content?
(Projects Done During the Semester)

Resource	Value
Videos	1
Roleplay	1
Audiobook	1
Interviews	2
How-to	3
Vox Pops	3
Narrated Slideshow	4
Slideshow	4

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- slideshows: for new vocabulary. Provides students with visual aids for listening activities.

- how-to very useful for processes and following steps. Teacher sometimes have problems with time in the classroom. For it is not enough for explaining steps. This type of resource make it easier and have students engaged in carry on with processes

What kind of multimedia resources do you find most useful for the teaching of English and/or content?
(Projects Not Done During the Semester)

Resource	Value
Short Movie	1
Recording Computer Screen	1
Video Books	1
Audio Books	1
Panels (recorded)	1
Second-Life	1
Voice Thread	1
Investigation	1
Documentaries	3

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- recording screen from the computer to make videos to teach how to do something technological.
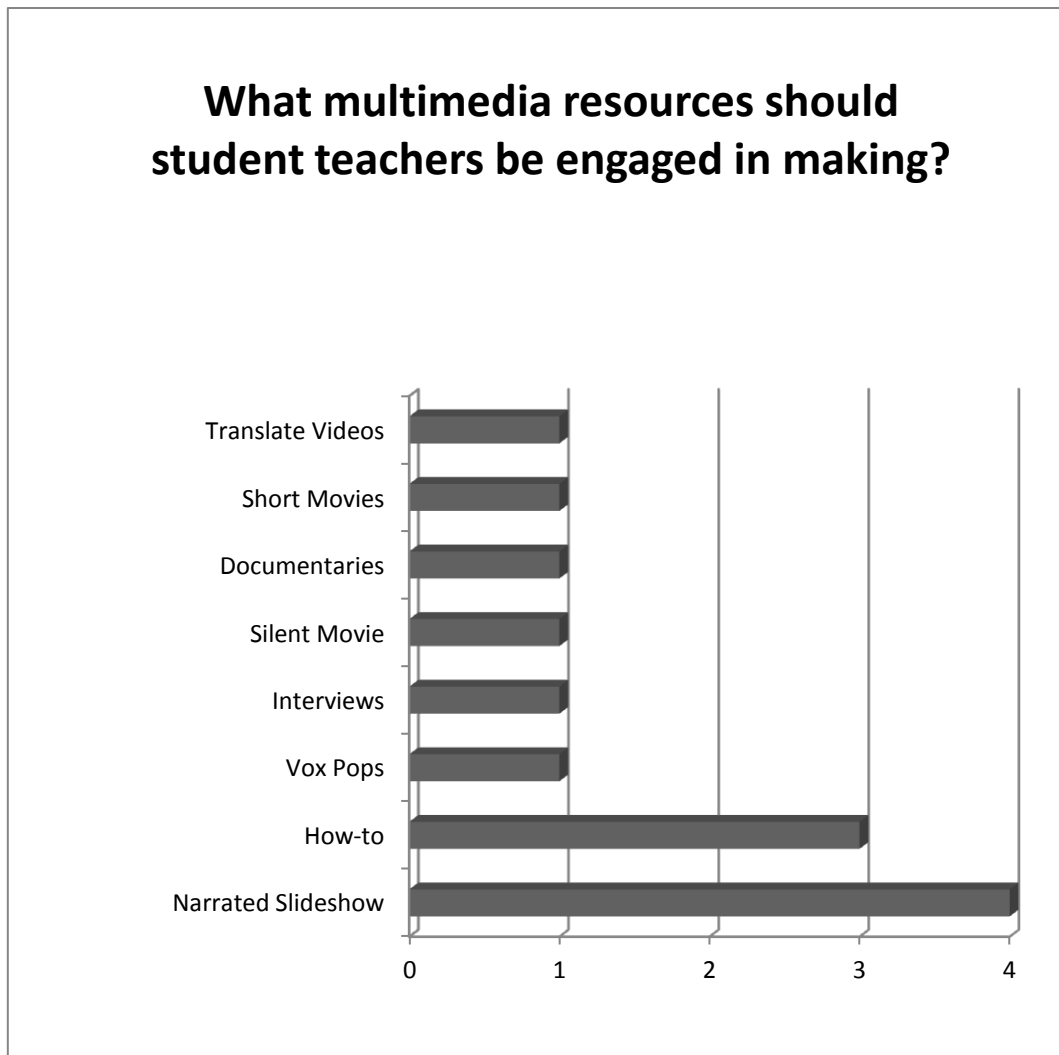
What multimedia resources should student teachers be engaged in making?

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- I think in the use of narrated slideshow, because it help us to not make the explanation boring, I believe it is more interactive

- the how-to activity is the most useful, and teachers could use it in order to facilitate the lesson planning and the delivery will be successful

- narrated slideshow: they are very easy to make. It is very appropriate to teach content.

- I consider that narrated slideshow works better because you don't have to explain everything and studs probably will understand better with this kind of multimedia activity

What are some of the advantages of designing multimedia for pedagogical purposes?

