Trendy Technology or a Learning Tool?: Using Electronic Journaling on Webnotes™ for Curriculum Integration in the Freshman Program in Engineering at ASU

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Abstract

Lately, technology has transformed our world, with millions of users negotiating everything from purchasing goods to accessing research. The pressure to embrace this technology has grown to the point that even in the composition classroom, instructors are exploring ways to most profitably use it. Given the growth and commercialism of the World Wide Web (WWW), it is not always easy to distinguish the hype from the useful. However, one worthwhile application is WebNotes™,[1] a commercial, WWW-based electronic forum software product that has become a powerful journaling tool for fostering connections, delivering information, and creating an online community in and out of the classroom. In our first two iterations of the NSF Foundation Coalition integrated program for first-year students at Arizona State University, we used journaling to encourage students to connect their classes by explaining math, physics, or engineering concepts to the non-specialist (English teachers), discussing teaming and teaming issues, and providing feedback. Before the use of WebNotes[™], the English teachers collected the journals and passed them on to the other faculty members, usually in the space of one week, causing many logistical problems. With Webnotes, students now write entries in a word processing program, which encourages them to check spelling and grammar, and then they paste them into a WebNotes™ forum. The faculty can then read the entries at their convenience and respond to each student via e-mail. These entries can be kept hidden from other students until or unless the moderators (faculty) choose to release them. Assessment of student responses to this form of journaling, in the form of anecdotes and a survey, has been very positive. Students like the individual and immediate responses they receive via e-mail -- always a popular form of communication with students. Moreover, they appreciate the fact that multiple faculty may read a single entry. As a learning tool, an integration tool, and a feedback tool, this technology has proved that technology is not simply "trendy." Sometimes it really can enhance learning and communication.

Introduction--fear of technology/lure of technology

The pressure to use technology in the classroom is enormous, so much so that even in first-year composition classes at Arizona State University (ASU), teachers are scrambling to secure mediated classrooms and struggling to master research on the Internet. However, all too often the uses to which we put this technology are somewhat questionable. Is it worthwhile asking students to write to each other on e-mail when they are peer revising a paper? Why not just write the comments on the paper and then talk to that person who happens to be sitting across from you? What benefit can be gained by typing your comments into a computer? These kinds of questionable practices certainly make some teachers wary of technology. And rightly so. As teachers we must think critically about how we use computers in the classroom if we are to avoid the "uncritical enthusiasm" that may cause us to unwittingly perpetuate traditional approaches to education that limit instead of further students' autonomy as learners [2]. One tool that has proved to be especially useful in the first-year integrated program in engineering (FIPE)at ASU is Webnotes[™], a commercial, WWW-based, electronic forum software product. This has become a powerful journaling tool for fostering connections, delivering information, and creating an online community in and out of the classroom.

The Journal Project

In developing our program, we realized that to further integration of subjects, it would be useful to have students keep an integrated learning journal. We envisaged that this would take the form of a paper portfolio in which students would write responses to various tasks. In particular, we wanted students to use this journal as a forum for developing connections between classes and encouraging reflection. A key concept within the Foundation Coalition is the integration across traditional discipline boundaries of courses normally taught as completely disconnected entities. The primary intent of integration is to introduce crossdisciplinary reinforcement of the subject matter, e.g., such that students immediately see applications in physics of concepts that are currently being introduced in mathematics. There are accompanying advantages of integration, however, such as the cross-pollination of pedagogy from one discipline to the next. Moreover,

research conducted by McCrindle and Christensen shows that "reflective writing can encourage students' awareness of their own learning processes and consequently can enhance cognitive control" [3]. Thus students might, for example, explain a physics principle to the English teachers so that the English teachers, who had no training in physics, could grasp the concept. By considering audience in this way, students would be forced to see whether they had truly grasped the concept when they had to translate it into a lay person's terms. Likewise, the English teachers might ask them to explore how similar the writing and design processes are or to think about how they could apply the tools for invention in English to the tools they needed for brainstorming ideas in engineering. A complete description of the journal project and journal assignments that we have set is available at www.was.asu.edu/~asufc/journal.html.

