Absenteeism and the Use of Online Learning Modules

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Abstract: Absenteeism is an issue plaguing schools across the nation. A disruption in learning occurs when students miss valuable instruction due to illness or extended vacations. Many schools are looking at the use of online learning modules as a possible solution. Used in the post-secondary environment, online learning modules have the potential to deliver engaging and collaborative lessons on a 24-hour basis. This action research project examined whether middle school students were comfortable with receiving instructional materials from a learning module in an online format. Through the use of Web 2.0 tools, students provided evidence of understanding Hawaii Standard CTE.7-8.2.4 which deals with analyzing how skills and interests affect career choices. Data collection was in the form of pre and post online surveys and student reflections in an online blog. The research focused on the ease with which students were able to navigate an online module, comfort level using Web 2.0 tools to collaborate and motivational level while carrying out tasks. As a result of this study in a regular classroom, the researcher and others interested in the topic will now have a better understanding of the requirements in designing online learning to help absentee middle school students.

Introduction

"Absenteeism, which is increasing at an alarming rate, is becoming the gateway to dropping out of school altogether" (Butts, 2009). This statement paints a dire picture of a growing situation in public schools, one which must be addressed across grade levels. According to Jacobson (2008), students with absences due to illness, travel or extra-curricular activities (i.e. athletics) show a decrease in academic performance and achievement. Recently established as a respected approach in the post-secondary educational arena, online learning is a fast-growing method for delivering instruction that allows students to interact academically despite being physically apart. This methodology is currently being introduced in the K-12 environment to provide students with round-the-clock access to instructional material and assignments. With the potential to motivate students to be self-directed learners and stay on track despite excessive absences, the availability of online learning modules could be the answer to aid student progress and at the same time develop skills necessary for future success.

Background

Delivery methods for distance learning have changed over time. As technology improves and new Web 2.0 tools become available, more time is spent developing effective online learning experiences. As use of computers increase, the need to streamline design methods becomes increasingly important.

According to Mulvihill (2009), the main philosophy behind careful development of learning modules is the delivery of information into chunks to accommodate the human attention span of three of five minutes. He describes learning modules as consisting of clearly focused, engaging content directed toward succinct objectives. He is careful to point out that this does not necessarily mean using the latest technology which can often be a distraction rather than beneficial. The author points out designers are increasing their use of humor, animation and graphics to gain the attention of the learner. The goal is to create an experience similar to that of the traditional, face-to-face classroom. Efforts have become increasingly successful over the past couple of decades.

One author who worked with course management systems suggested using questionnaires, photo galleries, blogging and portfolio creation as a part of a learning module (Guhlin, 2009). Congruency between module content and objectives is a key factor to success. This allows learners to follow a clear roadmap of instruction and keep up-to-date with classmates despite physical separation or absence from learning community. Designing modules in this format is effective for all ages, including the young who benefit from consistency.

Hirschheim (2005) documents the success experienced in the post secondary environment. He claims there is no difference in the performance of students in a traditional setting or an online format. The high level of frustration, technical difficulties and lack of face-to-face social interaction are deterrents that must be overcome. Measured in terms of grades, there is little difference in the two delivery methods. However, Hirschheim questions the quality of the learning experience. His hesitation of the equality of instruction is based on the fact that student evaluations on distance education courses usually consist of closed question surveys that do not allow the student opportunity to share their online experience.

The concerns presented by Hirschheim (2005) are often magnified when using the online format with younger students. His belief that their tendency to "give up" easily coupled with a lesser degree of maturity in regards to self-motivation and problem-solving skills were issues that led to this academic work. In particular, two questions guided the design and implementation of this study:
- How can teachers limit the disruption to instruction caused by excessive absences?
- Are online learning modules an appropriate format for middle school students?

Methods

The purpose of this action research study at a Hawaii middle school was to determine whether online learning for this age students has potential to prevent instruction disruption in the classroom. Because the results were based on the students' experience, data was collected via online surveys delivered through www.surveymonkey.com in an anonymous format. Students started with a demographic survey, as well as one to determine level of experience. The post survey focused on the ease of retrieving instructional material in an online format and functionality of navigating the module.

Target Audience

The target audience for this action research project included students enrolled in a Career and Business Technology course at a public middle school in Hawaii. Included in the group of participants were students who had grade point averages (GPA's) dropping below 3.0 due to excessive or long-term absences. Although the purpose of the project was to aid 13 and 14 year old students with excessive absences, the module was tested with a subset of students in a regular education class to determine if

students were able to participate in collaborative projects online despite group members missing school. Behaviors and skills of the target audience included at grade-level reading and writing, basic keyboarding skills. Though previous students at this age group had the ability to navigate the internet, and were familiar with the Microsoft Office suite, 60% of this group had minimal experience in these areas.