The following are direct quotes made by the students taken from the answers given in the questionnaire.
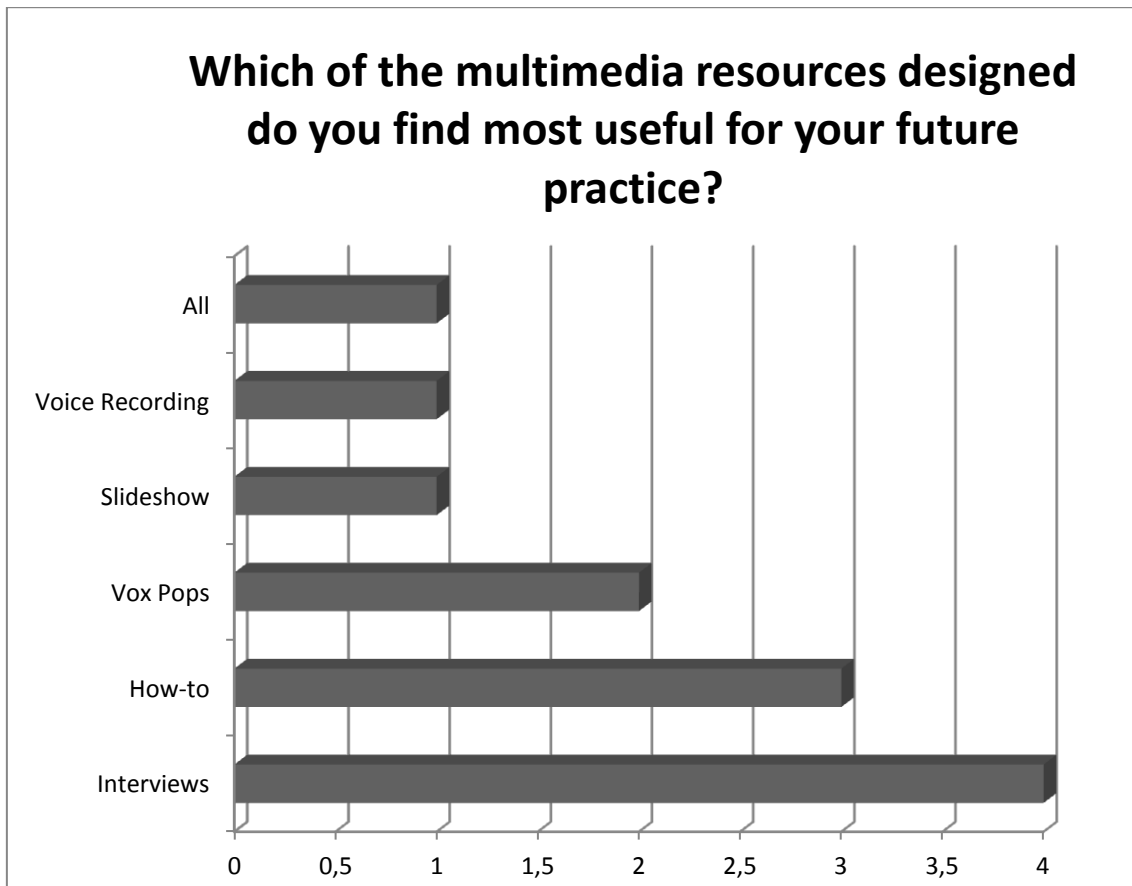
- its useful to make more interactive the class. It's a different way students can learn and they can enjoy
- They are extremely interesting and appealing because they make learning meaningful
- I'm pretty sure that we as teachers cannot avoid technology, we have to use the sources that can make classes more meaningful for students
- adapting the topic (text), be part of the video
- students are very visual. Using multimedia makes a class more interesting and appealing.
- this is useful to handle a complex class.
- The advantages are many

What are some of the disadvantages of designing multimedia for pedagogical purposes?

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- sometimes the programs don't work
- Time consuming
- The only disadvantage is do not use the sources with the right purposes or that are not good enough
- recording equipment
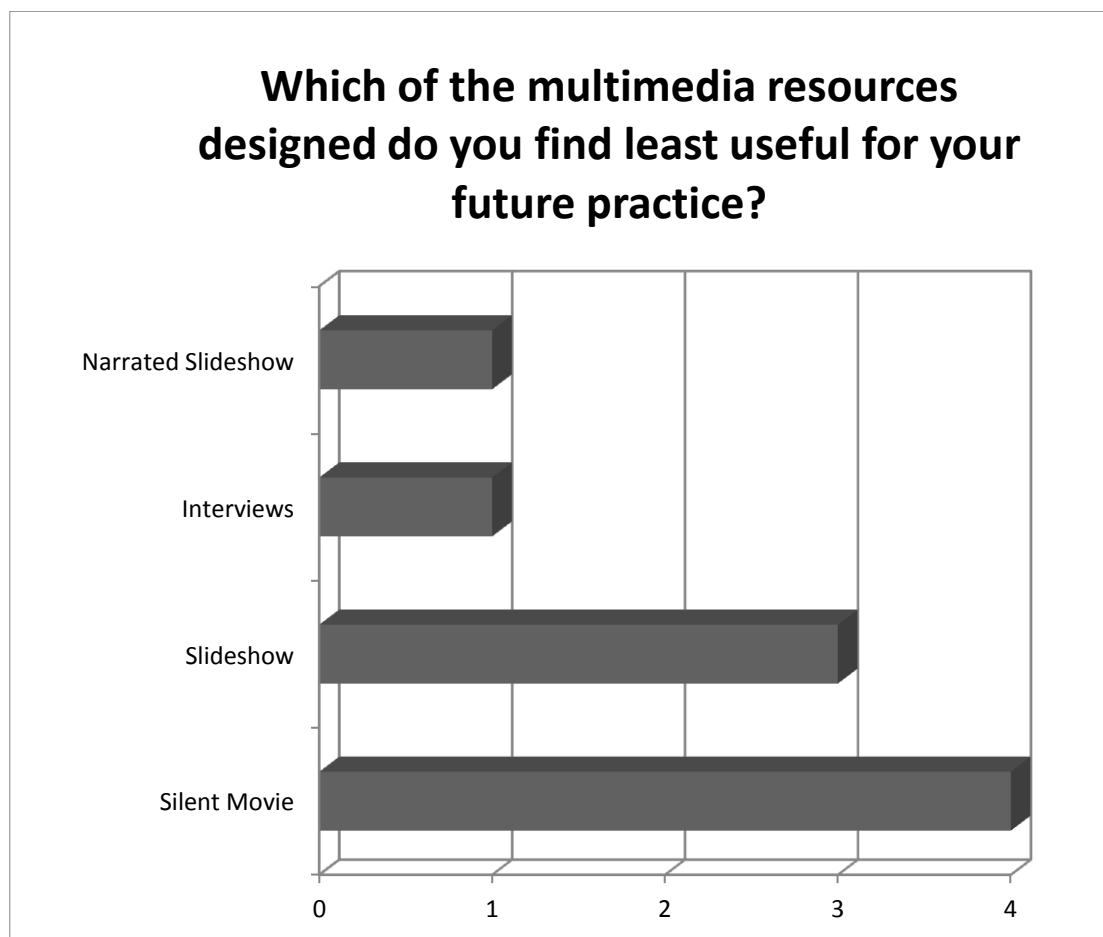- takes a lot of time doing it, something there are not the equipment to do it.