While journaling is commonplace within English courses, it is rarely used as a tool of instruction in a traditional physics curriculum. Yet we have discovered that journaling turns out to be superbly suited for teaching freshman physics, especially the conceptual understanding of physics. In providing a verbal response to a physics question, a student is forced into a non-numerical mode of analysis. Memorization and rote regurgitation of mathematical expressions - the tried and true "learning" techniques of beginning physics students - simply do not work when journaling. Instead the student is forced to dig deeper in order to express the *content* of the mathematical expression rather than just delivering the expression itself. By careful choice and judicious wording of the journal assignment, students are led in a very natural way to deeper conceptual understanding of the subject at hand[4]. Or, should that conceptual understanding be lacking, the fact becomes quite clear to the instructor when reading the journal assignment. Journals thus offer both a teaching tool and, simultaneously, a diagnostic tool[5]. In a more traditional mode, journal assignments can also be used to force the students to think and write about themselves in relation to the world around them, especially their perceptions and understanding of physics and the teaching and learning of physics.

Problems with a paper journal

In our first two years of the program when we used "paper" journals, we would ask the various instructors to take turns reading these journals weekly. Ideally more than one discipline would read each journal each week. Thus the journal that asked students to explain a physics concept to the English teachers should be read by both the English teacher(s) and the physics teacher(s).

Not surprisingly, the logistics of passing a set of papers from one professor to another within the space of a week proved somewhat difficult. Too often, we forgot to bring journals to our weekly meeting or we would arrange to leave them somewhere to be picked up by another professor and then forget them. Moreover, grading and adding comments in a timely manner when more than one professor was involved also proved difficult. Nevertheless, since we agreed with research on journal writing showing that students do need to reflect on and process what they have learned, we felt that the journal should be maintained as an integral part of our integration [6].

Fortunately, in the third year of the offering, we began to use WebNotesTM electronic conferencing and that has solved many of the logistical problems and brought added value to the whole project.

Description of Webnotes™ program

Webnotes[™] is a powerful, easy to use, high speed, conferencing forum or bulletin board system which allows users, separated by time and distance, to conduct threaded, asynchronous communications; to exchange information and ideas; and to build up a knowledge or information base. WebNotes™ collects and stores user data and information as postings on a WebNotes™ server; users access this collective data using almost any Web browser. The user simply accesses the WebNotes™ server using a standard Universal Resource Locator (URL) address or a hot-link from another Web page, and the program does the rest of the work so that the user does not have to negotiate protocols or technical functions. Conferences in WebNotes™ can deal with any subject. A user can begin a new thread for discussion by posting a *topic* (WebNotes[™] terminology for an entry which is a major new line of thought) and other users can reply to that topic or to other topics with a *note* (WebNotes[™] terminology for a reply to a topic). These notes can be kept hidden from other students until or unless the moderators (faculty) choose to release them.

We post journal entries as topics, and the students use notes for their journal entries, which are kept hidden from other students unless we choose to release them. We can answer the students' replies via e-mail from within the WebNotesTM program. When answering a note, we can quote the original note easily without having to cut and paste.

Typical assignments we have set

Some of the most beneficial assignments have indeed been those that force students to apply and connect their knowledge. For example, the first journal assignment in physics allows students to explore their own knowledge and perceptions of that subject. It is generally given as the very first journal assignment of the year. The intent is to impress upon the students the need to "re-think" some of the things they already "know" about physics and to keep an open mind about their physics "intuition." The assignment is preceded by the showing in class of a short video entitled "A Private Universe" [7]. In the film, the moderator asks graduating students Harvard students and their professors a simple question: "Why does the earth have seasons?" Virtually all of the respondents give a reasonable but completely incorrect answer, namely that the earth must be closer to the sun in the summer and farther away in the winter! As one student noted in the journal,

"First impressions of this film, were actually quite funny. But, as I thought about what the students were saying I realized that it would be quite easy to make these mistakes. The concept of ingrained misconceptions seemed to be quite common, and that even I had had these same misconceptions."

