

# Connect, Communicate, Learn

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## Abstract

This paper examines the experiences gained during 2004-2005 using SLN and CourseSpace in three undergraduate and eight graduate courses with 220 students at Maritime College. Two courses were distance learning, nine were hybrid.

These experiences are described in terms of outcomes, observed strengths and weaknesses, and potential opportunities and threats. Feedback from the students is provided.

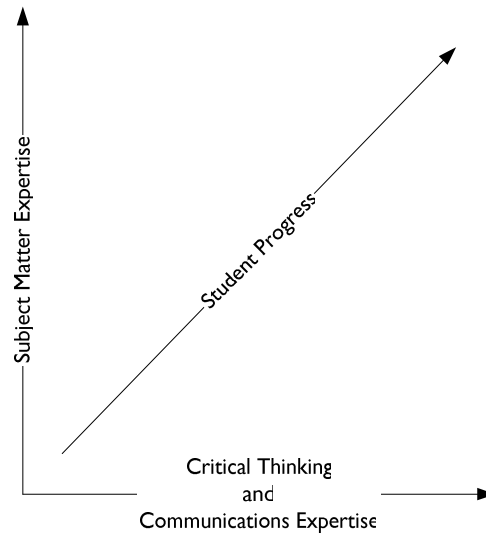
At the heart of this paper is the hypothesis that the integration of pedagogy and technology provides for a very rich learning environment and experience, but that it is not for every teacher and every student. Hence, careful vetting of the participants is critical to success.

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## The Objective

The student and teacher have an objective to improve the student's knowledge along two dimensions.



**Figure 1 The Objective**

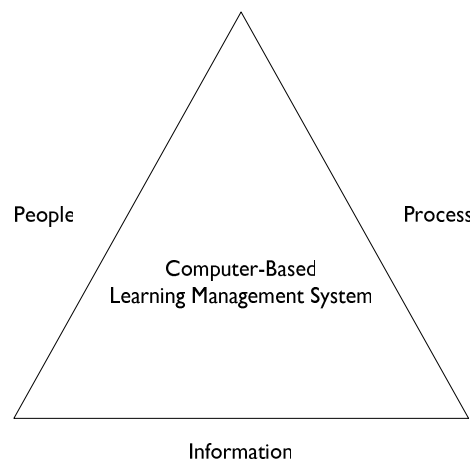
If teachers leave the students sated with the subject matter, but unable to apply it through critical thinking and unable to express the results of this critical thinking, then the students have been ill-served by their experience.

While subject matter expertise is likely a responsibility at the department level, the development of critical thinking and communications expertise is everyone's responsibility.

This paper examines the pursuit of this goal of student improvement through the use of a computer-based learning management system (CBLMS).

## The Approach

CBLMS comprises three elements.



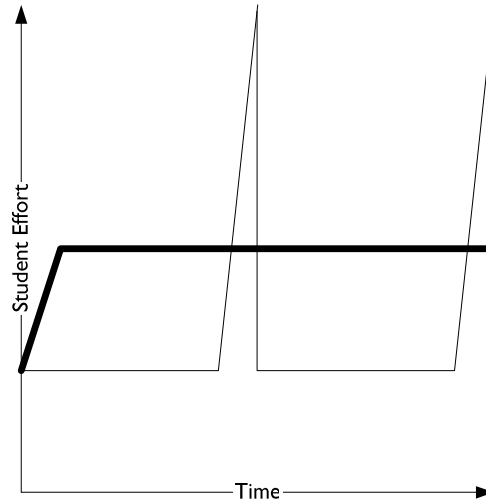
**Figure 2 CBLMS**

People comprise the two major principals, student and the teacher, and the support structure; MIDs, Help Desk staff, librarians, etc. CBLMS must, first and foremost, support the teacher and the student. It must not get in the way of the learning process.

The learning process (e.g., Socratic Method, case analysis) is one of two critical CBLMS processes. The second is that involved in using the associated technology.<sup>1</sup>

Information is managed by the process and used by the people to achieve the desired outcome (Figure 1 The Objective). The information may exist in a number of forms -- audio, video, still images, text -- and come from a number of sources -- personal experience, Internet, libraries.

CBLMS integrates these three elements to produce a coherent story that promotes the desired learning. As important as CBLMS as a tool is the manner in which it is applied.



**Figure 3 Application of CBLMS**

The thin line in Figure 3 Application of CBLMS represents a hypothesis of how students traditionally devote effort to learning. The "cram" at the midterm and final may allow for a passing grade, but may not promote "learning that sticks."

A hypothesis is that "learning that sticks" comes from constant effort throughout the course. Constant effort means constant involvement and I do this mainly through discussions.

## **Undergraduate Scheme**

In an undergraduate classroom course a typical assessment scheme is:

1. Attendance in Class: 28 meetings at one point per meeting = 28 maximum points
2. Weekly Examinations: 13 tests at five points per test = 65 maximum points
3. Weekly Discussions: 13 discussion periods at four points per period = 52 maximum points
4. Final Examination: Five questions at five points per question = 25 maximum points

Discussion points account for 31 percent of the total grade in this example. It is difficult to pass without involvement in discussions.

Undergraduate courses are organized along the lines of the textbook assigned to the course. Each assigned chapter is dealt with over two class meetings. The first class meeting is a formal lecture on the topic. The chapter is then assigned for reading by the start of the second meeting. The second meeting starts with a 20-minute written examination on the assigned material and concludes with a discussion of the assigned material.

The idea is that the student needs to focus on getting the grade points every week. Only 15 percent of the grade is at stake on the final examination in this example.

I do not require student involvement with CBLMS at the undergraduate level. My experience has been that undergraduates lack 1.) the desire to learn, 2.) appropriate self-discipline, and 3.) comfort with technology. And yes, the last item is a stunner.

However, my undergraduate courses are available on CourseSpace. I encourage the students to get involved in CBLMS (it's the only way I distribute material; involvement can lead to extra credit; an increasing number of courses are being offered over the Internet and one needs to get comfortable with the approach).

### **Graduate Scheme**

In a graduate hybrid course a typical assessment scheme is:

1. Attendance in class: 15 classes at one point per class = 15 maximum points
2. Discussions: 147 maximum points (14 classes at four points per class for classroom discussions; 13 weeks at seven points per week for on-line discussions)
3. Final Written Report on Class Project: 64 maximum points from the written report. All team members will receive the same grade on the project.
4. Team Participation: 24 maximum points based upon your participation in the project team.

Discussion points accounts for 58 percent of the total grade in this example. It is impossible to pass without involvement in discussions.

At the undergraduate and graduate levels I assess the quality of discussion according to the following table.

<b>0</b>	<b>1</b>	<b>3</b>	<b>4</b>
Little to no contribution to the discussion	Contribution indicates a minimum acceptable understanding of the material and/or willingness to become involved in the discussion.	Contribution shows a reasonable understanding of the material. The student is participating meaningfully in the discussion.	The contribution delivers significant insight into the topic, or opens a potentially significant new line of thinking regarding the topic.

**Table 1 Discussion Quality Points**

Only quality is assessed during discussion in the classroom. I also assign points based on quantity in the on-line discussions.

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
No posts	Posted less than three times; began no major discussion threads	Posted three times; began one major discussion thread	Posted more than three times; began more than one discussion thread

**Table 2 Quantity Points**

A point about discussion threads is in order.

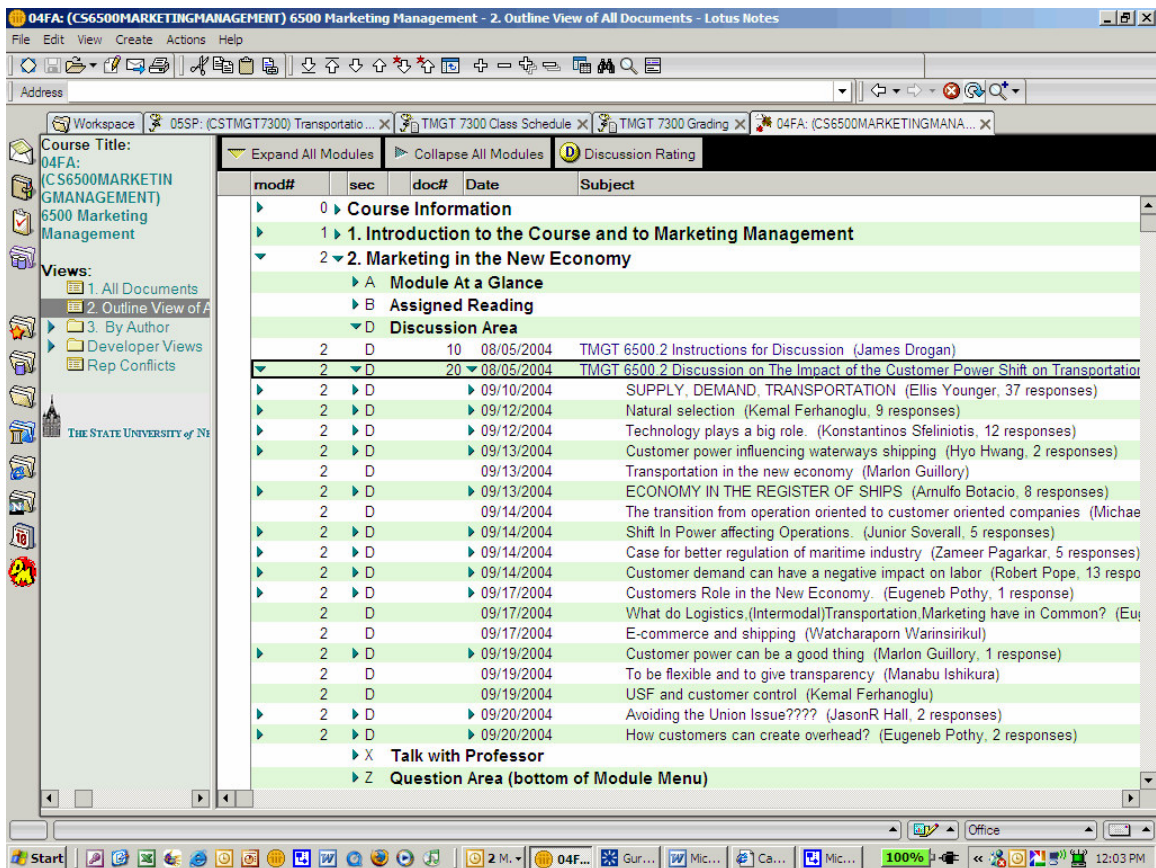


Figure 4 Discussion Threads

In the above screen shot from a prior course you can see the discussion topic is **TMGT 6500.2 Discussion of The Impact of the Customer Power Shift on Transportation**. This topic was posted by me. Underneath the discussion topic there are 18 discussion threads that were started. Ellis Younger started one, the first. Marlon Guillory started two, the fifth and the fourteenth.

Students starting discussions gain more points than those who don't.

In a graduate distance learning course a typical assessment scheme is:

1. On-line Discussions: 56 maximum points (8 weeks x 7 points per week)
2. Final Written Report on Class Project: 64 maximum points
3. Team Assessment: 24 maximum points

Discussion points accounts for 39 percent of the total grade in this example. It is impossible to pass without involvement in discussions.

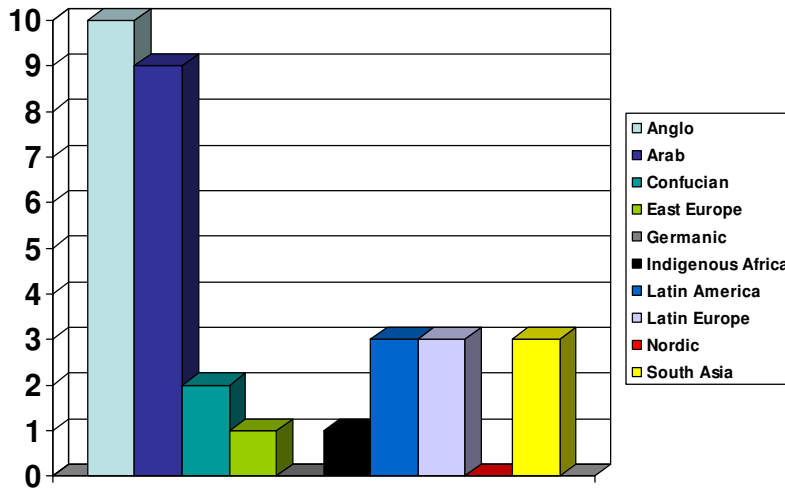
## The Results

### First Example: TMGT 6500 C F4 Marketing Management (Hybrid)

#### Analytics

This was a three credit hour prerequisite graduate course that met 14 times from August 30, 2004 through December 13, 2004. Thirty-two students were enrolled. This was the first time I had taught this course.