- actually I don't see any disadvantages with multimedia

Which of the multimedia resources designed do you find most useful for your future practice?

Resource	Value
All	1
Voice Recording	1
Slideshow	1
Vox Pops	2
How-to	3
Interviews	4

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- vox pops because with this project students and even teachers can analyze different points of view, cultural aspects, etc.

- Interview: to introduce someone

- How-to: to show students instructions

- slideshow- to stablish the building background to certain subjects

- how-to- as a tool to complement certain activities that required following instructions

- Recording the voice- makes you be on part of the scene

- interview- makes you be on part of the scene

- vox pops: to social purposes. I can use it to have students give their opinions and take into account other's.

- interview- it is very useful to rely on experts

- how-to (this one is the most helpful. This make students and teachers to prove and show something to learn)

- interview (to gather relevant info, ask to experts)

- all of them are really useful. Probably, I'm gonna use them in the future

Which of the multimedia resources designed do you find least useful for your future practice?

Resource	Value
Narrated Slideshow	1
Interviews	1
Slideshow	3
Silent Movie	4

The following are direct quotes made by the students taken from the answers given in the questionnaire.

- the silent movie because this project is a little difficult to find pedagogical purposes

- Interview: research tool

- slideshow or narrated slideshows: to practice tenses with storytelling

- maybe the silent movie. But, I think this is very subjective. I'm not intended to teach just English. In content classes this tool will be very useful.

- silent movie: this one is more for entertainment

- silent movie- requires too many time and it's a long project. Too much preparation.

- slideshow- too many pictures, maybe useful as a building background, but for me it is not so much relevant. All the multimedia resources are useful but I think I won't these a lot
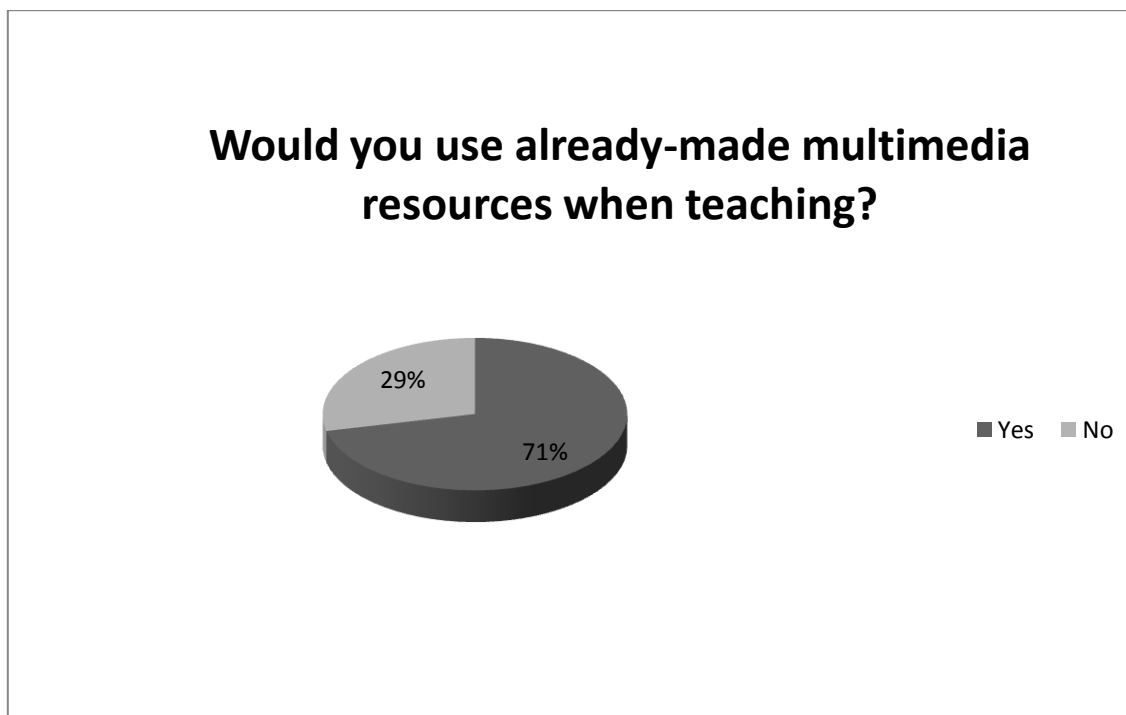
Would you use already-made multimedia resources when teaching?

The following are direct quotes made by the students taken from the answers given in the questionnaire.