A later journal assignment broached Newton's laws of motion [8]. The third law is a somewhat difficult concept for introductory physics students. It deals with "action" and "reaction" forces and states that if object #1 applies a force to object #2, then object #2 must apply an equal and opposite force to object #1. In the journal assignment, object #1 is an automobile and object #2 is the road surface on which the automobile sits. The car applies a force on the road and the road an equal and opposite force on the car. For a stationary, non-moving car on a zero grade road, the situation is simple: the force of the car on the road is directed downwards, the force of the road on the car is upwards, and both forces are equal in magnitude.

When the car is accelerating forward or accelerating backward (backward acceleration being the same as forward deceleration) the situation becomes somewhat more complex. Horizontal components of both forces now appear. Newton's second law states that an unbalanced force on an object will cause it to accelerate in the direction of the force, with an acceleration of magnitude a = F/mwhere F is the magnitude of the force and m is mass of the object. For the car, the only horizontal component of force acting on it (neglecting air resistance and tire resistance or friction at any non-driving wheel) is the force applied by the road to the car. If the car is accelerating forward, this force must therefore, be directed forward. Applying Newton's third law, this means there must be an equal opposite force exerted by the car (through its tires) backward on the road. This force, at least in Arizona where the hot desert sun softens the asphalt in the summer, will cause distortions in the road surface, pushing the asphalt backward in the places where the cars accelerate forward, and pushing it forward in

the places where the cars accelerate backward (equivalent to decelerating forward, i.e., braking). The distortions in the pavement - which show up very nicely in crosswalk stripes - therefore are directly related to the average acceleration of the cars as they pass that spot in the roadway. The students are given the effect, the distortions in the crosswalk stripes, and asked to deduce and explain the cause. There is some very nice detective work involved: Closer examination reveals that at intersections that carry two lanes of traffic in each direction, the lane farthest from the curb shows *backward* distortions while those in the curb lane are distorted *forward*. The students are asked to propose a possible explanation for this.

Although the replies show that not all students have worked out a full understanding of Newton's laws, it is clear that all have had to "actively process" on this subject matter. Instructor's comments in []'s:

"'Action -Reaction forces' are no longer equal. [Wrong !!] The forces are not equal now because there is no constant acceleration. The car is the initial force and the pavement is the reaction force. The car is adding a net force in all of the lanes except the right because the car is accelerating. The acceleration force from the car to the pavement is so great that the pavement, which is all mushy due to the sun, that the paint and pavement shift."

"As the cars accelerate, they apply a force in the backward direction on the road. Newton's third law says that an equal but opposite force is applied to the car, and so it moves forward. This is rather like the fact that when we walk forward, we push back with our feet. As the cars accelerate, the asphalt is distorted in this direction. The reason that the middle two lanes are more pronounced is that there is more traffic there. The reason that the right lane has lines in a different direction is that people are generally decelerating rather than accelerating as they approach it, because they are stopping to turn. The brakes apply a forward force, stopping the car and dragging the road forward. If there were no stoplight, then the lines would not be as pronounced, because it is not probable that the cars would be accelerating as they approached the crosswalk. The right lane, however, might be the same."

"The second law says that the acceleration of an object is directly proportional to the resultant force acting on it. The third law states; if two bodies interact, the force exerted on body one by body two is equal in magnitude but opposite in direction to the force exerted on body two by body one. The curvature of the crosswalk lines is due to either acceleration or deceleration of the cars.

When a car accelerates (as in the middle lanes) the car tires exert a backward force on the road and as a result of Newton's third law the road exerts a force on the car tires. The opposite is also true, when a car decelerates (slows down for a turn) the car tires exert a forward force on the pavement and the pavement exerts a backwards force to the car. As a result, due to Newton's second law the car moves because a resultant force is applied to it and acceleration occurs. When the road is hot and soft the force applied to the road by car tires is enough to make the asphalt accelerate and move very slightly, in accordance with Newton's third law."

