Integrating Facebook into the Classroom

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Introduction
After returning to the academy after over a decade away, I was amazed at how comfortable with technology the students in my classes were. Unlike in 1993, the Class of 2011 is connected everywhere they go with their laptop computers. During my first semester teaching Mathematical Modeling and Introduction to Calculus, the first mathematics course in the four course sequence, I noticed that my students seemed overwhelmed by the intensity of the daily requirements of the tightly packed cadet schedule. Since the math courses at the academy are four credit hours, the most during a cadet’s freshman year, it is normal to be apprehensive about the course. Although the cadets are aware of this fact, they, like many students, focus on the requirements that are closest to being due versus trying to understand and see the large application of the subjects.

I decided, from a suggestion from a cadet I sponsor, to integrate the Facebook.com applications into my Differential Calculus class. Facebook.com is a social networking application that began as a book in the 1990s for graduate school programs. The applications on Facebook.com are more secure than the MySpace.com applications, and allow a member to create private groups/sites controlled by an administrator.

Students were already using the website for academic purposes, so Smith decided to take it a step further.-McGraw [6].

Methodology
Prior to moving forward with the creation of a Facebook.com site, I polled my students and forty-seven out of forty-eight students were already Facebook.com members. Since they are already members, I found out, through a class poll, that they spend as much as two hours throughout the day on their individual sites maintaining connections with their friends.

I researched Facebook.com and found the private group feature. (Facebook.com allows a member to create a private group that is not open source) This is key to maintaining the integrity of an academic environment. The next major step was connecting the class to the site. In order to facilitate this, the group members must be friends with the administrator. Some instructors may feel uncomfortable with their students having access to personal information, but another great feature of Facebook.com is the limited profile feature. This allows the administrator to only allow his/her friends to see what
they want them to see on their individual site. The total time to create the site from start to finish was thirty minutes.

The site had similar information that their current Blackboard site had. The current classroom information; however, unlike Blackboard which may sometimes be intermittent, Facebook.com is on the world wide web and all you need is an internet connection of some sort. I have found that cadets even check their Facebook.com sites on their cellular phones.

"Education is the acquisition of the art of the utilization of knowledge." -Whitehead [3].

Examples
The class Facebook.com site allowed the students to post helpful links like “Pauls Online Math Note” that re-enforces concepts that they have learned during the semester. Also students posted an insightful “Lagrange Multiplier” link from the Massachusetts Institute of Technology (MIT). This but one of many unique math applications found by multiple students for the intent of helping each other gain a better understanding of mathematics. This illustrates students taking control of their own learning. This is a critical transition for collegiate students. They are accustom to being given the majority of what they need for examinations in class, thus, taking an active role in their own learning is a new concept to most college freshmen.

"In its broadest sense, learning can be defined as a process of progressive change from ignorance to knowledge, from inability to competence, and from indifference to understanding....In much the same manner, instruction-or education-can be defined as the means by which we systematize the situations, conditions, tasks materials, and opportunities by which learners acquire new or different ways of thinking, feeling, and doing." –Fincher [4].

Like Fincher states, the learning is progressive and utilizing this new means to create a different experience will allow the student to look at his/her educational experience in a different way.

Survey Overview
To determine if the class site was helpful, I conducted monthly surveys throughout the semester, the results were very interesting. When given a medium to give their opinion, cadets are extremely honest. Do to the relaxed learning environment I created, the students took an active role in their learning. Based on their comments they felt strongly about their educational experience.

1. Do you think the Facebook Site is helpful?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree
2. What can make the Facebook Site better?
   a. REQUIRED TO MAKE A COMMENT

![Facebook.com Results Chart]

Figure 1: FACEBOOK.COM student input results over Academic Year 08-02

The survey indicates that during the initial portion of the semester the students really liked the Facebook.com class site; however, over the course of the semester this enthusiasm diminished slightly. The question is why did the Facebook.com site have a range of 86% in block one to 70% in block two, and by the end of the semester a 75% favorable rating? There are many factors that could contribute to this. At the beginning of a semester the students are extremely excited and ready for the academic challenges. While taking and average course load of twenty credit hours at the academy, the semester can become extremely difficult very quickly. The decline in the favorability during Block 2 can be explained by the academic requirements in the month of February. One portion of freshmen mid-terms occur during this period of the semester, along with multiple projects and papers that are due. Time management is essential. The Facebook.com site, if utilized properly by the students, could potentially alleviate some of the academic pressure.
Feedback Analysis

*It is a useful tool to keep students informed though.*

*I think the facebook site works fine the way it is being used.*

*It's working really well right now but I think getting everyone to participate more might help everyone benefit just that much more.*

*I think it's better than blackboard. I don't think we need to change anything.*

*We need to get a greater participation in the site (by the students) in order for it to become more widely used.*

*Keep sending quiz "invites!" The status stays up on my facebook, giving me a constant reminder every time I sign in.*

I primarily used the site as a platform for discussions. Math related links were posted, and the students could contact me, even if the academy internal network was down. The students could also post pictures, and I sent them invitations to events, such as, quizzes or lectures.

The feedback from the students illustrates a sense of maturity from some. They understand that this is their tool to contribute to their learning. By the time this experiment was conducted, my students had one semester of using our Blackboard application. More than one student found that the Facebook.com application was easier for them. (They check the site five or more times per day).
Conclusion
The students really appreciated the effort to integrate a medium they already used, with their math class. The majority found it helpful, and few inspired cadets really add value to their educational experience by posting great links they found while studying. Overall, like many things, the Facebook.com application requires the students to take ownership of their own learning in order to make it a successful tool.

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