Yes:

- they are a different way students can understand very well the topic, and at the same time enjoy it

- because I wanted my students to get something difficult

- because sometimes we need something to teach and it is already make it. So it is easier to use it.

- Actually I use them very often for some subjects like micromiddle and also used to use them for english classes

No:

- Actually I stopped downloading YouTube videos because I found that I could design videos that have appropriate information for the subject I wanted to teach. I can select and use images, music and content that I like the most.

- during this class I have learnt the usefulness of creating your own material. It happens sometimes that you find a really good video on YouTube, it is appropriate for content but the language does not fit the level of students.

Would you rather create your own multimedia for your own teaching purposes?
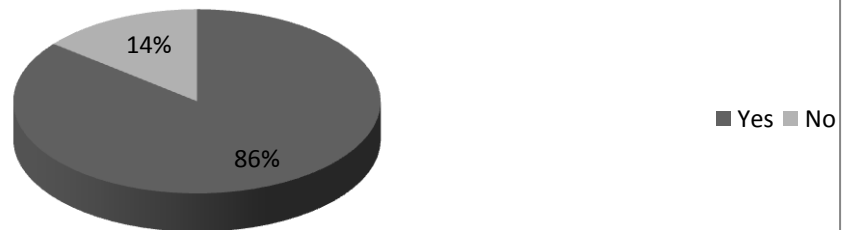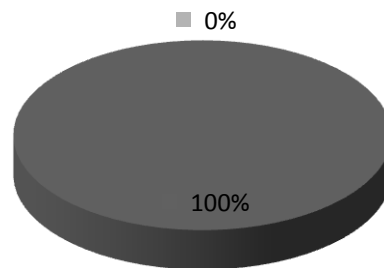
14%

86%

■ Yes ■ No

The following are direct quotes made by the students taken from the answers given in the questionnaire.

Yes:

- sometimes the sources given by internet are not enough to explain a topic, so with the own multimedia sources teachers can explain in the best way possible.

- well, it would be worth sometimes because you have to have time to do so.

- As I wrote before is more meaningful for me and for the delivery class. Lot of videos that you find online are full of stupid things and hideous music. So… I'm allowed to choose what I want.

- those can help me to support my class in a different context. And also make student interesting in the subject

- this class gave us a complete tool to make videos. it will be easier to create other kind of videos just with what we learn before. It will be easier to handle any content area using this.

Would you recommend this class to another student?
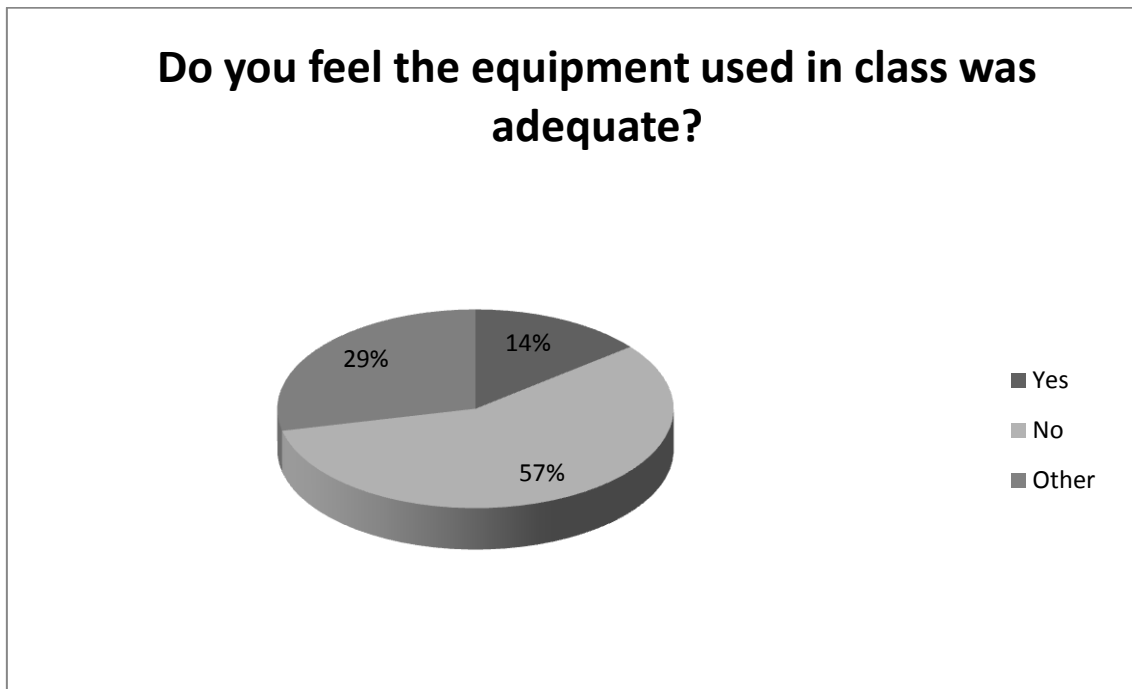
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The following are direct quotes made by the students taken from the answers given in the questionnaire.

Yes:

- yes, it is a good way to learn and use pedagogical purposes in technology. Many things that we did not know we learn in this class in an easy way and with the own resources

- Yes, it is very useful and different. It is to say, it is a worthwhile class because you see teaching from another perspective

- Yes, because it give us lot of ideas of how different technological tools can be use in class. Also, I get fun doing my projects.

- yes cuz the students can make their own video according with the topic that they like

- well, the class is cool. But the materials (camera, microphones…) suck!

- Yes, because its really helpful to make videos to help us to delivery our classes. Also, this class is relax, hw is cool!