Thus, the instructor has immediate and very definitive "diagnostic" information on what yet needs to be reemphasized in class. Journaling is an extremely useful exercise for both the student (in learning) and the instructor (in teaching and assessing).

Another journal many students responded to positively was set at mid-term asking the first-semester students to consider their progress to date. Had they achieved the goals they had set for themselves in their very first journal entry? What problems were they experiencing? What did they think faculty could do to make the experience more successful? What did they think they could and should be doing to make themselves more successful. In response to this journal, one student later explained that during the first part of the semester, she had been overwhelmed, and like so many first-semester students, after failing several papers and exams, she had given up. Her English teacher told her all was not lost. She should begin trying to get on track by writing this one entry, which she did. In her reflection at the end, she explains that this one journal helped her see what she had accomplished during the semester, and how she had reached some of her goals. Further, the sheer act of writing this journal enabled her to see that she could catch up with the other students. We are happy to report that this student not only caught up, but she became one of the more diligent members of the class. Likewise another student explains that this journal entry forced him to reassess his original goals of earning only "A" grades and acting as team leader. He realized that he was so concerned with earning an "A," that he was becoming unbearable in his team, and he was focusing his energy on a grade and not on his own learning. He realized that he needed to understand how other members of his team worked and not try to force his leadership on the team.

English Final: Reflection on the Journal

To complete the reflective nature of this project, the English teachers used the journal as a basis for a final exam. In their final exam for English, students were asked to write an

introduction to the journal project, explaining what they thought were the most useful assignments and why. Thus they were asked to read and revisit the whole journal, consider its purpose, and consider which entries they thought were most significant, providing their own definition of "significant," and why. They were then asked to reprint all the entries, number them, revise any writing problems, design a cover sheet, and print the introduction. This reflective portfolio then formed their final exam for the first-year writing portion of the integrated program. Responses to these journals showed unexpected depth and perceptiveness, and, in turn, helped us reassess our teaching and our relationships with our students. The following are a sample of some of these responses:

"We were told to write a journal about how we feel about our grades thus far in college. I started by discussing my performance on tests but digressed into discussing my view on homework. I had never done well in homework and it took this journal to make me understand the reasoning behind this performance. It made realize that I see homework as a means to an end, whereas most students (and teachers) see it as end itself . . . it has helped me to realize why I was having trouble completing assignments. Since this made me realize something very important in my academic life, I consider this my most meaningful journal assignment of the semester."

"I thought that they [journals]were childish. I recalled the pointless journals that I was forced to write in Junior High School. However, I was surprised when the journals allowed me to express my feelings, and come to a better understanding of college life and connect classes."

"They helped give us a clearer perspective on the work that we were doing. But most of all, they kept us in touch with our teachers. They helped us to see that we were being taught by real people, and not just textbooks with black-and-white print."

"At first, I resented the idea of journals every week. Gradually, I saw the purposes for journals. It is a way for the professors and the students to interact with each other. Some students are uncomfortable talking one-on-one with professors. Some just do not have the time. Journals act as the bridge between the faculty and the students."

"Although at times it seemed a little annoying to have to sit down every week and compose an entry, I feel it was worthwhile because it presented me with some interesting topics to ponder."

