

Chapter 3: Data Methods and Analysis

Data Methods

Surveys: In the first week of class I administered a general survey to eighteen students, in my multimedia animation class. The survey was a very important part in assessing students' overall technological skills, how often and for what purpose they spent their time using technology, if they had access to computer use outside of class, if they knew what multimedia was, were motivated overall in school, at home, and how they felt when learning new software material (Appendix A). Following are sample questions from the initial survey:

1. Do you have access to a computer outside of school?

- A. Yes, all the time
- B. Sometimes, limited use (library, relatives, etc.)
- C. No, not at all

2. Rate from the following from 1-4, 1 being the lowest score. What computer activities do you spend the most time doing?

- ___ Playing games
- ___ Visiting social websites (Twitter, Facebook, etc.)
- ___ Doing something creative (video editing, photo manipulation, animation, etc.)
- ___ Basic surfing, email, and homework

I also administered various surveys throughout the course of the action research project that targeted student interests and learning styles. For example I administered Sternberg's intelligence survey to determine students' mix of creative, analytical, and or practical learning styles (Appendix B). I was able to learn more about the individual students and their particular intelligences that fuel their processing. I then created projects that reflected their individual interests, skill level, and learning styles. The class named their surveys so that I was able to

assess the overall ability of each student along with their individual learning style. From this data I drew out my focus group students.

Journals /Exit Cards/Reflection Books: These three methods were a great tool for gathering student reflections about project choices, motivation for content, and involving them in shaping the course structure. Below is an example of how I used each:

Journals: Each day I wrote in my journal about my daily experiences, interactions, and questions that arose from my class. It was important to note students' behaviors, how they were talking about their projects, or ways they interpreted a given project. I also noted the way students were behaving to see if patterns existed in motivation, effort and execution of assignment, and peer conversations about their multimedia projects.

Exit Cards: The exit cards were used to check for student motivation and create necessary changes in the curriculum to increase their enthusiasm, explain a memorable project from their past, and give an overall sense of their project progression as individuals and as a class. The exit cards were written, drawn, or animated (Appendices C-G) and used in designing our projects, assessing what they needed as individual students and what changes I needed to make to the curriculum, and a way of getting further input from the class as a whole.

Reflection Books: At the end of the second project I gave each student a reflection book that asked questions about their motivation level, connection to the assignment, strengths

and weaknesses, if they felt involved with the project (Appendix H). The students' could respond in any manner they felt appropriate, written, sketching out the answer, utilizing cartoon figures, and any other desired way of responding.

Interviews/Focus Groups: The interviews and focus groups consisted of five students that either met with me all as one larger group, individuals, and or smaller internal groups selected from the main focus group. The students were interviewed primarily after completion of each multimedia project to get a more in depth analysis of how each felt about the design, implementation, and execution of the assignment. This process allowed me to get the specifics of why the students chose to do what they did, how the flow of the assignment went, if the project was motivating, if the student was motivated, how their background affected their choices, and what makes a memorable project for them. Following is a sample of interview questions (Appendix D):

- 1. What types of projects have had long lasting effects on you? Describe please.***
- 2. What types of elements challenge you when given a class assignment?***

Audio Recordings: The audio recordings were used to analyze student behavior during class hours and for interviewing individual students. The recordings allowed me to knowingly to the students talk about their projects, listen to how they interacted with one another, and record interviews. I was able to recognize patterns of motivation, interests, skill level, and background. These recordings were used primarily at the start, middle and end of a project and allowed me to relate the students' behavior directly to what I was hearing.

Data Analysis

Surveys: When analyzing the initial surveys I coded and analyzed the data in order to define students' motivation level, experiences with technology, previous multimedia use, and main purposes for using technology. I then was able to separate the data into categories and sub-categories (see below) and create a graph of the students' responses:

Technology	Motivation Level	Primary Purpose Using Technology
Skill Level	At School	School
Access	Home	Games
MM Definition	Learning new things	Socializing/Blogging
	Sports, Hobbies, etc.	Shopping/General Use

Journals/Exit Cards/Reflection Books:

Journals: My personal journal was used to observe student behavioral patterns and conversations. The journal allowed me to quickly record any questions or comments I had about individual students. I also monitored how students were using technology and the questions they asked their peers or me during our class time. The field notes were summarized and analyzed into data that allowed me to look for repetitive and or changing classroom behaviors as the action research process unfolded.

Exit Cards: Exit cards were used as a quick assessment to check in with students' weekly motivational level, any personal challenges, and relevant thoughts/questions. The exit cards were framed in short reflective answers; quick scaled responses, drawings, simple

animations, and or multiple-choice questions. They gave me insight on the overall direction the class was heading and to what extent it would help me to alter instruction and increase motivational strategies if necessary.

Interviews/Focus Groups: The interviews were transcribed and logged into various sessions; motivation, project choice, technological background, and future changes. This data was coded for repetitious quotes, responses, and comments that need to be addressed further. The students' insights helped me to understand their view of motivation and what the driving force was for learning the course content. I have compared my findings with other main areas of my analysis to see if they coexist and if an overall pattern had occurred. The focus group guided me in a way that increased motivation and challenge for all within the classroom.

Audio Recordings: I utilized the audio recordings to see if various behavioral patterns existed within the classroom. The recordings were transcribed and logged accordingly. I noted my observations of the students' behavior variances, conversations regarding the given assignment, and quotes that were relevant to motivation, student choice, growth in content language, and technology. Also I involved my focus group students in identifying their own key behaviors throughout the recordings and what they felt at that given time.