- I really recommend this class because with all the projects with made we could polish our own knowledge in terms of the use of technology and also for teaching context.

Do you feel the equipment used in class was adequate?

The following are direct quotes made by the students taken from the answers given in the questionnaire.

Yes:

- Yes, despite sometimes the programs didn't work, the equipment is very good for people that don't have professional materials to do the project

- For me, It was important to understand that we had a limitation with the equipment because if we're gonna teach in a public school we won't have enough sources. Limitation improves creativity, and that is awesome.

No:

- It's obvio that we haven't a lot equipments to make a excellent video

- No, it was not adequate. But of course it does not depend on the teacher but the university. In general, the class was structured useful.

- because there were too many people using them. And they were always occupied. More cameras, tripods- we don't have anything

- I don't think we have the best equipment to work because we don't have enough tool to use as well as softwares. Actually, we had to struggle a lot.

Pedagogical Intervention

Design of the Course

The course was designed as a series of workshops with some in-class instruction. Group work, guided by the instructor, took place during preparation and planning of group assignments. The course also included screening days, during which we watched the projects and held a comment and discussion session afterwards.

One of the first tasks an instructor has with a course such as this one is to be sure all students are familiar with the technological tools to be used. The tools include the camera and tripod, and software, namely Windows Movie Maker video editing program and Audacity audio recording program.

There must be ample time to show students how to capture footage from the camera onto a computer so it can be edited, time to arrange clips in Movie Maker, learn how to incorporate dissolves and fades between clips, and time to finalize the movie so it can be burnt to a disc.

The steps needed to effectively and clearly record audio with Audacity need to be outlined, and the technique of exporting the audio file then importing into Movie Maker must be explained.

What follows is a list and description of the assignments from the course.

Slideshow- The idea of this assignment is for the students to practice making a multimedia presentation that would be used in a future class, taught by them, of a subject of their choosing. The day that we screened the projects, the students were also expected to turn it into a mini-lesson to show that their project could be used in a lesson plan. Some examples of lessons included English vocabulary related to bathrooms, classification of animals and images of a student's hometown.

It should also be noted that there were two projects that were not successful, due to the subject matter that the students chose. One was a lesson on gambling, and the other on punk subculture. It was clear that the students chose these topics because they were interested in the subject matter. However, they did not take into account that the lesson would be used to teach students, likely young students, and the topics were completely inappropriate. The subject of gambling for children is certainly controversial, and some of the images used in the punk subculture slideshow portrayed drug use and profanity. I was obligated to explain to them that showing these kinds of images to young children is not only unethical, but could also seriously put their employment at risk. It must be made very clear to students what the project is to be used for (a lesson given to possibly young children), and should not simply be a product of their personal interests and preferences.

Assignment: Movie Maker Slideshow

- 20 images of your choice (they may be your own photos or some you download from Google Images etc…)

- 6 seconds per image

- 1.5 seconds per transition (use only <u>dissolve</u> transitions- "atenuar")

Include:

1. Music of your choice that fades out at the end of the slideshow (details below)

2. A title slide at the beginning (details below)

3. An end credit slide, all black with no text, 6 seconds long

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Music: Your Choice

Fade out at the end

To fade:

1. Select the music track in the timeline

2. Clip > Dividir to cut off the end that you do not want

3. Clip > Audio > Atenuar

Title Slide: 6 seconds long

Your Name
Slideshow
Making Videos
Date

- Any font except MicroSoft Sans Serif

- Any background color except blue

- Any text color (it must be readable)

- Transparency 0%

- Any text size (it must be readable)

- Position- your choice

- Animation- your choice, any 2 Line Title animation

Turn in on a CD:

1. Windows Movie Maker project file

2. Finished Movie

3. Folder with the images and music that you used

4. Write on the CD exactly what is on your title slide

Narrated Slideshow- This assignment was similar to the previous Slideshow assignment, except that students were required to record a voice-over using Audacity audio recording software. This built upon their previous experience with the video editing (Windows Movie Maker) and allowed them to create a more engaging project. Again, they were tasked with combining the multimedia project with a lesson plan, which they then "taught" to the class on the day the assignment was due.

Topics that the students chose included Greek mythology to be used to teach social studies, the history and required equipment of football to be used to teach physical education, and expressionist art to be used to teach art or art history.

It was satisfying to note that the quality of the multimedia projects for this assignment increased dramatically from the previous one, and the student who created the inappropriate punk subculture for the Slideshow assignment, decided on the more child-friendly topic of Greek mythology.

Assignment: Narrated Slideshow

20-30 images (or more if you want)

The topic should be used to teach:

    a.   content (start a discussion, social studies, math, etc...)

    b.   vocabulary

    c.   verb tenses

Decide what you will teach with this slideshow before you begin. (All three elements listed above)

Sources of images:

1. Take your own pictures

2. Download from internet (be sure to use "medium" or "large" sizes from Google Images

3. Draw what you want, then scan it

4. Draw it with computer

Plan the sequence of your images.

Fill out outline with description of each image and script for each image or series of images

If your script continues to more than one image, write "continued from above" on the lines

Put the slides in WMM on the timeline in the order you want them. The length of each slide does not matter at this point.

Use Audacity to record your sound clips (the script for each slide or series of slides). Speak slowly and enunciate clearly.

Export each audio clip from Audacity as a .WAV file.

Import into WMM.

Adjust the length of each slide so that they fit your audio clips.

Put a title slide at the beginning, with

1. Making Videos

2. Narrated Slideshow

3. Your Name

4. Date

Put an end title slide, black only, five seconds long.

On Tuesday, bring your narrated slideshow as a finished "Movie" on a CD **AND** bring your outline.