For the purpose of small group testing, the participants were six students from the middle school, enrolled in the Career and Business Technology class. Though all 24 students in the class participated, these six students were identified as having a 504 status, which means they had the potential to miss an excessive number of days due to documented medical disabilities. At this school, 67% of the student population receives assistance for lunch and bus and 75% are Asian/Pacific Islanders (personal communication, July 27, 2009). Previously, 100% of students enrolled in this course had internet access at home. However, for this test group only 72% had internet access available to them outside the classroom.

Implementation

Design of the module followed the structure of Gagne's Nine Events of Instruction. In early February, students were given two surveys to establish the demographics of the participants and extent of computer experience. The basic components of the module consisted of a short introductory section to ensure students were able to retrieve information in an online format. Based on the results, more extensive ground work was needed. This section had to be revised to include mini-lessons on using Microsoft Word, email, and blogs, as well as effective keywords and reliable sources for internet research.

This module design was developed in the Moodle Service Network, an open source course management system (www.moodle.com). It was made up of four parts with a final objective of creating a portfolio that included a personal career plan. With a goal of determining the usability of online modules for middle school students, a variety of delivery methods were implemented. The first section of the module required the students to complete online assessments for skills and interests.

By clicking on the first folder, students found links to two online skills inventories. One was a straight-forward assessment requiring the student to check the boxes next to words or phrases that best describe him or her. The second assessment was an interactive assessment geared to middle school age students (www.driveofyourlife.org). Students responded well to the second site and were more interested in conducting further research into the suggested careers.

In an effort to expose students to a variety of tools, they were asked to reflect on the results of their assessments in the form of a blog. A Voicethread was used to introduce the blog and how it works. They had no trouble logging onto the site, however their responses were similar to those you would find on a social networking site, very short and often cryptic. The instructions requested thorough responses but only two of the 24 actually did. After the reflection, they were asked to research three of the suggested careers. They were to use the internet as a tool to investigate the education needed, potential salaries, necessary skills and interests and the job outlook. This information was stored in their personal folder on the classroom server.

The second folder started with instructions for a brainstorming activity called, "How much is my candy bar?". Students were given instructions for this portion in written format, as well as a Voicethread.

They were asked to log onto www.google.com to our class account. Once in the mail account, they opened a Google document and with a partner (assigned ahead of time), they were to come up with as many careers as they could think of who were involved in the making of the candy bar; from the farmer to the grocery store. They used their compiled list to create a brochure highlighting the many jobs involved in the development of a $0.50 candy bar.

The objective of the third folder was for the students to select a free movie editing program and create a two-minute clip as a personal introduction. Initially, the plan was to use www.jaycut.com, however its scheduled February launch date was delayed until March. Students chose sites such as www.pinnacle.com and www.blender.org. They were responsible for exploring the capabilities of the program they chose. The introduction was no more than two minutes in length and had to have music, text and pictures.

In the fourth folder, students created a website on Google sites. This was the culminating activity for the module. Students organized the information gathered in the previous three folders to present an introduction, describe the results of their assessments and share three careers that interested them. With this information, they developed a career plan which included their choice of paths for high school, and future educational plans

Results

All 24 students in the class participated in the action research. The pre and post surveys were conducted in a group setting during class time. The module consisted of seven folders, one for each observed class period. As a result of the survey, the introduction was expanded to two class periods. All 24 students were able to easily take the survey created on www.surveymonkey.com. After completing the first introductory folder, ninety-two percent of the students felt comfortable with editing and formatting a Microsoft Word document using the toolbars. Eighty-nine percent felt comfortable posting to a blog.

Participants took interest and skills assessments in a paper-pencil format, as well as online. The survey results showed they much preferred the online format. Collaborating online was the most challenging activity for students. Only thirty-two percent felt comfortable working on a group project using Google docs and other collaboration tools. They felt a disconnect from their group members and clear communication was difficult for them.

In terms of comfort-level, 72 percent of students preferred receiving instruction on Voicethread, an online audio and slide presentation tool (http://www.voicethread.com). Forty percent stated that using the typed format was easier when printed up and used as a reference. Thirty-six percent of the students stated their reading skills were not strong enough to comprehend the step-by-step instructions. The survey showed that all twenty-four students preferred using the Voicethread with paper instructions to complete tasks such as the brochure or Google sites portfolio. Screenshots on the printed document helped students to feel confident they were clicking the correct links on the website design.