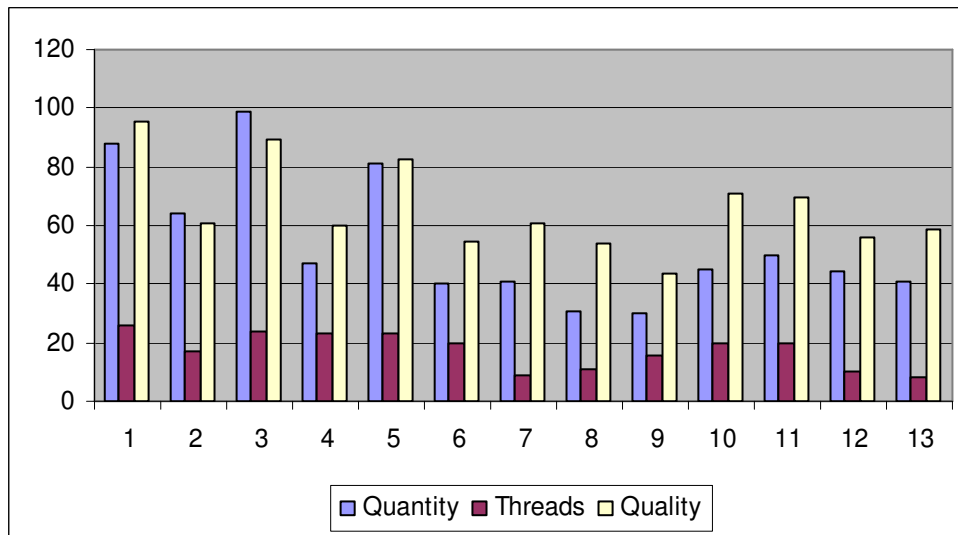
Cultural demographics<sup>2</sup> for the class were:



**Figure 5 Cultural Demographics**

I believe cultural demographics are important in understanding student behavior. About one-third of the students in this course were Anglo. Some cultures do not promote discussions between students and teachers or, for that matter, that the students have the freedom and are encouraged to bring alternative points of view into the classroom.<sup>3</sup> Hence, I often find that that all the encouragement I might provide for discussions and alternative points of view breaks upon the rocks of this prior, rigid training.

Thirty of the 32 students were male. Eight of the students had previous experience with CBLMS, seven of whom picked this experience up for the first time in my spring or summer 2004 courses.

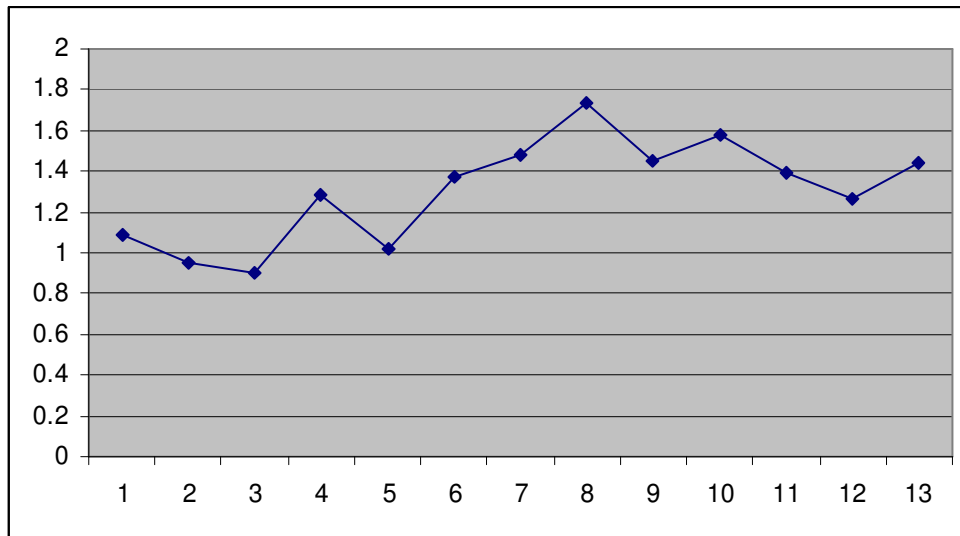


**Figure 6 Weekly Posts**

Discussion of Figure 6 Weekly Posts:

- I. After a strong start the student involvement in the on-line discussion slowed. Possible reasons include:
  - a. Thanksgiving was during week 10.
  - b. Midterms were likely during weeks 7-8.

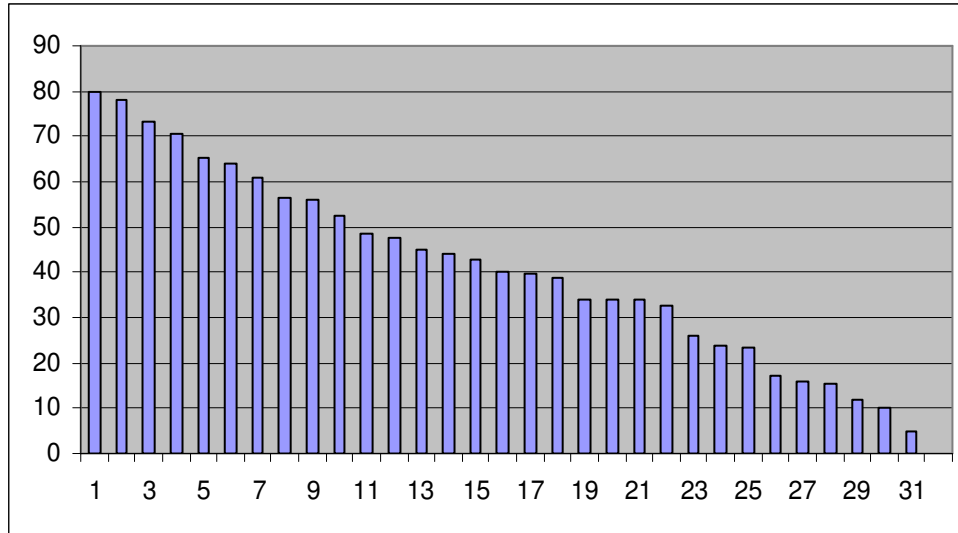
- c. Later discussion tended towards more abstract, esoteric, strategic management concepts. Students tended to have less experience in these areas.
  - d. Continuous involvement is hard work.
  - e. Preparation for finals in other courses.
  - f. Other demands.
2. The quality of the posts tended to improve over the 13 weeks. Possible reasons include:
- a. Constant feedback to the student through assessment of each post, follow-up questions by the students and teacher, private discussion by the teacher with the student as thought necessary.
  - b. It is believed that the number of responses to a student post began to be an informal badge of honor.



**Figure 7 Ratio of Quality Points to Number of Posts**

Discussion of Figure 7 Ratio of Quality Points to Number of Posts:

- I. Presuming that the subjective assessment of quality stayed the same over the 13 weeks<sup>4</sup>, then the trend seen here – increased quality per post – is desirable.



**Figure 8 On-Line Points by Student**

Discussion of Figure 8 On-Line Points by Student:

1. The maximum available points for the on-line discussions were 91.
2. The top 10 students accounted for 50 percent of the points.

Five students responded to the Course Feedback Survey. Students' *comments* are unedited. I've added comments as appropriate.

<b>What Worked Well?</b>	<b>Where Did We Get Stuck?</b>	<b>What Should We Do Differently Next Time?</b>
<ul style="list-style-type: none"> <li>• <i>liveliness of discussions;</i></li> <li>• <i>applicability of the course project;</i></li> <li>• <i>ease of studying (even if i did not read the required chapter, shame on me, i was able to regain the information during discussion; certainly some valuable information is not recoverable without reading)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>project as debate</i></li> </ul> <p>What the student has in mind, I think, is that a debate about the project between the various project teams would have been a useful learning experience. JD</p> <ul style="list-style-type: none"> <li>• <i>try to mix the ongoing discussions whether on-line or in class with the them of project</i></li> <li>• <i>i have done allocating of effort being more attentive to core and elective courses than to prerequisite; increasing of minimum prerequisite grade would do the 'magic' for me</i></li> </ul> <p>This is an interesting comment. This student appears to see this course (a prerequisite) in the context of the remainder of the program (core courses and</p>



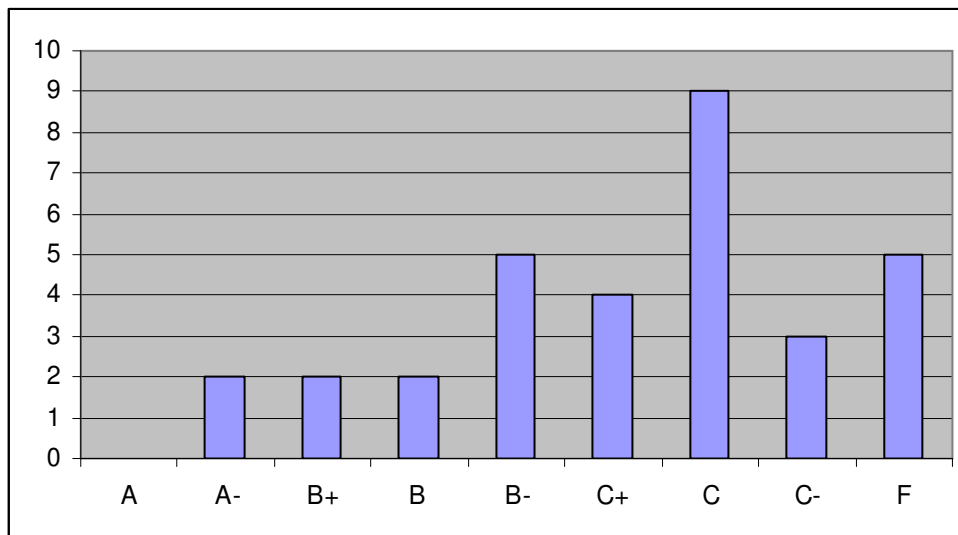
What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p>electives). Because it was a prerequisite he did not apply the effort he would have if the course had been a core or elective. Because he didn't apply as much effort he did not get as much from the course as he otherwise might. JD</p> <ul style="list-style-type: none"> <li>• decrease the number of students in class - some students because of their shyness or something else did not participate what they were capable of; if a student for some reasons is not willing to be active in class or on-line, he/she should be pulled in by the professor</li> <li>• i would have definitely spent more effort on this course but i cannot express it in percent</li> </ul> <p>This was in response to the following question.</p> <p>"This is a prerequisite course. While your final grade appears on your transcript, the grade is not used to calculate GPA. If the grade was used to calculate the GPA, how much additional effort (answer as a percentage, say 25% or 75% or some other percentage number) would you have spent on this course?"</p>
<ul style="list-style-type: none"> <li>• I liked not having to do any exams. It created less stressful situations. The class participation, online posting and team/term paper, I think was more than sufficient to fully understand the different subject matter and how they apply to real-world scenarios.</li> </ul>		<ul style="list-style-type: none"> <li>• To get more class participation especially from those who may not be as outspoken as others, you can assign particular areas of study for every student or groups of students (doing separate research for comparison with the others students) for maybe 1/2 hour each class for the student/s to discuss. The discussion topic can be something pertaining to the class discussion on that day</li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p>so the student/s can expand on a particular area.</p> <ul style="list-style-type: none"> <li>When we had the SSS discussion in class after the seminar, the few students that went were then expected to answer any question from the seminar (not that they were in the hot-seat). But I could recall the discussion in class being one of the liveliest; maybe it was because the topic was for the Term Project.</li> </ul>
		<ul style="list-style-type: none"> <li>Some student will never participate until they are being asked to answer some questions. So in addition to student who volunteer, you can make everybody participate by asking them to do so.</li> <li>At least 60%</li> </ul> <p>This was in response to the following question.</p> <p>"This is a prerequisite course. While your final grade appears on your transcript, the grade is not used to calculate GPA. If the grade was used to calculate the GPA, how much additional effort (answer as a percentage, say 25% or 75% or some other percentage number) would you have spent on this course?"</p>
<ul style="list-style-type: none"> <li>I liked the methodology best. It took some getting used to because I have never been in a course in which verbal thoughts beyond what is correct according to the text were solicited. A student has to prepare differently, I think it takes a month or more to finally feel comfortable with this form of class structure.</li> <li>My approach was that I have four classes all classes were</li> </ul>	<ul style="list-style-type: none"> <li>I am not sure if it was purposeful or not but it seemed sometimes that the class discussion when all is said and done did not get tied into some sort of conclusion.</li> </ul>	<ul style="list-style-type: none"> <li>Possibly a little more direction during the in class discussions.</li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p><i>treated almost equally.</i></p> <p>This was in response to the following question.</p> <p>"This is a prerequisite course. While your final grade appears on your transcript, the grade is not used to calculate GPA. If the grade was used to calculate the GPA, how much additional effort (answer as a percentage, say 25% or 75% or some other percentage number) would you have spent on this course?"</p> <p>This is an interesting contrast to comments by other students. Perhaps it reflects a focus on the opportunity to learn versus the opportunity to get a grade. JD</p>		
	<ul style="list-style-type: none"> <li><i>I think the all discussion strckture of the course -both in-class and online discussion- were a little too much. If I'm enrolling a class to learn something, I prefer my proffessor to teach what he has to teach and than at the end of the class maybe an hour maybe half an hour he can have the students to create a discussion. But overall importance of discussions both in the class structure and in terms of grading were not fair. Not participating in the discussions does not show i didnt learn anything nor does it show i learned anything if i were to participate more.</i></li> </ul> <p>I get a significant number of students who have come from a rigid educational background. To get them involved in a lively discussion, whether on-line</p>	<ul style="list-style-type: none"> <li><i>In this class, there were students with strong transportation background and there were others with no transportation background. And the class was created around the subject of transportation and SSS. Given these the discussions were revolved around the students with stronger backgrounds. Was i supposed to raise my hand and talk about McDonalds? If this is a MARKETTING MANAGEMENT class that aims to teach marketting management (vs trasnportation and SSS), it is the instructors job to find a subject that relates to everyone in a better and balanced way.</i></li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
	<p>or in the classroom, can be a challenge. However, they are made aware of the expectations in a very clear manner the first time we meet. This issue could be resolved by resorting to a lecture-test approach. JD</p> <ul style="list-style-type: none"> <li><i>It is a fact that all students postpone their projects until the final moment. This is true not only for students but also the businessmen. Although we were given a whole semester to complete a project it was really hard to do it. In this manner i believe if the initial hand-in date were set for a week earlier than it was, and when the handin day came another week was given to the students, although the overall time given would be the same, the final quality of the work done would be much higher.</i></li> </ul>	