Basic Camera Shots- This is one assignment that was not intended to be used directly in a lesson plan in a hypothetical class. The purpose of this assignment is to familiarize the students with the different camera angles and shots commonly used in television and film production so that they can be more creative with their projects. A hallmark of an inexperienced filmmaker is the use of the same basic shot throughout. In order to produce more compelling multimedia, students had to be taught these techniques, since a more compelling presentation is more likely to capture and keep the interest of their future students.

It was interesting to hear the students, after having completed this assignment, say that when they watch television or movies, they recognize the use of these shots and angles and can name them by name. They clearly were able to retain this information, and I feel that it was due to the hands-on nature of the assignment.

Assignment: Basic Camera Shots

1. Long (Wide) Shot: Shows the entire human body, with the head near the top of the frame and the feet near the bottom.

2. Medium Shot: Contains a figure from the knees/waist up and is normally used for dialogue scenes, or to show some detail of action. Background detail is minimal, probably because location has been established earlier in the scene - the audience

already knows where it is and now wants to focus on dialogue and character interaction.

3. Close-Up: This shows very little background, and usually concentrates on a face. Everything else is just a blur in the background. This shot magnifies the object (think of how big it looks on a cinema screen) and shows the importance of things, be it words written on paper, or the expression on someone's face. The close-up takes us into the mind of a character. In reality, we only let people that we really trust get THAT close to our face - mothers, children and lovers, usually - so a close up of a face is a very intimate shot. A film-maker may use this to make us feel extra comfortable or extremely uncomfortable about a character, and usually uses a zoom lens in order to get the required framing.

4. Extreme Close-Up: As its name suggests, an extreme version of the close up, generally magnifying beyond what the human eye would experience in reality. An extreme close-up of a face, for instance, would show only the mouth or eyes, with no background detail whatsoever. This is a very artificial shot, and can be used for dramatic effect. The tight focus required means that extra care must be taken when setting up and lighting the shot - the slightest camera shake or error in focal length is very noticeable.

5. Detail (or Cut-in): specifically refers to showing some part of the subject in detail. Can be used purely as an edit point, or to emphasize emotion etc. For example, hand movements can show enthusiasm, agitation, nervousness, etc.

6. Two-Shot: Variation on the Medium Shot, but containing two figures from the waist up

7. Over-the-Shoulder (OTS): Another variation on the Medium Shot, but positions the camera behind one figure, revealing the other figure, and part of the first figure's back, head and shoulder.

8. Point-of-View (POV): Shows a view from the subject's perspective.

9. High-Angle: The camera is elevated above the action to give a general overview. High angles make the object photographed seem smaller, and less significant (or scary). The object or character often gets swallowed up by their setting - they become part of a wider picture.

10. Low-Angle: These increase height and give a sense of speeded motion. Low angles help give a sense of confusion to a viewer, of powerlessness within the action of a scene. The background of a low angle shot will tend to be just sky or ceiling, the lack of detail about the setting adding to the disorientation of the viewer. The added height of the object may make it inspire fear and insecurity in the viewer, who is psychologically dominated by the figure on the screen.

11. Pan: A movement which scans a scene horizontally. The camera is placed on a tripod, which operates as a stationary axis point as the camera is turned, often to follow a moving object which is kept in the middle of the frame.

12. Tilt: A movement which scans a scene vertically, otherwise similar to a pan.

13. Zoom: A zoom lens contains a mechanism that changes the magnification of an image. On a still camera, this means that the photographer can get a 'close up' shot while still being some distance from the subject. A video zoom lens can change the position of the audience, either very quickly (a smash zoom) or slowly, without moving the camera an inch, thus saving a lot of time and trouble. The drawbacks to zoom use include the fact that while a dolly shot involves a steady movement similar to the focusing change in the human eye, the zoom lens tends to be jerky (unless used very slowly) and to distort an image, making objects appear closer together than they really are. Zoom lenses are also drastically over-used by many directors (including those holding palmcorders), who try to give the

impression of movement and excitement in a scene where it does not exist. Use with caution - and a tripod!

14. Zoom to Moving Subject: Begin with a zoomed-out shot and zoom into a subject as it moves from left to right, or right to left.

15. Rack Focus: Racking focus is the practice of shifting the attention of a viewer of a film or video by changing the focus of the lens from a subject in the foreground to a subject in the background, or vice versa.

Retrieved from http://www.mediaknowall.com/camangles.html

Silent Movie- The silent movie assignment stemmed more from necessity and the limits of the equipment we had than anything else. The cameras we had access to only have built-in microphones which, as anyone who has watched videos and audio recorded in this way will know, have very low sound quality. A silent movie would allow the students to focus on story development and visual images, without the distraction of poor sound quality.

Assignment: Silent Movie

Script, storyboard, shoot and edit a silent movie of approximately ten minutes in length

The story should have a beginning, middle and end (3-act story structure)

Include appropriate music to fit the theme of what the audience sees on the screen

Interview- This assignment built on all the previous skills learned in the other assignments. The students would need to have good camera skills, good audio recording skills, and good editing skills in order to accomplish the required tasks.

Given the limitations in hardware that we had, this technique is one that I made up beforehand in an effort to improve the quality of audio when using the cameras. I tested it before the semester began to be sure that it was possible.

The technique is technically challenging, but the final product is worth the effort in my opinion. The diagrams that follow illustrate the setup of the interview. Essentially, the interview team would shoot the interview using only one camera, one microphone, and one laptop. This is the minimum equipment that must be used. The final product appears to have been done with much more equipment.