Benefits of electronic journaling

Because Webnotes™ is an electronic journal, and faculty can each be given moderator privileges, all faculty have access to the journal. We no longer have to wait for one person to read and then pass along the paper copies. Moreover, this instant access encourages us to read journal entries we have not set. Such a case was an entry set this semester by the English teachers for the competition in National Engineers' week. Students were asked to rewrite a traditional fairy tale as if technology had been available. Many students wrote very creative entries. One in particular also demonstrated the powerful connective nature of journaling. One student rewrote "Humpty Dumpty" by referring to the Fall semester Engineering Project, "The Bungee Omelet Project." In this project, students had to devise a launch and release mechanism that would allow them to drop an egg from 60 feet without breaking it. The following is the student's response to the journal:

Humpty Dumpty

Humpty Dumpty sat on a wall Humpty Dumpty had a great fall but Humpty Dumpty was thinking ahead if he wasn't an engineer he'd probably be dead he was strapped in with a safety constraint designed by ASU engineers because he knows that they're great as he approached the ground he did not frown because he had a bungee cord attached to his crown you see unlike Jack and unlike Jill Humpty Dumpty just did it for the thrill without exceeding his max four G's he could prevent from becoming an omelet with cheese then all the kings horses and all the kings men iust stood in awe as Humpty did it again.

Needless to say, many on the faculty team read these entries because they were not only amusing, but they allowed these students to share another side of their abilities that traditional coursework does not always reveal.

In addition to allowing good instructor access,
WebNotes™ allows faculty to respond to the students on email with ease. Since students enter their e-mail addresses

when they first register (users must register with WebNotes to participate in a forum), and their e-mail address appears at the top of the entry, faculty can reply to the entry by merely clicking on the students' addresses. All the faculty in our program were surprised by how positively students responded to e-mail from the faculty. During the first semester, when we were trying to get to know these students quickly, this interaction proved tremendously helpful. All too often, a response to a student indicating he or she had written "a provocative journal entry" generated yet another response from the student, quickly building a solid studentfaculty interaction that went beyond the classroom. In a reflective journal entry, students commented that this proved to be especially helpful to them as they adjusted from their high school environment with its close teacherstudent interaction to the university setting.

In journaling, students are encouraged to be honest and have diverse points of view because we are not standing over them as they type away. We are deliberately trying to avoid imposing prescriptive answers to potentially valueladen questions. For example, the chemistry professor asked students to read an excerpt from C. P. Snow's novel *The Search* and reflect on whether they, like the central character, had ever been tempted to falsify results. The students' responses were unexpectedly honest.

Nor are the benefits limited to personal exploration. In mathematics, journaling is an excellent way for students to collect their ideas and explain the concepts which are so vital to understanding. Assigning journals allows the calculus professor to require reading that relates to other subjects. The students must form an opinion or explain something in words, a skill very important in studying mathematics, yet often left out of traditional math courses. Moreover, WebNotes™ can accommodate journaling in mathematics since a word processing document or symbolic algebra document can be carried as attachments to topics or notes.

An informal survey (see appendix A) revealed that students overwhelmingly preferred an electronic journal to a paper journal. 84% of the 51 students surveyed stated that electronic journaling was preferable to paper journaling. 76% of these students agreed that WebnotesTM is easy to use, and 58% stated that they liked receiving responses from faculty to their journals on e-mail.

Perhaps the only disappointing aspect of WebNotes™ in our application has been this: We did set up another forum for students to share ideas, homework questions, comments and so on. However, we found that very few students used this forum. In part, the very nature of the classroom and teaching environment may mean that they do not need this forum. They work in teams during each class, they meet later in the day for homework, and they stay with the same group when they socialize. They simply may not need their

own forum to chat together. Moreover, they may have felt, and perhaps rightly, that since faculty moderated this forum, it was hardly their own. E-mail is much more private.

Certainly an electronic journal has proved to be far more sophisticated than a paper journal. Its benefits far outweigh any negative aspects, and because this particular program is so very easy to use, technophobes such as English teachers should have no fear. Moreover, because WebNotes™ allows us to hide replies, it is eminently suitable for a journal. This is one technological tool that is not trendy. This is not technology for technology's sake.

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[8] RBD is grateful to Howard Voss of the ASU Physics Department for originally providing this idea. Prof. Voss who uses the subject in his own introductory physics courses

Appendix A: Student survey for Webnotes™

We are trying to assess whether WebNotes™ is a better way for us to conduct our journaling exercises, Please answer these questions as honestly as you can, bearing in mind that we would **always** do a journal. However, the question is whether an electronic journal has real benefits over a paper journal.