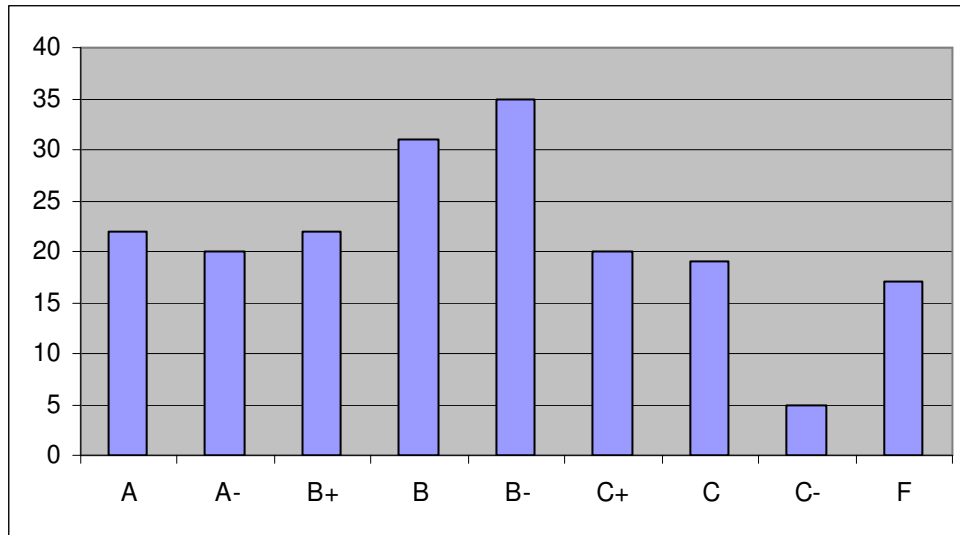
**Table 3 Student Comments**



**Figure 9 Distribution of Grades**

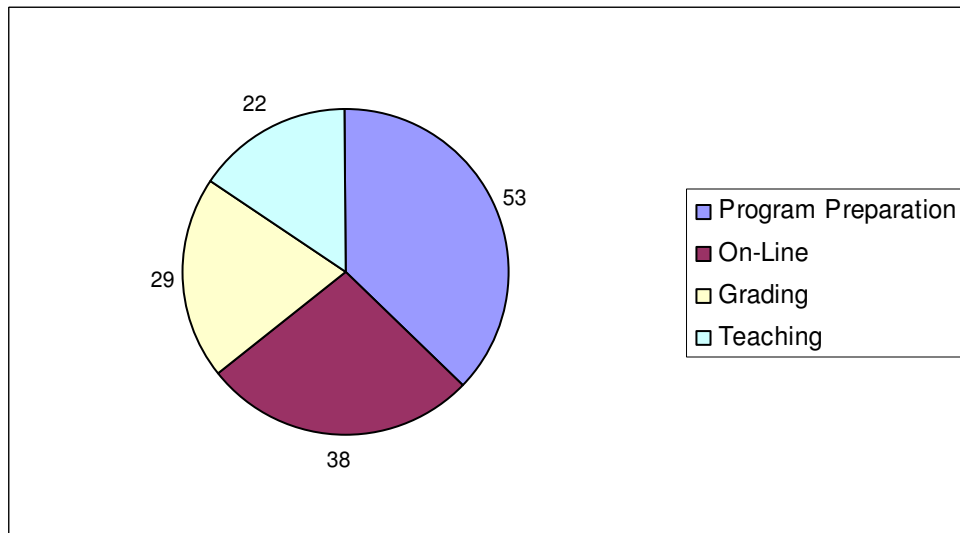
If one considers that a B or better as the goal for a graduate student, then 19 percent of the students achieved this target. At Maritime, prerequisites do not figure into the grade point average and all that is really required is that the students pass. Eight-five percent of the students passed this course.

Ninety-one percent of all students in the eight graduate level courses I have taught have received passing grades. Forty-nine percent of all students in the eight graduate level courses achieved a B or better grade level.



**Figure 10 Distribution of Grades Across All Graduate Courses**

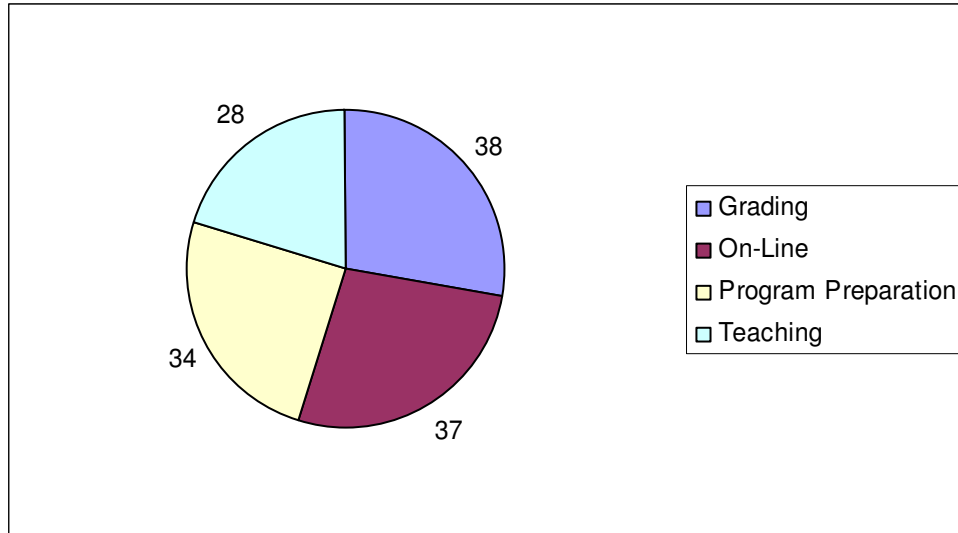
In comparing Figure 9 Distribution of Grades and Figure 10 Distribution of Grades Across All Graduate Courses one wonders to what extent the distribution has been affected by pass or fail with no impact on GPA versus the effect on GPA of core and elective courses.



**Figure 11 Distribution of Teacher's Time**

The combination of Teaching (in the classroom; 22 hours) and On-Line (the on-line discussions; 38 hours) comprises all the interaction between the students and the teacher. On-line time includes that required to assess the response of the student and write, as appropriate, responses to the students.

Program preparation is high because this is the first time I taught the course.



**Figure 12 Distribution of Teacher's Time 7300 Su4**

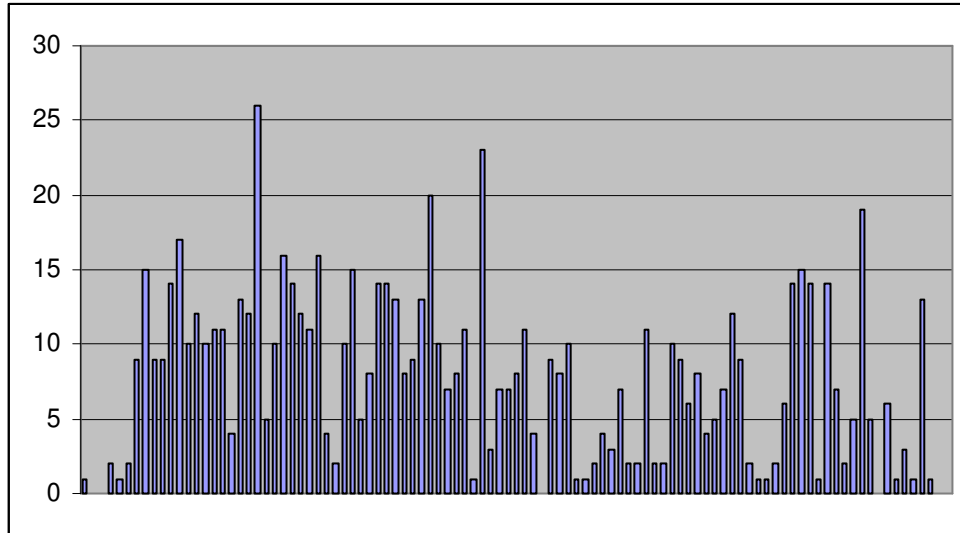
Compare the program preparation time in Figure 11 Distribution of Teacher's Time with that in Figure 12 Distribution of Teacher's Time 7300 Su4. The second figure represents an accelerated summer course based upon a previous course I first taught in the Spring 2004 term. Program preparation went from 95 hours for the Spring 2004 class to 34 hours in the Summer 2004 class. Reusable learning objects and course design have a lot to do with this.

Grading consumes a considerable amount of time. Grading, as measured here, is the weekly process of determining and entering students' performance into the grade book. It is the determination that consumes the time in the context of the present CBLMS. More about this later.

<b>What Worked Well?</b>	<b>Where Did We Get Stuck?</b>	<b>What Should We Do Differently Next Time?</b>
<ul style="list-style-type: none"> <li>The focus on discussion comes about from the teacher's 40 years of experience in business.</li> </ul> <p>In business, personal performance is judged on the basis of one's ability to contribute, in a meaningful way, to the resolution of issues. For the most part, this is done on the basis of discussion and, to a lesser extent, one's ability at "head-down" analytical work or writing.</p> <p>Hence, it is teacher's view that the pedagogy should, to the extent possible, prepare the student for survival "out there where the cold wind blows."</p>	<ul style="list-style-type: none"> <li>Thirty-two students is a large number. There can be significant daily activity in the on-line discussions (see Figure 13 On-Line Student Responses by Day).</li> </ul> <p>The more students one has the less focus you provide on an individual student. No new news here. However, cannot ignore student responses simply because there are a large number of students and responses.</p> <p>Less of focus may mean that I provide less of a nudge to those students that really need it.</p> <p>The implied commitment is that I will read, assess, and, if appropriate, respond to</p>	<ul style="list-style-type: none"> <li>Focus more on assuring that CourseSpace, the CBLMS used for this course, becomes increasingly easier to become friends with and use efficiently. Part of the issue lies in CourseSpace, part in the way in which it is introduced to the novice, and part in the lack of effort on the part of the student.</li> <li>Wrap-up discussions in-class and on-line.</li> <li>Clearly explain as early as possible the approach to teaching. Assure that students understand and, most importantly, accept the approach.</li> </ul>

<b>What Worked Well?</b>	<b>Where Did We Get Stuck?</b>	<b>What Should We Do Differently Next Time?</b>
<p>Many of the students are experienced in the fields of global business and transportation. Discussions allow for them to bring their experiences into the class in a way not allowed by a lecture-test approach. This makes for a much richer learning environment.</p> <p>Discussions are a basis for one to establish and develop personal networks. One of the mantras sometimes chanted in my classes is that of Perfect Knowledge; "Know what you know, know what you don't know, and know who knows what you don't know." Discussions make this real.</p> <p>Finally, discussions, especially those that take place on-line, allow the development of communications skills and self-confidence.</p> <p>In short, discussions are the fundamental underpinning of Connect, Communicate, Learn.</p> <ul style="list-style-type: none"> <li>• Classroom whiteboards were photographed and put in CourseSpace, the CBLMS for this course. This provided considerable benefit, particularly to those for whom English was not their first language.</li> </ul>	<p>every response. These do not go away because the I miss a day.</p> <p>Keeping this commitment can become a burden.</p> <ul style="list-style-type: none"> <li>• Keeping the grade book is burdensome. It takes more time than it should. Recommendations to reduce the burden have been made to SUNY.</li> <li>• The web interface to CourseSpace, particularly when involved in the on-line discussions is burdensome. In some respects CourseSpace gets in the way of the learning.</li> </ul>	

**Table 4 Teacher's Comments**



**Figure 13 On-Line Student Responses by Day**

My commitment to my students is that I will read, assess, and, if appropriate, respond to every post they make. I budget one hour per day, every day, for this task. There are days when this amount of time, and more, is required (see the tall spike at the left in Figure 13 On-Line Student Responses by Day). On other days, five minutes may be all that is required.

The key is to look at the student responses every day. If I miss a day then my workload is simply that much more the next time I log on. In my syllabus I advise that I will log on several times per week, but the students soon discern actual behavior. Students tend to contact me if I become a bit tardy.

## The Conclusions

**Connect:** CBLMS allows a connection of knowledge, skills, experiences, and ideas between more parties, at a higher bandwidth, and more frequently than would be possible in the traditional classroom environment. It provides a basis for a richer learning environment.

**Communicate:** Connection does not imply communication. Communication is about meaningful dialogue and is based on satisfying the following conditions:

1. The grammar and syntax of the messages being exchanged is easily understood, and
2. the information communicated in the messages is relevant, and
3. the medium of communication is acceptable.

I take responsibility for establishing these conditions. Positive feedback, constructive when necessary and setting good examples in the communication I author are important elements of this. Prompt response is also important.

There is, I think, an art to this. One doesn't want to communicate so frequently and in such a commonplace manner that the communication becomes background noise.

Finally, this communication requires commitment. From the start of the course to the end I am "always on." It can become wearing and wearying.

My sense is that the opportunity for improving the quality of communications is increased with CBLMS.

**Learn:** This is perhaps the most difficult objective on which to pass judgment. Are the grades represented in Figure 9 Distribution of Grades really indicative of the level of learning? Have I, in some way, permitted an unrecognized bias to color my thinking? How would this pattern change if I taught the course in a classroom only environment?



There are a number of variables to consider when coming to a conclusion on this issue.