The team interviews the subject, shooting the subject answering the questions posed by the interviewer, while the audio technician records the subject's voice using a small microphone and the Audacity software (Interview Setup 1, below).

Once that stage of the interview is completed, the interview subject can be dismissed. The interview team then turns the camera around and shoots the interviewer asking the same questions, but to a "phantom" subject, using the same audio recording techniques (Interview Setup 2, below).

After the video and audio have been recorded, the technical challenge begins. The students must export the audio files from Audacity into Windows Movie Maker, then seamlessly edit the video to cut back and forth from the interviewer to the interview subject so that it appears the interview was shot using two cameras. Once the video is cut together satisfactorily, the editors must match the audio from Audacity to the video captured with the camera, then they mute the audio that was captured with the camera's built-in microphone. This gives the final video the good sound quality from the small, external microphone that was recorded with Audacity.

This technique can be used in a variety of situations to achieve better sound quality to go with the video than could otherwise be achieved with a camera's built in microphone.

Assignment: Interview

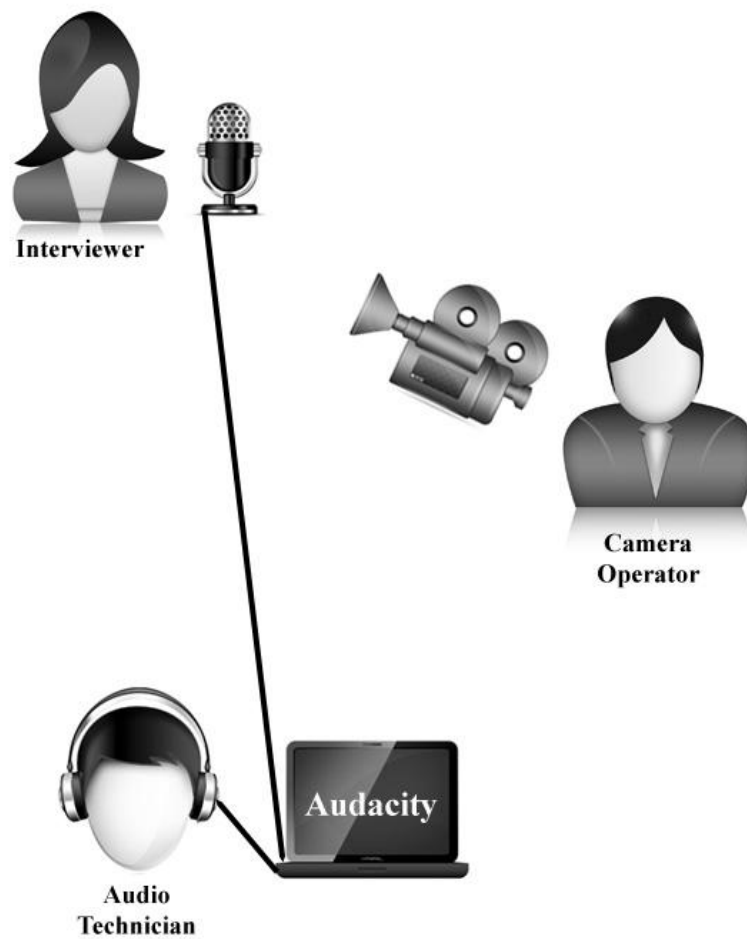Shoot and edit an interview of approximately ten minutes in length

You must use Audacity to record the audio and match the sound with the video in Movie Maker

One student will be the "journalist" interviewer, and you will interview someone who is not in the class

Interview Setup 1

Interview Setup 2

Interviewer

Camera Operator

Audacity

Audio Technician
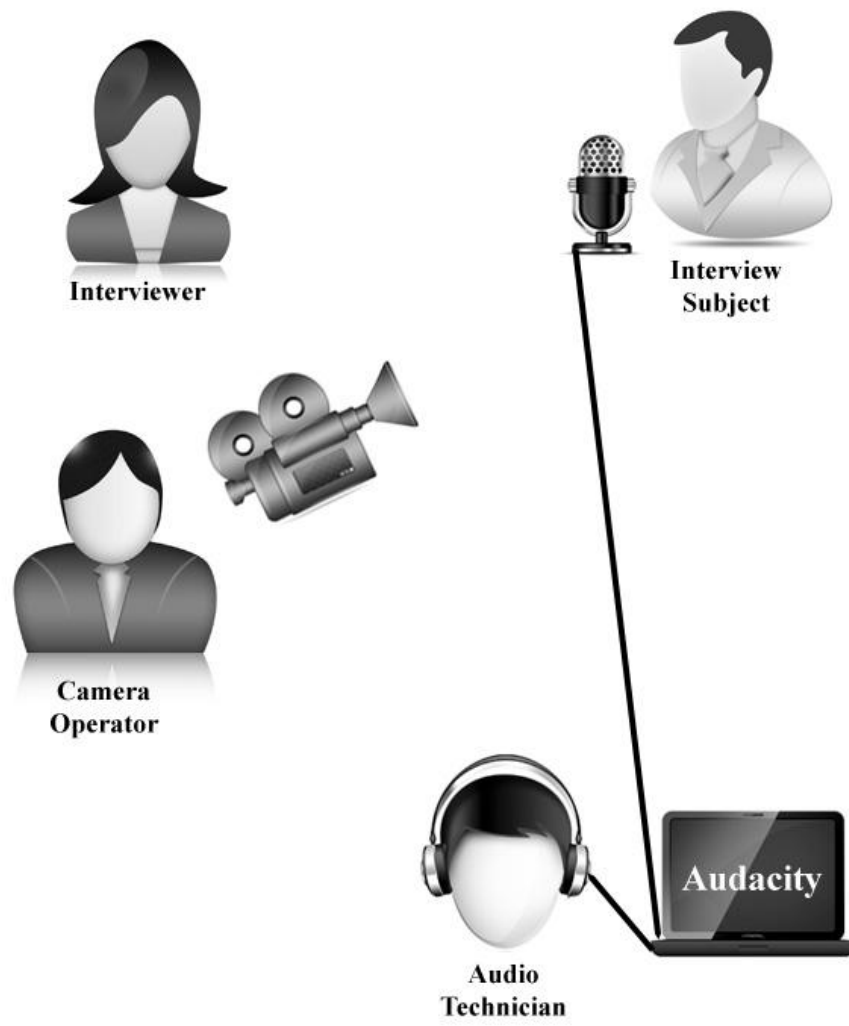
Vox Pops- Vox Pops (Voice of the People) is a series of very short (usually one question) interviews with a large number of people "on the street". Questions are often political or social in nature, and are used to gauge how the general population feels about a topic. This assignment was designed to allow the students to use their creativity without worrying about technical issues as much as they had to with some other assignments. They were allowed to use the built-in microphone that was part of the camera, mainly because it was not practical to record separate audio with another microphone and laptop.