Circle the most accurate response to each question:

Response summaries are bolded and give: # of responses
- percent of responses #

1. Do you find WebNotes (not dialing in from home) easy to use?

Easy Relatively Easy Difficult Very Difficult 38 - 76% 12 - 24% 0 - 0% 0 - 0%

2. Do you like being able to write in a word processing program, being able to run spell checker and then pasting your entry into the program given that you are marked down if your entries are badly written?

Yes Quite useful Little difference No difference 29 - 58% 12 - 24% 8 - 16% 1 - 2%

3. Do you find WebNotes easy to use when you want to use formulas and so on? No Response 2 - 4%
Easy Relatively Easy Difficult Very Difficult
3 - 6% 13 - 26% 17 - 34% 15 - 30%

4. Do you like the fact that all faculty can read your entries if they wish? **No Response 2 - 4%**

Yes Quite pleasing Little difference No difference 12 - 24% 4 - 8% 17 - 34% 15 - 30%

5. Do you like getting responses to your journal entries from faculty on your e-mail?

Yes Quite pleasing Little difference No difference 29 - 58% 13 - 26% 6 - 12% 2 - 4%
6. Do you think a paper journal would be better?
Yes Perhaps No 1 - 2% 7 - 14% 42 - 84%

7. Do you find any value in the journal project (bearing in mind that if you did not do this, you would have to keep a portfolio in English)

Yes Some value None Prefer the Portfolio 34 - 68% 14 - 28% 2 - 4%

8. Explain your last answer with developed reasons please.

Responses:

- I think that more journals should be about how we feel about the class, and a way to express any concerns to the various professors. Especially in Calculus and Physics.
- 2. The journals give us a chance to give personal opinions and people seem to write better when it is something they care about.
- 3. The journal assignments make us think about something that relates to something we are working on in class and is a way we can experiment with different writing styles (so we \can improve).
- 4. I feel the journal project brings somewhat of a focus to each week of the Campus Match program; so I feel it is valuable
- 5. I do not like the portfolios. And doing it on the web is easier and saves time.
- 6. Journals are a way we can use more of our creative side. Many of them are fun and allow us to express our feelings without being graded down for them.
- 7. They help deal with assignments that are given in class because they usually have to deal with them.
- 8. It gives some relevance to topics because it forces you to talk about things that most people consider just schoolwork, and it apply them to your life. One good thing about WebNotes is that you can always get your journals once you've ported them.
- I feel the journal holds "some value" because it allows
 me to be creative every once in a while and it allows us
 to input what we are feeling to the teachers on a weekly
 basis.
- 10. Even though the journal helps develop my thought process and I prefer this over a folio format, I feel that the format doesn't improve my writing much.
- 11. Journals are a simple assignment that often are enjoyable and they help to show what errors one makes before he/she makes them on a paper.
- 12. I find no value in either a journal project or a portfolio. Both are inane and useless. Hey provide and educational value to the student and take valuable time away from their busy schedule.
- 13. No Portfolio
- 14. A few times last semester, I was able to communicate problems that I was having with my teams to my professors over the Webnotes.
- 15. It seems like "busy work"
- 16. Even though we do not keep actual papers we still had to write a paper explaining all of the journals. The only difference is that we don't have to carry around papers.