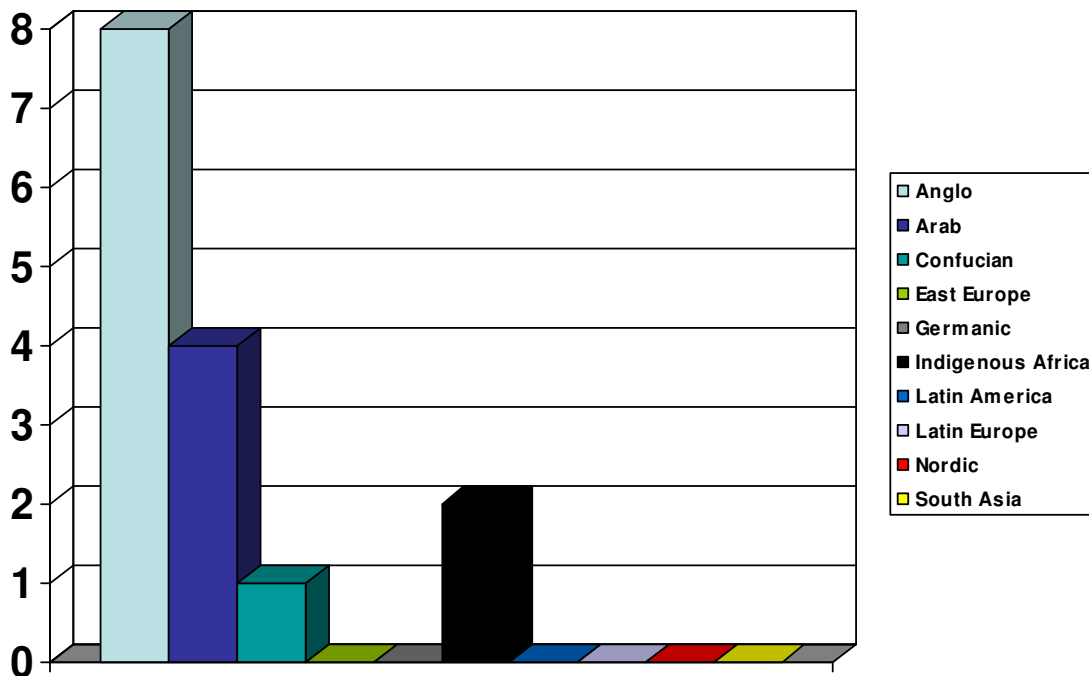
I will likely not teach this course in a classroom only environment simply to be able to make a comparison. My sense is that hybrid provides a richer learning environment and I would not ask students to put up with a less rich learning environment to satisfy my curiosity.

## **Second Example: GRO 7300 DL Sp 5 Transportation Management (Distance Learning)**

### **Analytics**

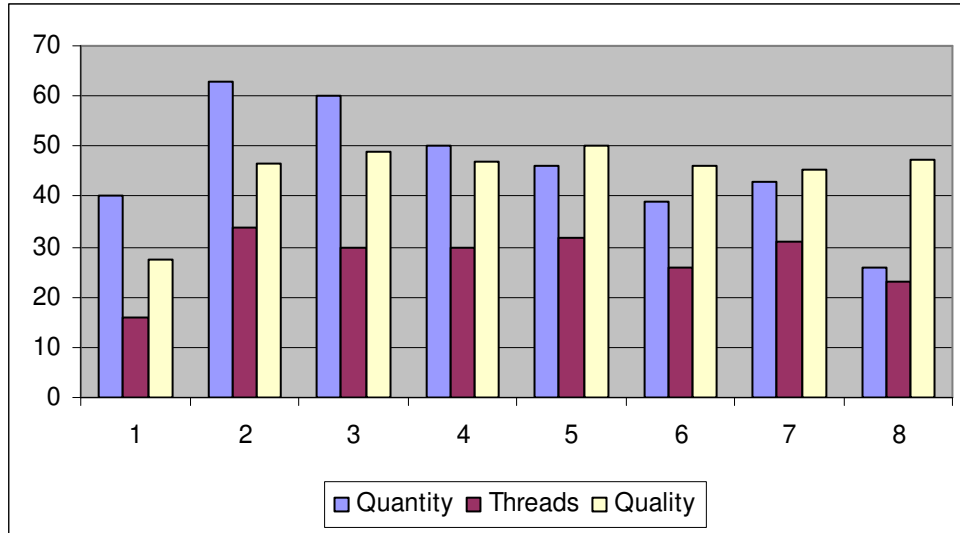
This was a graduate course that met for eight weeks beginning on January 17, 2005. Fifteen students were enrolled. I had taught this course three times previously; once as a 15 week hybrid course, once as an eight week distance learning course, and once as a seven week summer course.

Cultural demographics<sup>5</sup> for the class were:



**Figure 14 Cultural Demographics**

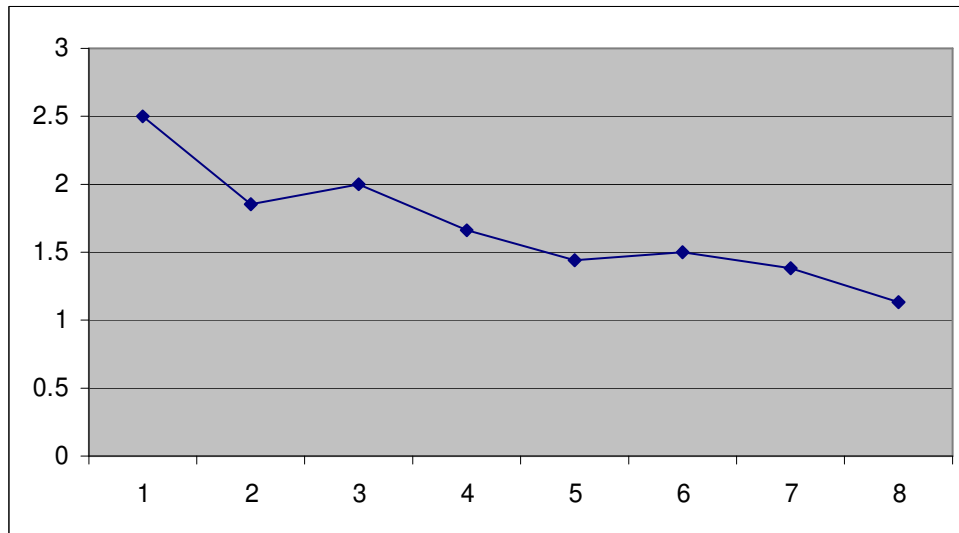
There was one female in the 15 students. Four of the students had previous experience with CBLMS, all of whom picked this experience up for the first time in my spring or summer 2004 courses.



**Figure 15 Weekly Posts**

Discussion of Figure 15 Weekly Posts:

1. The ratio of quantity of posts to those that are thread starters went down over the eight week period.

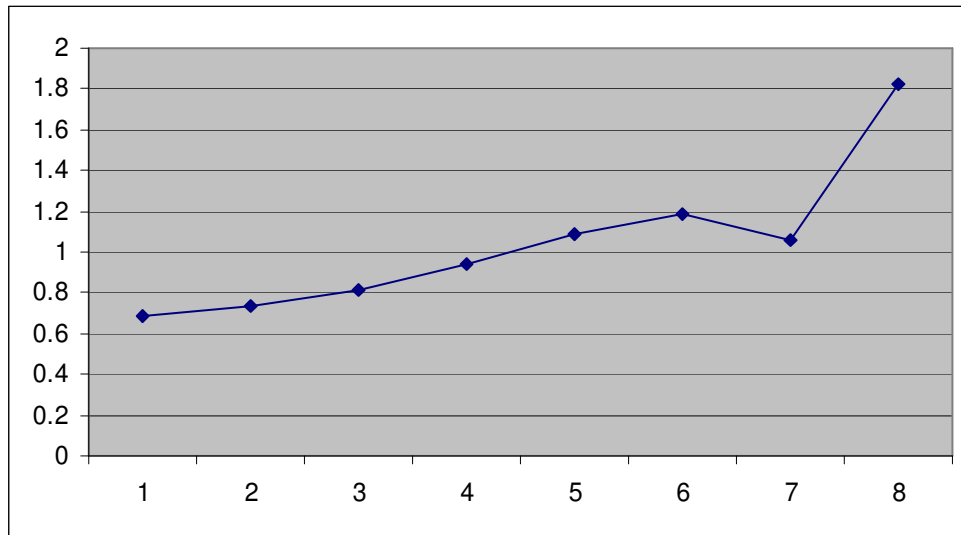


**Figure 16 Ratio of Responses to Thread Starters**

2. I reckon that the students figured out that the approach to assessment rewarded them for conversations with the teacher more than conversations with their fellow students. Hence, one really did not need to read and respond to the other students. This, of course, is not the desired behavior. In subsequent courses I have advised the students against this type of behavior, told them how I can see when it happens, and explained how I take his behavior into consideration when I assign a final grade.
3. I had previously stated that "Students starting discussions gain more points than those who don't." See the discussion of Figure 4 Discussion Threads on page 5. Students whose posts generate responses should also get more points than those whose posts do not generate responses. The notion here is that they are saying something interesting and others are responding.

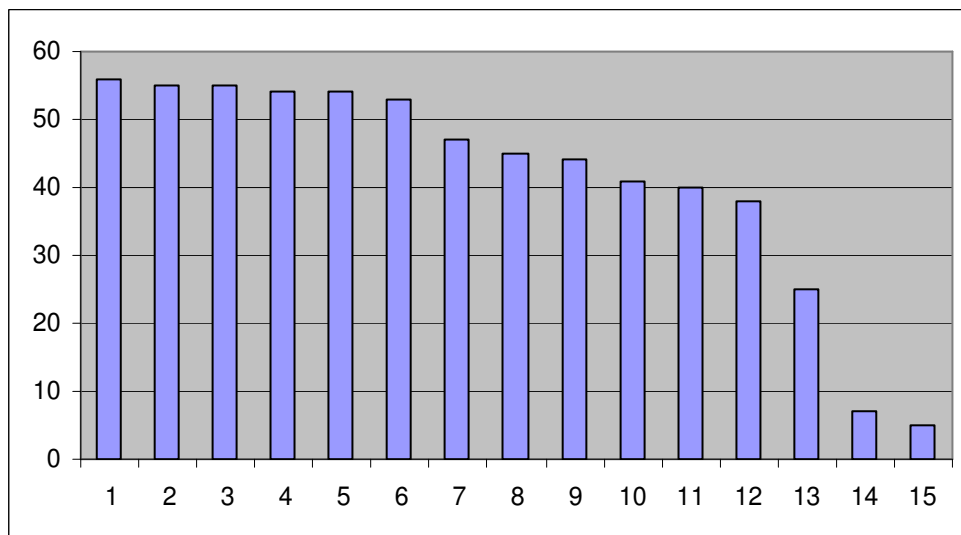
This data is available, but there is not easy way to capture and analyze this data in the current CBLMS. Consequently, when establishing the final grade I give a student credit for this on the basis of only a cursory inspection of the information and some sense of remembering whether the student's post generated responses.

- There are no holidays or weekends in distance learning. The pattern seen in Figure 15 Weekly Posts is about what I would expect – first week slow, a bump as the students understand the level of involvement required followed by settling into a rhythm and then a slight downturn at the end.



**Figure 17 Ratio of Quality Points to Number of Posts**

The same desirable trend shown in Figure 7 Ratio of Quality Points to Number of Posts shows in Figure 17. Clarification is in order here. As can be seen in Table 2 Quantity Points on page 4 more than four responses in a week will not gain the students additional quantity points. However, these additional posts can impact the average quality of the student's posts for a week. They can also impact how I assign the final grade at the end of the term. The behavior I try to encourage is one of making four high quality posts each week with two of the four being thread starters.



**Figure 18 On-Line Points by Student**

Discussion of Figure 18 On-Line Points by Student:

1. The maximum available points for the on-line discussions were 56.
2. The top six students accounted for 53 percent of the points. This is roughly the same as the percentage of students accounting for 50 percent of the grade in Figure 8 On-Line Points by Student on page 8. What is interesting to me is to compare the pattern of Figure 8 with that of Figure 18. This suggests that the distance learning course may attract students of greater capability with more commitment to the learning process than did the hybrid course previously discussed.

What would be interesting is to follow a group of students through a mix of classroom, hybrid, and distance learning courses. What works best for these students?

Eight of the 15 students responded to the Course Feedback Survey. This was a much larger percentage than in the first example given in this paper. Why should that be?

Students' comments are unedited. I've added comments as appropriate.