Assignment: Vox Pops

1. Vox Pops, or "Voice of the People". Conduct brief interviews of people at the Colombo. We want their opinions about topics.

2. You will ask three questions.

3. Your final video will have:

   a. Five different answers for each question.

   b. Fifteen different people speaking on the final video

4. Interviewees cannot be in our class.

5. Please interview people other than your friends.

6. In your final video, use the best answers that you get.

7. Be careful with audio. Avoid interviewing in large rooms (with lots of echo), and avoid doing it when there are a lot of people walking around, talking and making noise.

8. Introduce your video (similar to the Interview Video Introduction).

9. For each question, either:

   a. Tell us (i.e., "be on camera") what the question is

   b. Put the question in text on the screen

10. Include appropriate music

How-to (instructional video)- This was the final assignment for the semester, and required that students use all the techniques that they had learned up until that point. They had to script, storyboard, frame shots, shoot videos, record audio and edit the footage into a coherent video presentation. The video is supposed to "teach" the audience how to do something. The uses of this type of project should be many in an educational context.

Assignment: How-To Video

1. Show the process of how to do or make something

2. Medium shot as "home angle". This is the shot you will begin with, end with, and

   come back to when you need to speak to the camera

3. Use creative, but not distracting and confusing, angles. Close-ups, details, OTS, high

   angle, etc…

4. Use appropriate pacing (speed of instructions and editing)

5. Start video with title slide. Name, title ("How to make a …."), date

6. Fade to black at the end of the video

Findings

Several conclusions may be drawn from the responses to the questionnaire. Firstly, the choice of which assignments to give to students can be changed in the future to better reflect what students felt were the most useful. The narrated slideshow, interview, and how-to assignment seemed to be perceived as the most useful for future teaching use. Somewhat surprisingly, the non-narrated slideshow was seen as having value for teaching English or content, but many students also felt that they were unlikely to use it in their future teaching practice.

The silent movie, although often cited by students as the most fun and during which they learned a lot about filmmaking, was seen as having little direct value to their future teaching. It is an assignment, however, that, as some students noted, gives them skills that are applicable to other assignments that they may use directly in a classroom, including skills such as coherent story-telling, shot framing and editing practice.

The advantages of multimedia use in the classroom were described mainly in terms of making the lesson more interesting and visual, which is important to young students today. The disadvantages, as can be expected, were related to the amount of time required to produce the multimedia projects, and the general difficulty students encountered with the equipment we had. It can be noted that, when it comes to computers, video editing is a resource-intensive activity and requires computers with above-average processing power and data storage. In the future, what is considered average is likely to increase, so this limitation may be reduced.

While the students did not completely swear off the use of premade multimedia resources, many did say that they would prefer to create their own presentations for use in their classrooms. They cited such reasons as adaptability and appropriateness, as well as the freedom to put what they want into it.

Most of the students felt that the equipment was either difficult to use or that there was an inadequate supply for all the students to use. A few students, however, acknowledged that part of the point of the study was to use what was available and one even said that such difficulties increased creativity.

Limitations in the Study

This study would be more enlightening with a larger base of students to examine. The answers from the questionnaire are, admittedly, limited. However, the relative size of this school means classes are necessarily small which, although an advantage to the students in terms of teacher-student ratio, makes research involving a larger study group difficult in a reasonable time frame.

Another potential limitation is the lack of actual practical classroom time for the student-teachers to practice using their multimedia projects in front of students. In this

study, the lessons and classes they were tasked with imagining were very much hypothetical, although we, as a class, stood in for an actual class.

Action Plan

In the future, a class such as this one can be improved in several ways. First, closer consideration should be paid to which assignments are included in the syllabus. Only those assignments that could be used by future teachers should be included. Other assignments, such as the silent movie, probably should be cut. The skills learned in that assignment, like story development and increased exposure to camera and editing work, need to be learned in other assignments or in increased workshop time.

In order to make the work done in class more meaningful, actual teaching practice for the student-teachers should be incorporated into the semester. It could be off-site, in an authentic classroom of younger learners, or if that is not feasible, even classmates of the students in the same university. They could be younger students with less experience, to make the teaching practice more authentic, but some kind of practice would take it to the next level of effectiveness.

A third recommendation would be, if possible, and increase in the availability of technological resources. This does not mean the purchase of professional-grade equipment, as that would defeat the purpose of this exercise, but it could be as simple as staggering assignments so that the currently available equipment is able to be used more often, with fewer constraints on time.

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