- We still had to hand in all of the journals with other things at the end of the year.
- 17. I've found free writing to be a missed activity. As one progresses in school, especially in engineering, free writing finds little space or reason to be used in the curriculum. It can be an imaginative simulation that allows the writers mind to "color outside of the lines" which hardly ever finds its way into engineering. Not only is this healthy for the writer, it benefits also lie in future engineering endeavors.
- 18. I think that journal projects are better in developing ideas of the students, although sometimes they just feel like extra homework to which already seems like a good amount of homework.
- 19. WebNotes is a good way for professors to get feedback on what the students think about the classes.
- 20. Some of the journals make you think about what you've been doing in class and how it is useful. The professors will be better able to see someone's point of view on certain subjects.
- 21. Often the journals require us to spend a lot of time thinking about important topics and what we think about those topics. However, some journals seem odd and have little reference to what we are discussing in class.
- 22. I don't particularly find value in it, but it is better than a portfolio.
- 23. I like looking back to see what kind of things we did in the semester. The journaling entries are sometimes assigned to use material that we have learned in class, which makes the journals interesting. I don't like how I had to wait 40 minutes last time to post my journal.
- 24. It seems that the journal is more of an exercise in writing to please the professors, than anything else.
- 25. Several of the journals last semester helped me think about life in general. It was a great help in dealing with college life and my new home away from home. Also the electronic portion journal allows me to work on it at my own time with out the stresses of other classes.
- 26. I don't like portfolios. I feel that journals are easier because with a portfolio I would have to save everything and may lose some important items.
- 27. I honestly don't find the journals useful, but in comparison to portfolios or paper journals, I would rather do Webnotes.
- 28. The journal assignments are usually of interest to us, which makes the assignment easier for us. The journals allow us to express our ideas about the subjects that we learn, and I find this more enjoyable than a portfolio.
- 29. The journal project helps me express myself while learning and writing about what I have learned
- 30. It allows you to look back and see the improvements you have made over the semester.

- 31. I would rather write several short journal entries over WebNotes than to spend a lot of time making a portfolio at the end of the semester during studying for finals.
- 32. The journal projects as they exist now, give us more creative freedom. We can write from our own perspective and write from the heart. We learn a great deal about ourselves as we write.
- 33. I like the electronic journal think journals help keep up our writing skills to make us think in ways we usually don't'. Plus, a portfolio would take up too much time.
- 34. The journals allow us to critically think about various entries presented to us. We are allowed to express our feelings on various issues and get a response from the instructors.
- 35. The journal project lets me free-think my ideas and respond to the assignments my own way, less structure develops better writings from me.
- 36. I am glad we don't have to keep a portfolio, but keeping journals is almost parallel. WebNotes is also a security measure (if someone forgets to save their journal they can copy and paste.)
- 37. An English journal on WebNotes makes journaling more enjoyable than an English portfolio. A portfolio would make it seem like we have another huge assignment. This portfolio would be like a lab write-up and would cause assignments to conflict.
- 38. A journal from all classes develop many themes; a solely English-based portfolio would be to limiting.
- 39. One journal project is just another English assignment to me, but I'm sure that we get something out of it by the way of learning and improving our writing skills.
- 40. The journal project we do at the end of the semester is much more valuable than an English portfolio, In the journals we get to explore different subjects and in some cases use our imagination.
- 41. Everyone in the class enjoys using the computer, so it was a great idea to have them use something they like while doing their homework. It's easier than writing it down on paper and turning it in later. I really don't think there is anything wrong with WebNotes as it is right now. The only real complaint is that it is very hard to get on to WebNotes from my home computer.
- 42. I say some value because some of the journals make us think more about a certain subject. They make us do further research in order to understand the subject. For example, both the physics journal and the Math journal asked us to explain a difficult concept in simplistic terms. Being able to explain something is a way to better understand it yourself.
- 43. The journals are good assignments because they relate to what we are doing in class and make us think that at the same time.

- 44. Yes, each journal gets us thinking about various topics. I like doing the journal because a lot of times you can relate what ever subject to the topic (freedom of what to write on).
- 45. The weekly journal is easy to access and fairly easy to do. I also find it interesting that not only do the English teachers get to post a journal but also all the FC professors do. It is also easy to keep track of and keep paper waste down.
- 46. I would much rather an electronic journal on a disk rather than on paper portfolio that I would have to carry around.
- 47. I would rather do a small journal each week on the web instead of doing portfolio. It is more interesting.
- 48. I am not very good at organizing and loose papers. An English portfolio is not a good idea for me.