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<ul style="list-style-type: none"> <li>• Overall it was a well structured and informative. Some of the things I liked most are -               <ol style="list-style-type: none"> <li>1. Very good reading material like articles on GLOBE project, supply chain security, porter's value chain</li> <li>2. The textbook for the course was excellent. It comprehensively covered every aspect of transportation. Though I must admit I had difficult time absorbing all that information in such a short time.</li> </ol> <p>This issue of material versus time is one that occupies my mind from time to time. I'll take this up again in my conclusions regarding this course. JD</p> <li>3. Good insights from some of the students like ___ and ___ with whom I could not have interacted but for this online course.</li> </li></ul> <ul style="list-style-type: none"> <li>• I think the quality of discussions was very good. Some of the students were quite experienced in this field and I got a very diverse perspective</li> </ul>		<ul style="list-style-type: none"> <li>• As most of the students taking this course are probably working most of the postings were at the end of the week. So there would not be enough discussions on a thread as the module would end. If possible the course could be extended by a month or modules could be open for around 10 days or so.</li> </ul> <p>I think the project could be paper on a more narrow subject which could be done individually. Fortunately I had a very good team and we managed it well. But I found some of my class mates struggling as they were located at different places and found it difficult to communicate or co-ordiante on the project.</p> <ul style="list-style-type: none"> <li>• The course materials were well sequenced and the case studies were very interesting. As most students are from maritime field we could probably include some case studies related to maritime industry.</li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p><i>on each topic.</i></p>		
<ul style="list-style-type: none"> <li>• <i>The flexibility of when to be on-line. I also learned quite a bit from the interactions between the students on the discussion board.</i></li> <li>• <i>The sequence and the due dates were fine. The course was accelerated, but I liked the pace.</i></li> <li>• <i>The instructors management of the course was superb. We were prompted on certain discussion items, which was good, but for the most part we were given free reign on the direction we took. Feedback was give promptly</i></li> </ul> <p>The inclusion of this comment is not meant to toot my own horn, but rather to underscore how the importance of active management of the course by the teacher.</p> <p>I believe distance learning course require more involvement and commitment over a shorter period of time than do hybrid and classroom courses. Like the student, the teacher must make and keep a commitment that is beyond the ordinary. JD</p>		<ul style="list-style-type: none"> <li>• <i>None. I found it accurate that you need 16-20 hours a week for the course, and that seems right.</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>This was my first class via distance learning, it was a great experience. My favorite part of the class were the postings. I learned something new everytime I logged on. Everyone shared there experience therefore getting rela life stories and experiences about transportation. Also I liked that we covered a vast majority of transporttion. I was introduced to new topic and</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The only thing that I found a little bit difficult is interacting with the students in regards to the project, towards the deadlines set. The level of communication was at different levels with some group members. Instead of group project maybe an individual one.</i></li> </ul>	

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p><i>learned a great deal.</i></p> <ul style="list-style-type: none"> <li><i>I enjoyed the subject material and honestly if we had more postings, it would have been fine with me. I actually learned a great deal from the postings, project, and our textbook.</i></li> <li><i>I think the professor did AN OUTSTANDING JOB. He was always available, when ever we needed him. He managed the class with upmost professionalism and respect for the students and the students. I think the course in terms of the professors interaction, participation , and management is at a peak.</i></li> </ul> <p>Comments like these are carbo-loading for teachers. No doubt about it. However, the point of including this comment are the words "professionalism, respect, interaction, participation, and management."</p> <p>Distance learning is not the easiest way to earn one's salary.</p>		
<ul style="list-style-type: none"> <li><i>I liked the fact that I could work at my own pace during the week. It was a big help since I was working five days a week this semester.</i></li> <li><i>I really enjoyed this course this semester, I liked the way you let the modules develop and the free thought that was encouraged.</i></li> </ul>		<ul style="list-style-type: none"> <li><i>The only thing i think might make the discussions better is if there were due dates during the week for the individual questions.</i></li> </ul> <p>The student is evidently asking for less comprehensive questions and a shorter period of time in which to answer them. I suspect that this may be a request for additional external discipline in how his time should be managed. JD</p>
<ul style="list-style-type: none"> <li><i>It was very useful and insightful to exchange ideas with logistics professionals in other parts of</i></li> </ul>		<ul style="list-style-type: none"> <li><i>I might consider relaxing the weekly homework schedule to allow for over runs in peoples'</i></li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p><i>the world and within other disciplines of the logistics industry via the online medium. The flexible schedule for addressing classwork was very helpful to accomodating the different time zones.</i></p> <p><i>Further, the course professor did a good job of spurring class room discussion and bringing in additional "real world" discussion materials.</i></p> <p>Interesting use of "class room." Could it be that the student didn't distinguish between environments? Is this good? JD</p> <ul style="list-style-type: none"> <li><i>I thought the discussions were thought provoking. I would not change the format.</i></li> <li><i>Perfect work load for working professionals - though provoking academic content coupled with good discussions.</i></li> </ul>		<p><i>non-academic workload; the unfortunate side effect however would be potential lack of response and participation in discussions, and therefore probably is not worth accommodating</i></p> <ul style="list-style-type: none"> <li><i>More supplemental readings - these were great !</i></li> </ul>
<ul style="list-style-type: none"> <li><i>The ability to learn and respond within your own week-long time period for each week's assignment</i></li> </ul>		<ul style="list-style-type: none"> <li><i>According to the professor, we were not supposed to respond to each others comments with phrases such as..I agree with him/her, etc... However it seemed that many students always responded with I agree with him/her or I think his/her response is etc... Maybe this provision should not be there, or there could be a seperate section for specific student to student responses</i></li> </ul> <p>The instructions for discussions are precise on this matter. I'm not confident, however, that they are read and understood to the extent I would like them to be. You can lead the horse to water, but getting him to drink may be another matter. Additional effort is required</p>

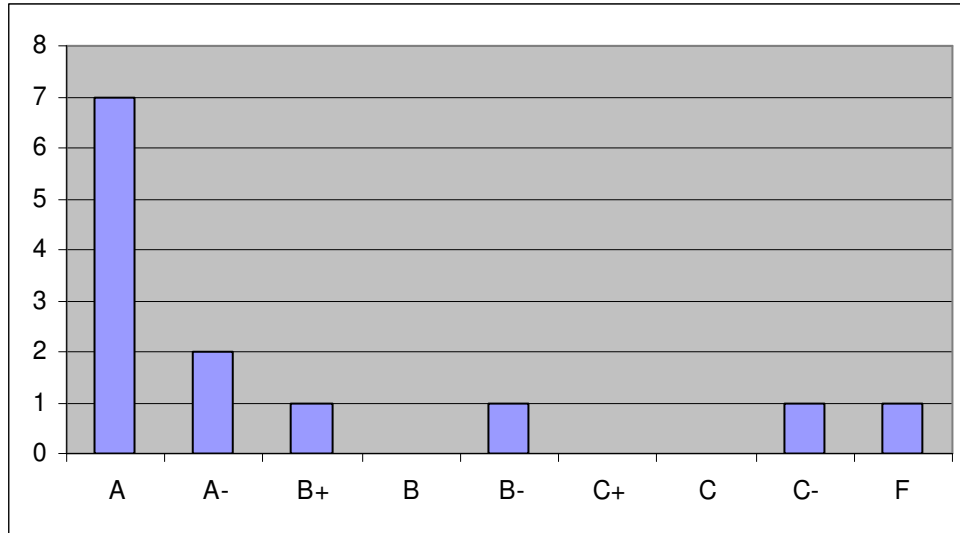
What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p>on my part to address these situations. JD</p> <ul style="list-style-type: none"> <li>• <i>With the introduction of group projects to an online or distance learning course it makes things challenging. Although I believe working with a group is skill absolutely critical to success in business, the management of the groups may need to change. Specifically, assign teams after the add-drop date or later so as to insure(or try to) that teams have equal numbers. This may force the projects to be smaller, as teams will not have the entire course to work on it, but I believe it will have a greater effect on quality group work.</i></li> </ul> <p>It is challenging to go through the forming, storming, norming, performing processes associated with group work in an eight week period. Assigning teams after the drop/add date cuts into the time available to do this. Perhaps a better answer is not to allow drop/add. JD</p>
<ul style="list-style-type: none"> <li>• <i>With regard to Profesor Drogan's teaching style, I find that sitting in class does not benefit me much because I'm listening to other students talk and don't feel like there's much structure.</i></li> </ul> <p><i>Course Space, however, provided me with the opportunity to learn a great deal in that I did a lot of research on my own and at my own weekly pace. Course Space has a lot of potential as a learning medium.</i></p> <p>I find this a very interesting comment in that the general</p>		<ul style="list-style-type: none"> <li>• <i>Make it a requirement to make at least one post in every discussion. When two discussions are being held in a week, people often neglect the second discussion, the result being that a person like myself doesn't learn much with regard to the second discussion.</i></li> <li>• <i>The key to doing well is getting started immediately in the course. People need to understand that when they let a week go by before they start posting, they've just lost 6 points on their final grade.</i></li> </ul> <p>Of late I have begun to</p>



What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p>structure and conduct of my graduate classes, whether hybrid or distance learning, is the same. I think this is more of a comment on the student's preference for one learning environment over another. JD</p> <ul style="list-style-type: none"> <li>• <i>The quantity of the work is fine. Any more might be asking too much.</i></li> <li>• <i>The professor was very active and answered questions promptly; no complaints.</i></li> </ul>		<p>equate time with points and emphasize the amount of time that has passed and remains in the course. I do this with a red/green bar in the newsflash area of a course. I do not provide opportunities for makeup. The idea is to motivate the student to get onboard early and stay onboard to the end. JD</p>
<ul style="list-style-type: none"> <li>• <i>The course was fast-paced and that kept me interested and focused.</i></li> </ul> <p><i>The various backgrounds and experiences of the class forced me to consider many factors that I hadn't previously been aware of</i></p>		<ul style="list-style-type: none"> <li>• <i>When supplemental materials are posted in Module #10, I would like to have seen mentioned made in that week's discussion area.</i></li> </ul> <p>I assumed students would pick up the new posting by the manner in which they interacted with CBLMS. This doesn't work if one looks at CBLMS on a module basis. JD</p> <ul style="list-style-type: none"> <li>• <i>To improve interactions and discussions, I would like to see your postings include questions directed at the rest of the class based on a student's original posting. Perhaps this would "force" a little more 'give and take' on the class and add to the discussions, rather than just having everyone post their answer to the question and not really comment on what others have said.</i></li> </ul> <p>This is an issue. In a classroom environment this is very easy to do; less easy in a distance learning environment. I agree with the student that additional focus is required here. JD</p> <ul style="list-style-type: none"> <li>• <i>In the future, project teams should be announced earlier.</i></li> </ul>

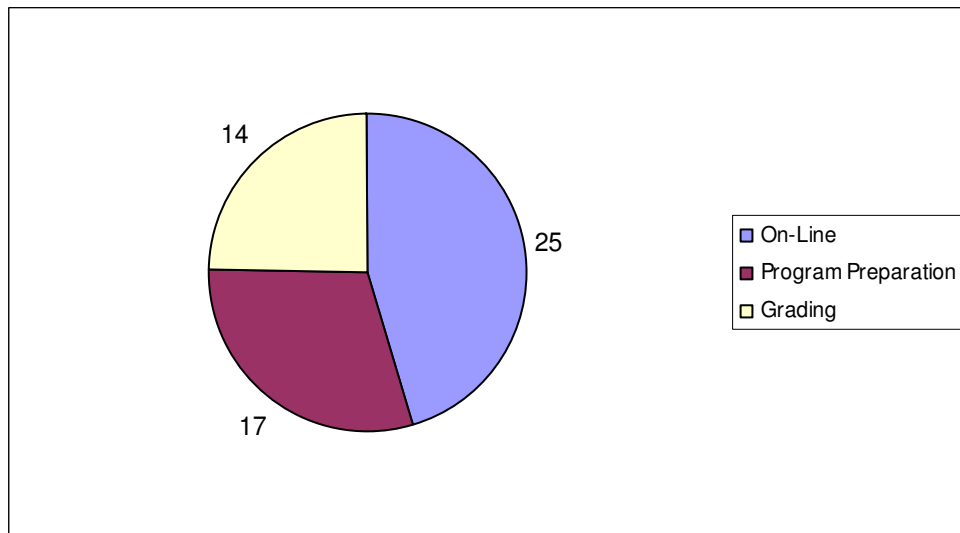
What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p><i>This would allow more time for the team to get "established" and individual work to be done and reviewed by the team.</i></p> <p>I agree. JD</p> <ul style="list-style-type: none"> <li><i>In order to get a better idea of who actually is in class, a small written assignment could be added early on (within the first 2 weeks).</i></li> </ul> <p>Students are reluctant to say much about themselves in the Meet Your Classmates section of the CBLMS. However, I also sense this student is asking for additional insight into her fellow students approach to learning. JD</p> <ul style="list-style-type: none"> <li><i>There needs to be a definite determination of class roster within the first two weeks. Nonparticipating students are a HUGE detriment to the project teams. I don't know how many of the other teams were similarly affected, but for team #3, I had really written _____ off completely and then all of the sudden he makes a posting in the last week.</i></li> </ul> <p>This is a great point raised by the student. We need to be a bit more firm with students as to participation in the class. JD</p> <ul style="list-style-type: none"> <li><i>I would like to see a "newsflash" posting at the end of each week. It would serve as a guidepost for us and provide the class with a little more direction.</i></li> </ul>

**Table 5 Student Comments**



**Figure 19 Distribution of Grades**

Ten of the 13 students in the class earned a B or better.



**Figure 20 Distribution of Teacher's Time**

The on-line discussion of 25 hours comprises all the interaction between the students and the teacher. On-line time includes that required to assess the response of the student and write, as appropriate, responses to the students.

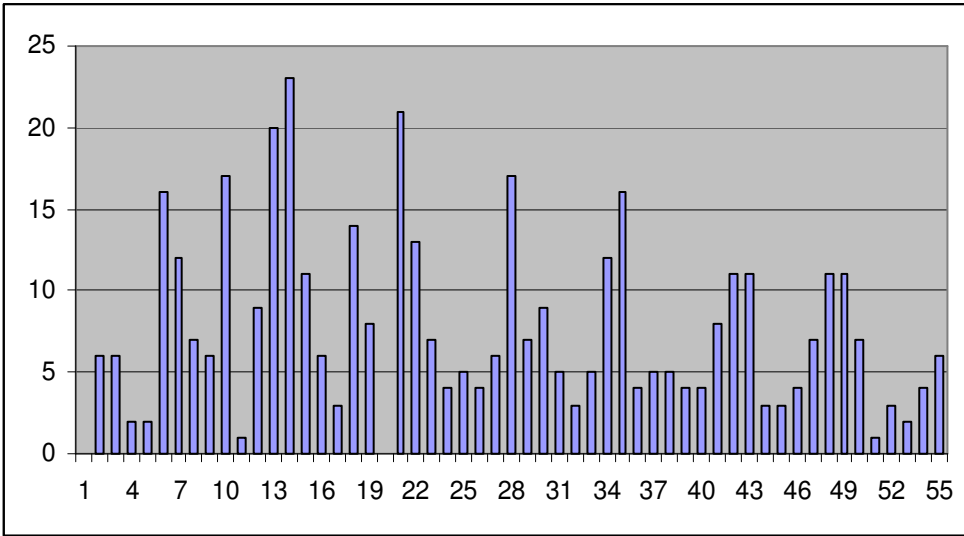
Program preparation is low at 17 hours because I had previous experience in teaching the class.