Though students claimed in the survey to enjoy experimenting with Web 2.0 tools, the learning curve for using them to complete assignments was large. In many cases, participants were overwhelmed with the process. Their previous use of computers was primarily social networks and games. Having to obtain instructional material to complete classroom activities and assignments proved more difficult than in the teacher-led environment. Students stated they learn more in face-to-face discussions where they can expand upon each others' ideas. For the most part, they had a difficult time retaining

information long enough to use it for the assignment. For example, though they preferred the Voicethread as a way to receive instruction, the disconnect between listening to the directions for creating a navigation bar on the career portfolio webpage on google docs and returning to the site to implement the instruction was too complicated. Even going back and forth between step-by-step instructions was difficult for this group of participants.

The results of the post-survey mirrored the article by Hirschheim (2005). Students in this study became frustrated and needed additional support to complete activities. Their immaturity showed in the areas of conducting research, online collaboration and communication. In the area of research, they tended to use the first search engine result whether or not they could understand the information. The survey showed that students are used to using textbooks that highlight or use bold print for pertinent information. A familiar strategy is to skim text to locate needed information. With a goal of researching career options, students did not have the skills to locate the information if it was not made obvious to them.

In a face-to-face environment, students enjoy group work but the survey results showed 62% felt that using Google docs to compile information was confusing because they need to see their partners and talk to them to decide who will do which part. They claimed the lack of non-verbal cues ("seeing what my partner thinks by how their face looks") affected their online communication.

The blog was popular because it was similar to posting a comment on a social networking site. The posting directions stated that complete sentences and formal English was required, however students commonly used informal language. This format resulted in the most active involvement. Students discussed the results of their assessments with back and forth interaction. Of all the tools, activities and assignments, the blog was most popular among the test audience.

Discussion and Conclusion

The issue of excessive absences continues to be problematic in today's classrooms. Students participating in extra-curricular activities, lower income or chronic illness tend to see affects on their grades when school is missed (Lucking, R., Wighting, M., & Christmann, E., 2007). Teachers and administrators will continue to look at ways to alleviate the challenges that occur when students return to class after an absence. The use of online learning modules is a viable solution by providing round-the-clock access to instructional materials. However, more formal training in basic computer and internet usage skills is necessary at the elementary school level in order to prepare middle school students for this format. This will help minimize the issue of "when frustration increases, motivation lessens" (Journell, W., 2008).

The participants of this study are intrigued by the opportunity to learn online. They expressed being motivated by increasing their competency on the computer. Realizing that future career opportunities will be linked to computers, middle school students will benefit from opportunities to practice skills necessary for success in the 21st century. These skills include the ability to be an independent learner. Online learning modules require students to provide evidence of their competency to manage time, and remain motivated to keep pace with instructional content (Tso, T., Chiang, F., Lu, H., & Sun, C., 2009). Due to the newness of this format, a combination of synchronous and asynchronous formats is most effective.

For the modules to be effective, it is important to design instruction to include a variety of delivery

methods. Being able to review instructions in written and verbal formats offers the learner more options to understand expectations. Students reported that when they did not understand the written format, listening to the Voicethread helped.

The findings of this research suggest that online learning modules are a viable solution to the problems resulting from excessive absences. However, thorough training in basic computer and internet skills prior to delivering the modules is needed. Students at this young age are easily frustrated and need a high degree of interaction in order to remain motivated. Due to the popularity of social networking sites, this age of student is comfortable using discussion boards and blogs to provide evidence of understanding but struggle learning new tools in the online format. With proper training, and a combination of synchronous and asynchronous instruction, students in middle school should be able to keep up with their peers through the use of online learning modules.

References

Guhlin, M. (Spring 2009). Moodle habitudes. *TechEdge,* 28(3), 18-23. Retrieved July
    10, 2009, from Education Research Complete Database.

Hirschheim, R. (2005). The internet-based education bandwagon: Look before you leap.
    Communications of the ACM, *48*(7), 97-101. Retrieved from Academic Search Complete
    database.

Journell, W. (Fall, 2008). Facilitating historical discussions using asynchronous communication: The
    role of the teacher. *Theory & Research in Social Education,* 36(4), 317-355. Retrieved July 21,
    2009, from Education Research Complete database.

Lucking, R., Wighting, M., & Christmann, E. (2007, September). Electronic bulletin boards and digital
    student groups. *Science Scope,* 31(1), 24-26. Retrieved March 21, 2009, from Education
    Research Completed database.

Mulvihill, M. (2009, March). Playing to the crowd. *e.learning Age,* Retrieved April 7,
    2009, from Business Source Complete database.

Tso, T., Chiang, F., Lu, H., & Sun, C. (2009, June). A quantitative study on attitudes of web-based
    Mathematic competition in different learning stages students in Taiwan. *International Journal
    Of Emerging Technologies in Learning,* 4(2), 61-65. Retrieved July 7, 2009, doi: 10.3991/
    Ijet.v4i2.697.