Grading consumes a considerable amount of time. Grading, as measure here, is the weekly process of determining and entering students' performance into the grade book. It is the determination that consumes the time in the context of the present CBLMS. More about this later

<b>What Worked Well?</b>	<b>Where Did We Get Stuck?</b>	<b>What Should We Do Differently Next Time?</b>

	<ul style="list-style-type: none"> <li>• The teams did not get off to a strong start.</li> </ul> <p>Part of this result was due to not picking the teams until two weeks into the eight week course. I delayed in order to better understand the students and the best way to put together more or less equivalent teams.</p> <p>One simply doesn't have the time to do this. The answer is to have the teams assigned on the first day and be alert to any subsequent changes that need to be made.</p> <ul style="list-style-type: none"> <li>• Uneven participation in the teams by the students.</li> </ul> <p>Individual performance on a team is assessed by one's team members. This assessment is worth about 17 percent of the final grade, ample incentive it seems to me for one to participate fully in the team.</p> <p>Ten of the 13 students contributed appropriately to team activity.</p>	
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**Table 6 Teacher's Comments**



**Figure 21 On-Line Student Responses by Day**

## The Conclusions

Here I talk about conclusions that are different from those I made on page 16 in the discussion of First Example: TMGT 6500 C F4 Marketing Management (Hybrid)

**Connect:** I'm not convinced that a distance learning environment provides as rich, and especially as responsive, a learning environment as in the hybrid case (First Example: TMGT 6500 C F4 Marketing Management (Hybrid)). I hypothesize that much can be read in the body language of the classroom and these readings suggest connections that may not be visible in a distance learning course.

**Communicate:** The hypothesis given immediately above suggests that limitations in connection limit communication.

**Learn:** The comment given under communicate, by extension, suggests limitations in learning.

## Third Example: TMGT 7300 C Sp 5 Transportation Management (Hybrid)

### Analytics

This was a graduate course that met for fifteen weeks beginning on January 17, 2005. Forty-one students were enrolled. I had taught this course three times previously; once as a 15 week hybrid course, once as an eight week distance learning course, and once as a seven week summer course. I also had an eight week distance learning version of the course underway simultaneously (see Second Example: GRO 7300 DL Sp 5 Transportation Management (Distance Learning) beginning on p 17).

Cultural demographics<sup>6</sup> for the class were:

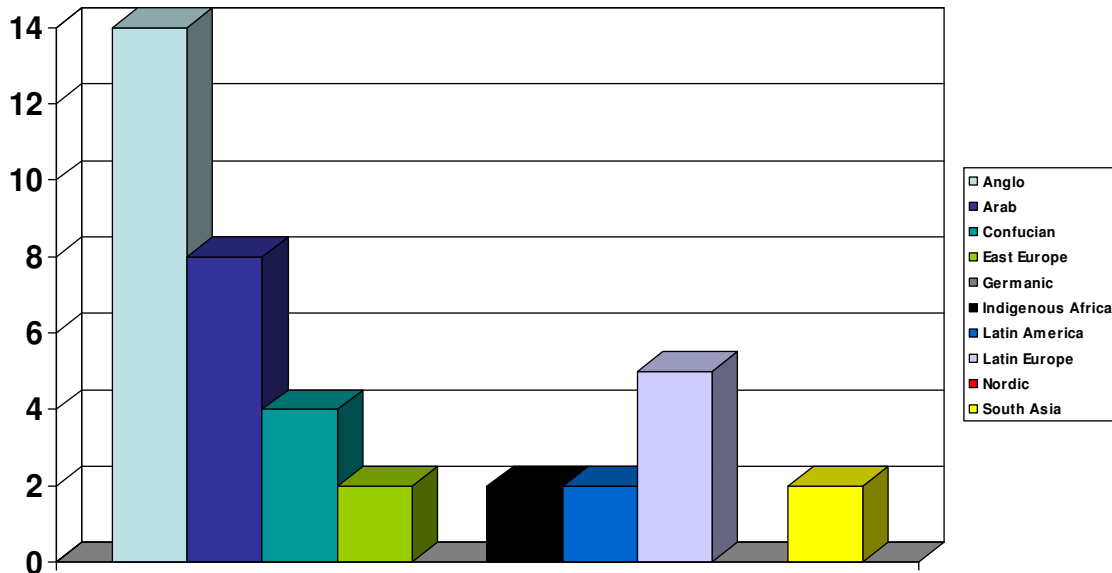
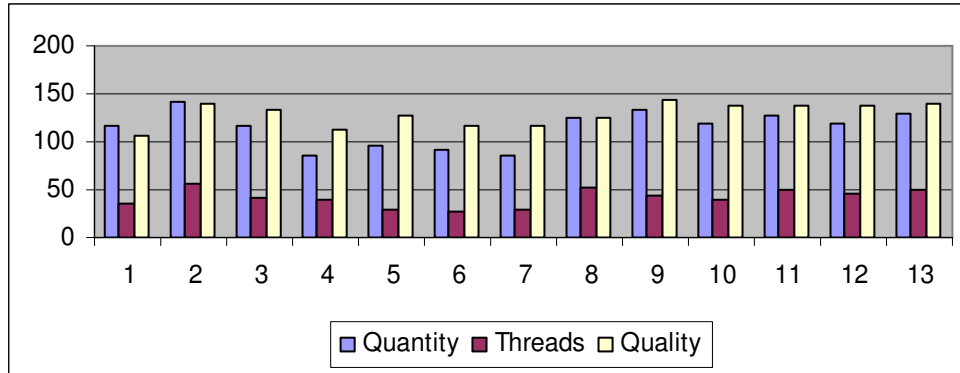


Figure 22 Cultural Demographics

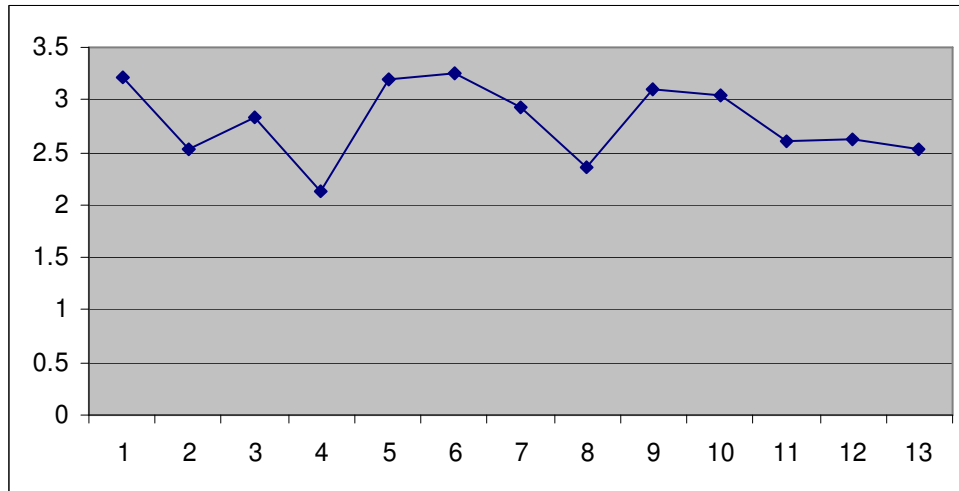
There were seven females in the 41 students. Nineteen of the students had previous experience with CBLMS, all of whom picked this experience up for the first time in my previous courses.



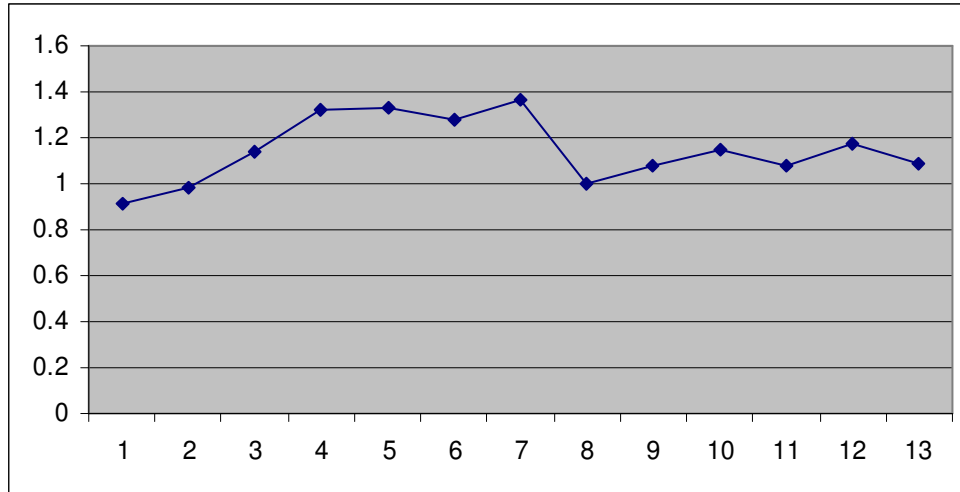
**Figure 23 Weekly Posts**

Discussion of Figure 23 Weekly Posts:

- I. The ratio of quantity of posts to those that are thread starters fluctuated, but seemed to stay reasonably constant over the 15 week period.



About the fourth week of the course I noted this ratio declining. I recall saying to the class that I interpreted this as they were only having a conversation with me and that I found this unacceptable. A ratio of two would be about right.



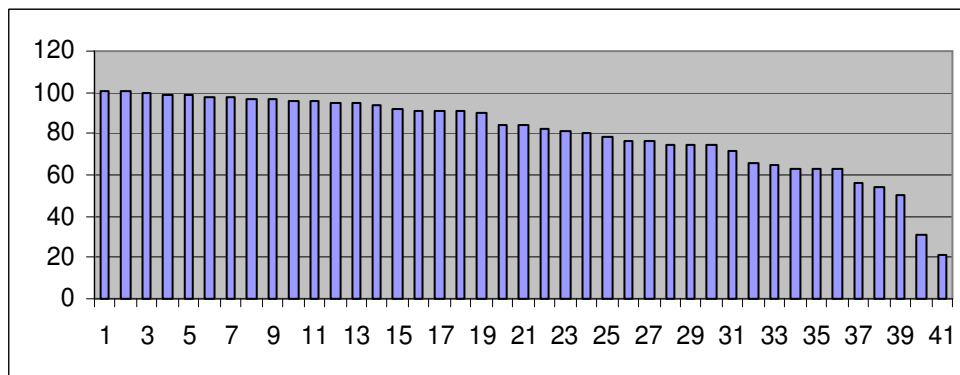
**Figure 24 Ratio of Quality Points to Number of Posts**

The desirable trend noted in Figure 7 Ratio of Quality Points to Number of Posts shows in Figure 17 Ratio of Quality Points to Number of Posts does not show in Figure 24 Ratio of Quality Points to Number of Posts. It's difficult to explain the downward turn between weeks seven and eight. However, one might construct the following hypotheses:

1. This would have been about the time of midterms in other courses the students may have been taking.
2. There is also a reasonably heavy workload in this class caused by the need to read, consider, and respond, if appropriate, to an average of 57 posts from students per week, less the student's own posts and my posts.
3. After the second week it was clear that a single large discussion group was inappropriate. The early participants in the weekly discussion tended to make the high value posts and the later participants, knowing that simply repeating what had been previously said was not valuable, were disadvantaged.

The students and I discussed this and agreed to divide into two discussion groups. This division was made arbitrarily and there is the chance that there was not an equitable division of the stronger students.

One would really like to have a balance of talent, but there seems to be no easy way to assure this.



**Figure 25 On-Line Points by Student**

Discussion of Figure 25 On-Line Points by Student:

1. The maximum available points from the on-line discussion were 108.
2. The top 17 students accounted for 50 percent of the grade. This is roughly the same as experienced in the second example tending to refute the notion that distance learning attracts students of greater capability.

Four of the 41 students responded to the Course Feedback Survey. This was a much smaller percentage than in the first example given in this paper. Why should that be?

Students' comments are unedited. I've added comments as appropriate.

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<ul style="list-style-type: none"> <li>• <i>I think that, while the CourseSpace work is fun and productive, I think I put in a little more work on it than I should have - pound for pound, given my course load. Perhaps lowering expectations a little would do best (ie. from three "quality" posts to maybe two, or one really good one). The thing is, I don't think my work typified the class on the whole - so given that, I digress. Just an opinion.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The I hated most about this class was NOT the number of people in the room (which was heinous) but how close everyone was to one another. Same number of people: okay. Bigger classroom: MUST.</i></li> </ul> <p><i>Point being, if I felt more comfortable (better chairs, desks) I'd be more at ease to contribute as opposed to thinking about how uncomfortable I am all the time.</i></p>	
<ul style="list-style-type: none"> <li>• <i>I think that the online discussions turned out to be an excellent learning tool that I really enjoyed. I think that the online discussions are good because to successfully participate in the discussions, everybody has to go through three steps:</i></li> </ul> <ol style="list-style-type: none"> <li><i>1) get certain knowledge of the topic</i></li> <li><i>2) make to yourself questions</i></li> <li><i>3) elaborate an opinion about it.</i></li> </ol> <p><i>I believe that with the traditional learning tools nobody passes the first step.</i></p> <ul style="list-style-type: none"> <li>• <i>Although there was a substantial amount of weekly work, I think that the pace and the sequence of the materials</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>As we commented in our last class, maybe a better definition of what it is expected in the project could help in the future. Nevertheless, too many explanations wouldn't resemble a real business situation.</i></li> <li>• <i>Definitely one thing that could improve the level of participation would be to reduce the number of students attending at the same time this course.</i></li> </ul> <p><i>Regarding quality, I think that it depends basically on the interest of the students in the course.</i></p> <p><i>I have previously commented on the size of the class. Forty-one was too many. The simple solution would have been to create an additional section, but we lacked the resources</i></p>

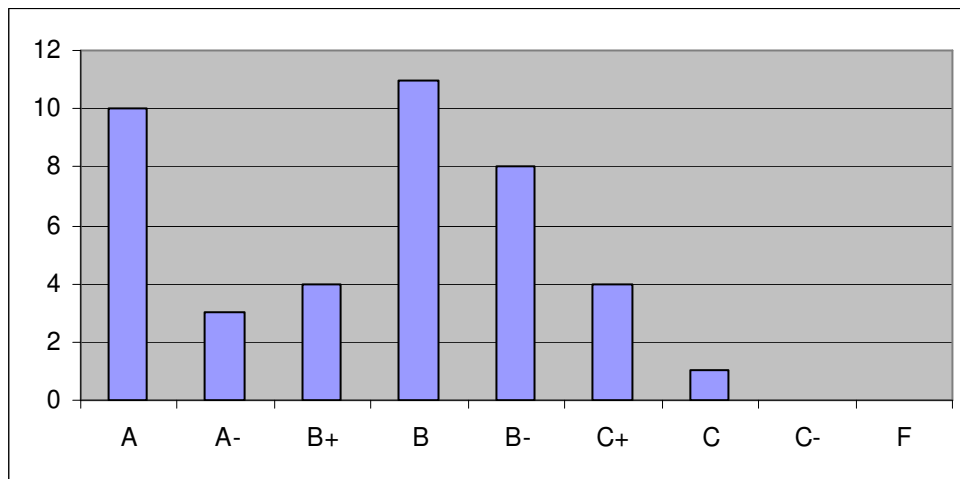


What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
<p>were well distributed.</p> <ul style="list-style-type: none"> <li><i>I really enjoyed this course. I liked interacting with my classmates and I feel that I learned many things.</i></li> </ul> <p><i>I liked the way respect was promoted in the discussions. Also, I liked the ability of the professor in driving the discussions to the important points.</i></p> <p><i>Although I have handed out many projects in my life, I have never ever received such a comprehensive analysis of the performance of the project. It's been a great thing to get feedback of our project and I am impressed of the level of detail of that analysis.</i></p> <p><i>I found it in general, a terrific way of teaching</i></p>		<p>(classroom space, instructor's time) to be able to do this.</p> <p>We should also have enforced the registration limits. JD</p>
<ul style="list-style-type: none"> <li><i>the posting online, the chit-chat online!</i></li> </ul>		<ul style="list-style-type: none"> <li><i>more lecture in classroom</i></li> </ul> <p>This, I think, reflects the educational environment from which the student came. He is asking for more of what he has had in the past. JD</p> <ul style="list-style-type: none"> <li><i>more lecture prof Drogan because sometimes i felt like we are making the class lecture but still we didnt get the main point until you say something to generalize. so it was like too much talking from the kids and Dad (you) comes home to settle the case. I found many student interventions out of subject but i really love your way to make us feel really comfortable even we screwing. Thanks prof, it is really nice from you but more lecture. At least before to start the interaction between you and us, just to use the first 30</i></li> </ul>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p><i>minutes to teach us about the week topic (culture, relationship management...)and now let's rock and roll our life experience discussion.</i></p> <p>This is perhaps one of the more profound, if colloquial, points made by a student. It represents a dilemma in form with which I wrestle. I'm not sure that with the homogeneity of the students I will ever get this quite right. JD</p>
<ul style="list-style-type: none"> <li>• <i>Actually, I found myself producing better quality work than I thought I was capable off.</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>The Prof. could encourage students to provide if possible more shared references.</i></li> <li>• <i>When I was studying my undergraduate degree at CUNY, I used a similar hybrid online system (Blackboard) for a class, but there was the ability to communicate with other students instantly (like instant messengers), because sometimes as soon as you post, some one responds within minutes indicating that they too are online.</i></li> <li>• <i>I know the idea with the online discussion is to have a refined discussion that is thought out and well stated, but allowance should be considered to incorporate some thing similar. It may be an issue for Course to consider.</i></li> </ul> <p>This an interesting idea. However, it seems to me that CourseSpace and SLN are very close to this in that the students work through the web. Responses appear when posted on the web. However, there is no convenient way to know who else is on-line at the time the student is on-line. Perhaps, as this student</p>

What Worked Well?	Where Did We Get Stuck?	What Should We Do Differently Next Time?
		<p>suggests, an even more conversational environment would arise. JD</p> <ul style="list-style-type: none"> <li>• <i>I would suggest that based on the professor's discretion that if he felt that the online discussion was really eye-opening for the class, he should allow it to run for a few more days to get as much out of it.</i></li> </ul> <p>While I establish a start and stop date for topics, it is mainly to provide some sense of structure and to keep the discussions moving along from topic to topic. I do not rigorously enforce the start and stop dates. I, like the student, feel that a rich conversation ought to be allowed to run its course as much as possible. JD</p>

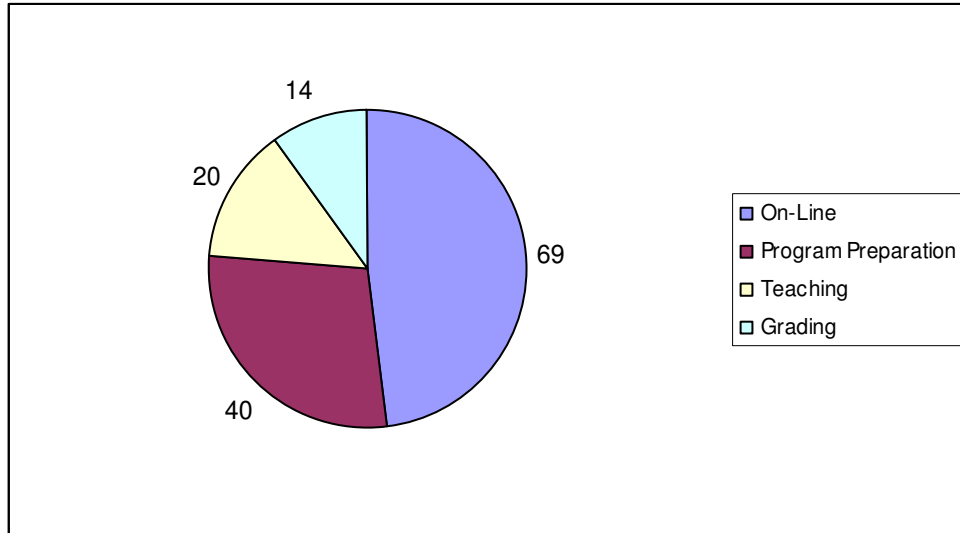
**Table 7 Student's Comments**



**Figure 26 Distribution of Grades in 7300 C Sp5**

Twenty-eight (68 percent) of the students earned a B or better grade. Fundamentally, this was a strong class and I expected them to do well.

Many had studied with me before, knew how I approached learning, and knew my expectations. This suggests another potentially interesting research project.



**Figure 27 Teacher's Hours**

The numbers associated with the slices of the pie are the actual hours I spent on each of the major activities.

An obvious question occurs when one compares Figure 27 Teacher's Hours to Figure 20 Distribution of Teacher's Time and considers that:

1. They are the same course except the hybrid/distance learning difference.
2. It represents material I have taught before

Why the difference in program preparation time: 17 in the second example and 40 in the third example?

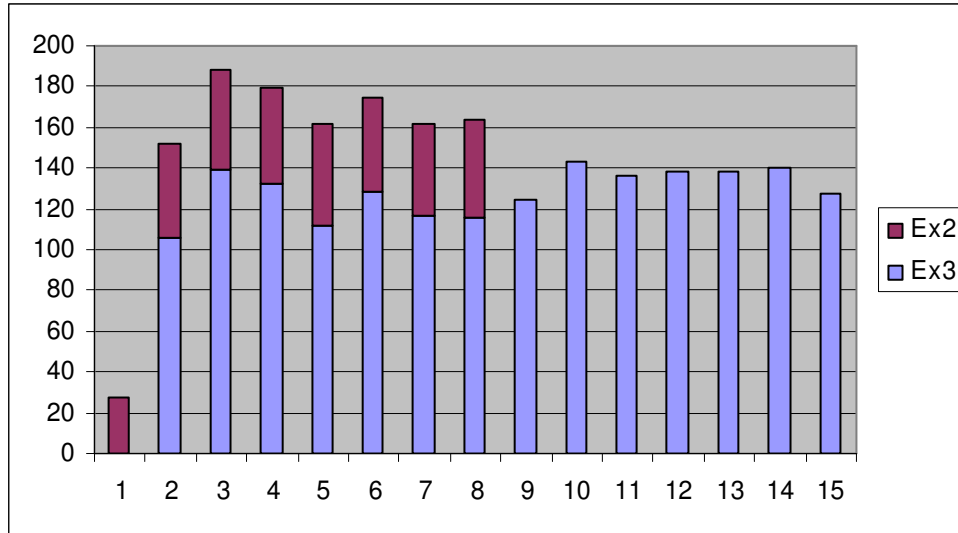
The courses overlapped. Both started on January 18. The distance learning course finished on March 12 and the hybrid course May 3. My habit is to prepare hybrid course first, then the derivative distance learning course.

<b>What Worked Well?</b>	<b>Where Did We Get Stuck?</b>	<b>What Should We Do Differently Next Time?</b>
<ul style="list-style-type: none"> <li>• The students demonstrated a great deal of respect for one another. I was particularly pleased by this</li> </ul>	<ul style="list-style-type: none"> <li>• The number of students in the class tended to inhibit in-class discussions. More than one spoke of being intimidated (their word). Perhaps a better word would be inhibited.</li> </ul>	

**Table 8 Teacher's Comments**

It is extremely difficult to prepare a graph of on-line students responses by day for this course. I had mentioned earlier that, because of the number of students, I had split the class into two discussion groups. I had also established separate discussion groups for the teams (10) to use as they worked on the course project. As a consequence, I ended up with 12 small groups and the students responses (discussion topic and project work) are intermixed for a particular day.

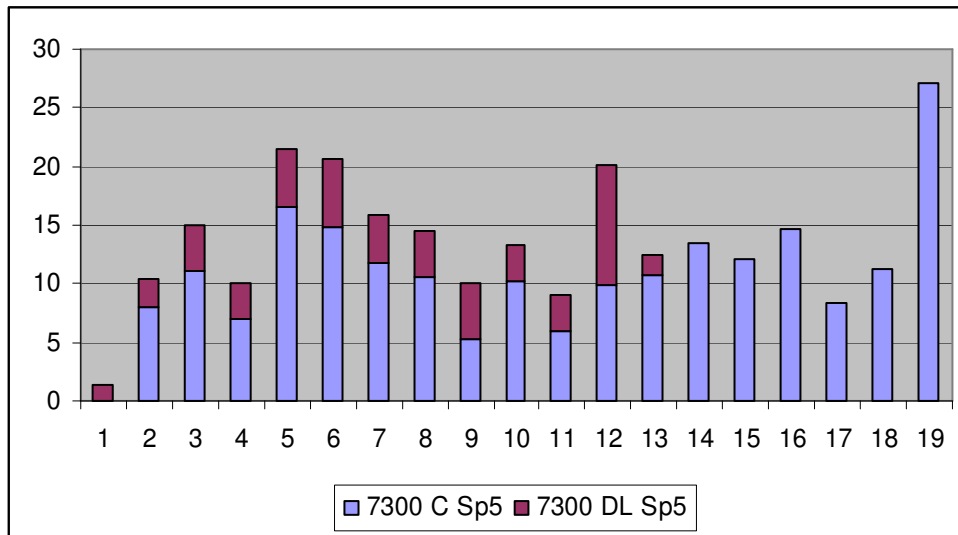
In Figure 23 Weekly Posts I showed the weekly posts. The second and third example courses started simultaneously as mentioned above.



**Figure 28 Combined On-Line Student Responses by Week**

The way in which I track and assess on-line student responses to the discussion topic removes the impact of the responses students make in the small groups devoted to team work on the course project.

The point I would make in Figure 28 Combined On-Line Student Responses by Week is that the load on teacher in managing multiple simultaneous hybrid and/or distance learning courses can be significant. In the peak week (3) there were 189 student responses, an average of 27 each day. At the same time I was teaching an undergraduate course of five students (thankfully small). My sense was I was operating close to my limit. By that I mean that additional load would have begun to compromise the quality of the learning experience.



**Figure 29 Distribution of Time for Examples Two and Three**

Week one in Figure 29 Distribution of Time for Examples Two and Three represents the first two days of January. Weeks began on Mondays. These courses began during the fourth week.

### The Conclusions

**Connect:** Figure 28 Combined On-Line Student Responses by Week and Figure 29 Distribution of Time for Examples Two and Three suggest that connection substantially increases when hybrid and distance

learning courses are running simultaneously. One is obligated, it seems to me, to increase the daily bandwidth of the communication. The question becomes one of determining the bandwidth that is sustainable.

**Communicate:** The bandwidth that can be sustained determines the quality of the communication. This bandwidth issue needs to be determined within the context of the teacher's life. For example, my total involvement with Maritime is not covered in the activities described in this report.

Here we have a different situation than described under the second example – limitations in communication. Here we have a demand for more communication than can be sustained.

**Learning:** Learning can, as a consequence, can be compromised.

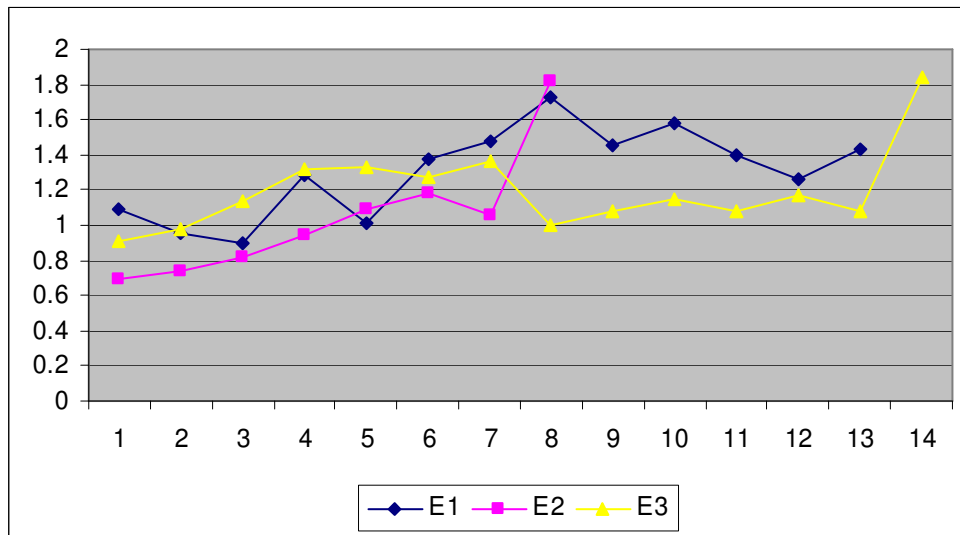
## Conclusions

### Level of Learning

The level of learning is a function of the level of communication and connection. An increase in connection and communication does not necessarily lead to an increase in learning. There is a margin point that is quite likely a function of characteristics of the teacher and the student.

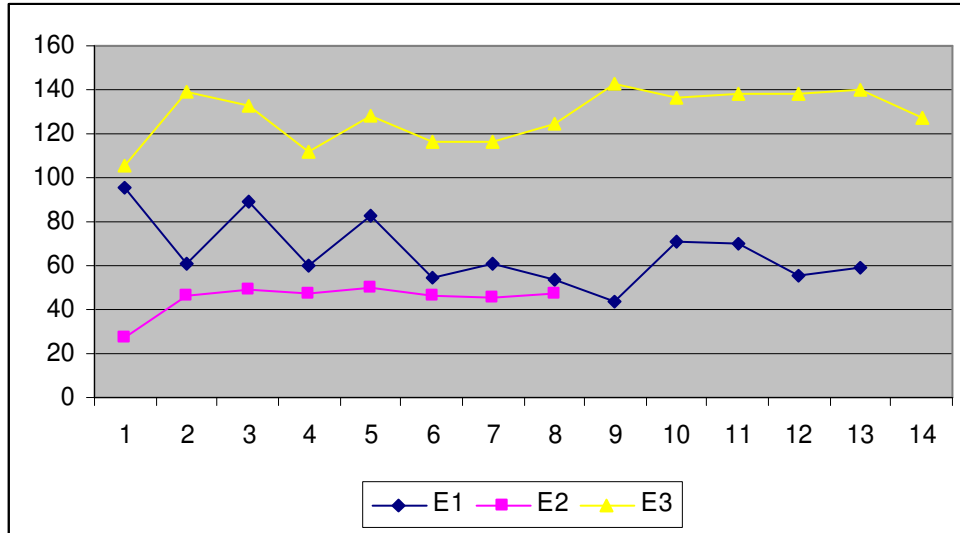
I understand there to be research by SUNY that suggesting that the ideal discussion groups range from five to ten students.

What does ideal mean? To me it is a measure of the quality and, to a lesser extent, the quantity of the discussion. The hypothesis here is that the better the quality of the discussion the better the learning.



**Figure 30 Ratio of Quality Points to Number of Posts by Example**

Recall that the number of students in these examples varied; 32 in Example 1, 15 in Example 2, 41 in Example 3 in two discussion groups. It's difficult to see any correlation between discussion group size and the notion of ideal in Figure 30 Ratio of Quality Points to Number of Posts by Example.



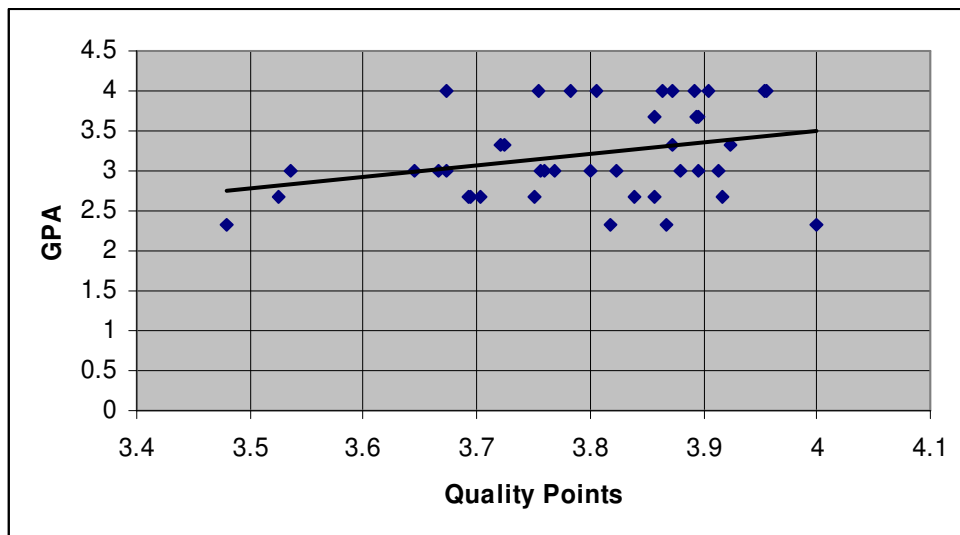
**Figure 31 Weekly Posts by Example**

Nor does bringing into play the data in Figure 31 Weekly Posts by Example seem to provide any real clues as to whether the size of the discussion group makes a difference.

In my classes ideal would mean four, and only four, posts per week. Two of these are thread starters. All four receive the maximum quality points. Ideal in this sense is maximum points from minimum posts.

My hypothesis is that "ideal" and hence, level of learning, is much more a function of the subject, the material available to support the learning of the subject, the students (aptitude, desire to learn, self-discipline, comfort with technology), the teacher (aptitude, desire to teach, self-discipline, comfort with technology) than it is the size of the discussion groups.

Is there a correlation between the quality of discussion and the final grades?



**Figure 32 Example 3 GPA versus Quality Points**

I'm not a statistician by training, only by eye. However, it seems to me there is somewhat of a correlation, particularly if you discount the anomaly to the far right in Figure 32 Example 3 GPA versus Quality Points.

A word about how the final grade is determined in my courses. My syllabi include the words "The mathematics guides me in the assignment of the final grade. What this means is that the final grade I assign may be different from the mathematical grade. In assigning the final grade I take into account your consideration, respect, and encouragement of others; your desire for learning and discipline in completing the assignments; your ability to bring relevant issues to the attention of the class."

### **Richness of the Learning Environment**

I've concluded from my experience over the last 17 months that hybrid learning provides a richer learning environment than does distance learning and classroom. On the one hand, to me, richness is a measure of the knowledge, skills, and experience within the learning environment. On the other hand, it is a measure of the manner in which the teacher and students use that richness.

Instead of the teacher prowling the information space (i.e., media, libraries, Internet) for relevant material, it's the teacher and the students. Everyone, not just the teacher and the authors of the textbook, contributes knowledge, skills, and experience.

More senses are brought into play in the hybrid communication process than in distance learning.

In-class and on-line discussions promote the development of communications skills in ways not practical in the distance learning and classroom environments.

### **Intensity**

In Figure 3 Application of CBLMS I sketch my goal of constant involvement throughout the course. That requires commitment on the part of the teacher and the students. Figure 28 Combined On-Line Student Responses by Week and Figure 29 Distribution of Time for Examples Two and Three give some feel for the intensity of the activity and the effort on my part to manage the classes. The number of students has an impact on this. I've found the last 17 months to be an intense experience when applying CBLMS in the manner described in this document.

Responses ignored are not responses that will go away. I must deal with them sooner or later.

Students are quick to pick up on my behavior. Deeds must match words. I've been taken to task more than once about the timeliness of my assessment of responses.

### **CBLMS Processes**

CourseSpace and SLN use a Lotus Notes/Domino-based environment to support the technological side of the processes. Lotus Notes is particularly easy to use for course development, posting of course material, reading and responding to student posts.

It's easy to assess responses. It becomes a bit tedious to pull together response assessments on a calendar basis, to count thread starters, and differentiate small discussion groups.

The students experience all this through the web interface. I can also develop and manage the course through the web, but chose not to because of the cumbersomeness I perceive.

Once I gather the raw assessment data I manually feed an Excel-based tool which brings all the data together yielding the final mathematical grade. This tool is also the source for many of the figures in this document.

### **Business Model Impact**

CBLMS changes the business model for the institution and the student.

Benefits	Costs
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Benefits	Costs
<ul style="list-style-type: none"> <li>• The reach of the educational program is expanded through distance learning. <p style="margin-left: 40px;">In Example 3 my students ranged across the world from Iraq to Korea.</p> <p style="margin-left: 40px;">In another course the attempt was made to work with a student sailing on a ship.</p> </li> <li>• The range of the educational program is expanded through distance learning. Arcane course are required by a specialized college such as Maritime. Qualified teachers for these courses are not always willing to come to the classroom. Being able to teach students located anywhere by a teacher located anywhere aids in putting together relevant educational experiences.</li> <li>• The costs associated with attending and teaching a distance learning course can be substantially reduced. This presumes, of course, that the costs of the supporting technology do not exceed the reduction in costs.</li> <li>• Extending the reach of the college and lifting the quality of the learning experience can have a positive impact on the college brand. This could result in more students of higher quality seeking to attend the institution.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a cost associated with the learning curve of adopting and adapting CBLMS. The majority of this cost is in time, not out-of-pocket money.</li> <li>• CBLMS is not for everyone. There are costs associated with vetting the principals involved. <p style="margin-left: 40px;">One of my students failed the distance learning version of a course, retook the course in the classroom and did quite well. He simply learned better in a classroom environment.</p> <p style="margin-left: 40px;">Some students find the level of involvement to be too great and drop or fail a distance learning course. They retake in the classroom and do well.</p> <p style="margin-left: 40px;">These are costs the vetting process should seek to avoid.</p> </li> <li>• The intensity of the involvement demanded, I believe, in hybrid and distance learning classes suggests that fewer students can be taught in any one section.</li> <li>• There are subjects that do not lend themselves well to CBLMS. Trying to force a fit could incur unnecessary costs.</li> <li>• There are costs associated with the restructuring of course material. <p style="margin-left: 40px;">For example, I used an instructor's presentation material from the MIT OpenCourseWare site. The professor was well-recognized in the field, but without his words to surround the presentation it had little impact.</p> <p style="margin-left: 40px;">Any presentations I post for a distance learning course have an associated script. This takes time to develop.</p> </li> </ul>

**Table 9 Business Plan Impact**

## **Connect, Communicate, Learn**

Does all this pay off in "learning that sticks?"

The answer lies somewhere in the future. I was involved in graduate and executive level education in a prior life. My sense was that the basics of the education in the field in which I was involved could be provided in six months. It took another 12-18 months to internalize the education. It was another 12-18 months before that education began to have a significant impact in the marketplace.

## **Recommendations**

## **CBLMS**

The question of using CBLMS should be a positive one; "How do we use CBLMS to improve the quality of the learning experience associated with this subject?" Finding reasons to reject CBLMS is too easy.

Do not allow CBLMS to become a technology decision. It's a tool and must not get in the way of the learning experience.

No single CBLMS can encompass all that one might wish to do or how one might wish to do it. There ought to be a continuous scan of developments in this field by teachers, not technologists. For example, what do the capabilities provided by organizations such as Kognito<sup>7</sup> allow us to do to lift the quality of the learning experience? What is the place of wikis, blogs, and instant messaging in the learning experience?

## ***Institutional Research***

The cost/benefit assessment for the student, teacher, and institution is fairly straightforward. What is needed is additional capability in CBLMS to assess the quality of the learning experience.

## ***Vetting the Students and the Teachers***

A clear process needs to be put in place for doing this. CBLMSs are not for everyone. There is a need to consciously strive to limit the costs associated with asking people to do what they may not be capable of doing.

## ***Fundamental Capabilities***

In Figure 1 The Objective I call out the importance of critical thinking and communications expertise. My experience is that I encounter students, particularly at the graduate levels, that are deficient in these skills. Some remedial education is required. Look at CBLMS as a way in which the remedies may be applied. For an example, see *The Computer as an Aid to Teaching Critical Thinking*.<sup>8</sup>

## **Closing Comments**

The approach to Connect, Communicate, Learn described herein underpins my teaching. It is the richness of the learning environment it provides that excites me. I could teach in a traditional classroom environment, but I would not find it as rewarding. And I don't think my students would find it as rewarding.

I'm grateful to Maritime College and SUNY for the opportunity to be involved in education in this manner.

Nothing herein should be construed to represent anyone's views other than my own.

# Endnotes

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<sup>1</sup> CourseSpace or SLN.

<sup>2</sup> Source: Project GLOBE [http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons\\_project\\_globe.pdf](http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons_project_globe.pdf)

<sup>3</sup> One of my Korean students has written: " As I am Korean, I am very shy, especially during class, only looking for right answers. In Korea class rooms, students only hear what professors teach, and even some students feel they have different ideas with professors' opinions (even I have never thought professors' teachings are wrong or something different with my idea), they never argue with professors. But here in the United States, there is no wrong answer. Even some one have different ideas or even these are not true, no one says that idea is wrong. In this reason, class rooms are alive (is it right expression?) and energetic."

<sup>4</sup> It becomes increasingly difficult to get a higher quality grade as the term progresses.

<sup>5</sup> Source: Project GLOBE [http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons\\_project\\_globe.pdf](http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons_project_globe.pdf)

<sup>6</sup> Source: Project GLOBE [http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons\\_project\\_globe.pdf](http://www.ucalgary.ca/mg/GLOBE/Public/Links/lessons_project_globe.pdf)

<sup>7</sup> ([www.kognito.net](http://www.kognito.net))

<sup>8</sup> <http://jmsdrn.squarespace.com/storage/The%20Computer%20as%20an%20Aid%20to%20Teaching%20Critical%20Thinking.pdf>