

Technology Use at Mars Hill College: 2006 & 2007 Course Syllabi Analysis

Methodology

Data were gathered by reviewing each syllabus from fall 2006 and fall 2007. Initially, types of technology usage were categorized into three categories of sophistication: High, Medium, and Low. As new technology usages were encountered, they were categorized accordingly. Table 1 below lists the main types of technologies encountered and their categorization. This list includes 504 syllabi examined: 236 from fall 2006 and 268 from fall 2007.

High	Medium	Low
Learning Management System	Active: Video/Still Cameras/Mini disk/mp3	Passive: TV/Videos/Radio/Audio
Book's Companion Website	Development of Databases	Email Correspondence
Distance Learning	Typical Software Usage	Basic Calculator
Development of Databases	Internet Research/Reading	
Discipline Specific	Graphing Calculators	
Student Creation of Web Content	MHC Computer Network Usage	
E-Portfolio	USB/Flash Drive Usage	
Computer Lab Class Scheduled	Scientific Calculator	
Normal Classes in Computer Lab		
Online Discussion		
Online Anonymous Feedback		
Online Tutorials/Exercises		
Computer/Web Programming		

Table 1

Tabulation

For these analyses, we recorded the level of sophistication and frequency of technology use, as indicated by course syllabi. A point was given in the appropriate sophistication column when a type of technology was mentioned as an instructional method. Additional points were given for each assignment that utilized a type of technology. For example, if an "E-Portfolio" was mentioned in the syllabus as an instructional method, and six (6) assignments mentioned using the "E-Portfolio" system, this particular syllabus would get seven (7) points in the "High" sophistication column. See Table 2 for fall 2006 analysis and Table 3 for fall 2007 analysis.

Table 2. Fall 2006 Technology Usage

	Technology Frequency			
	High	Moderate	Basic	Total
Total Occurrences¹	70	89	104	263
Distribution²	26.62%	33.84%	39.54%	
Occurrence/Syllabus³	0.30	0.38	0.44	1.11
Department	High	Moderate	Basic	Num of Syllabi
Art	7	3	1	14
Business	9	10	1	17
Computer Science	14	9		8
Education	9	13	3	22
English	4	10	1	21
Fashion	2	1		4
History		3	1	6
HPER	1	3	10	17
International Studies				0
Liberal Arts	1	8	27	10
Math	9	3	1	16
Modern Foreign Language	1	1	6	6
Music	7	8	10	26
Natural Science (Bio/AT)			9	17
Natural Science (Chem)		1	1	4
Political Science	1	1	1	5
Psychology			2	11
Recreation				3
Religion	3	8	21	10
Social Work	1			3
Sociology			5	3
Theatre Arts	1	7	4	13
	Total Syllabi Examined:			236

¹Total number of occurrences on the syllabi of each technology type. Totals are in the far right column.

²Distribution is the number of occurrences of this technology level divided by the total occurrences found, represented as a percent.

³Occurrence per syllabus tells how many times a use of technology (and what level) is found per syllabus. The totals are found in the far right column.

Table 3. 2007 Fall Technology Usage

	Frequency			Total
	High	Moderate	Basic	
Total Occurrences¹	159	126	103	388
Distribution²	40.98%	32.47%	26.55%	
Occurrence/Syllabus³	0.59	0.47	0.38	1.45
Department	High	Moderate	Basic	Num of Syllabi
Art	10	5		16
Business	3	17		9
Computer Science	12	9		6
Education	36	22	3	30
English	1	26	4	29
Fashion	20	1	2	6
History	4	6	1	8
HPER	33	3	9	22
International Studies				1
Liberal Arts			34	25
Math	7	1	2	13
Modern Foreign Language	8		5	10
Music	12	12	5	28
Natural Science (Bio/AT)	4		5	15
Natural Science (Chem)	4	2	2	4
Political Science		4	3	5
Psychology			5	11
Recreation	2	1	1	2
Religion	1	13	7	6
Social Work	1			3
Sociology		1	3	6
Theatre Arts	1	3	12	13
	Total Syllabi Examined:			268

¹Total number of occurrences on the syllabi of each technology type. Totals are in the far right column.

²Distribution is the number of occurrences of this technology level divided by the total occurrences found, represented as a percent.

³Occurrence per syllabus tells how many times a use of technology (and what level) is found per syllabus. The totals are found in the far right column.

Analysis

Several observations can be made with a first glance at the gathered data.

1. The average number of occurrences of technology per syllabus increased by 0.3. That is, from fall 2006 to fall 2007, the countable technology usage increased per syllabus. In this case, it went from 1.11 in fall 2006 (Table 2) to 1.45 in fall 2007 (Table 3).
2. The occurrences of highly sophisticated technology use increased by over 125%. These types of occurrences (Table 1) increase from 70 in fall 2006 (Table 2) to 159 in fall 2007 (Table 3). (See Figures 1-3)
3. The occurrences of moderately sophisticated technology use increased by over 40%. These types of occurrences (Table 1) increase from 89 in fall 2006 (Table 2) to 126 in fall 2007
4. (Table 3). (See Figures 1-3)
5. In 2006, highly sophisticated technology accounted for only 26% of the technology occurrences. This percentage increased to over 40% in 2007. (See Figures 1-3) This indicates that not only is technology use becoming more prevalent, but it is also becoming more sophisticated.

What does this mean? Point #1 yields that we are recording more technology usage in our syllabi -- over 30% more. Not only are we including more technology in our syllabi, but the distributions found in points #2-4 suggest that this technology trend is toward more sophisticated technology, not just an increased use of simple technologies.

Conclusions

How do we show a marked improvement on these numbers over the lifetime of the Title III grant?

First, we need to suggest that faculty add an *Instructional Methods* portion to each of their syllabi. In this section, we will encourage them to list all the different forms of technology they use during the course of the semester. Many course syllabi examined did not list the technology that I know the course uses.

Secondly, we need to better educate faculty on the types of technology that may aid in their classroom instruction. This will take setting up demonstrations for different departments/faculty, and proper instruction. This may allow faculty to begin incorporating more sophisticated technology into their pedagogy, by exposing them to technology of which they were unaware.

Thirdly, we need to educate the faculty on the benefits of using our CMS, Moodle. By simply posting course documents and assignments for every class, we can dramatically demonstrate an increased technology usage. This would merely be the gateway for the faculty to begin incorporating technology into their classes at higher frequency, and also a higher level of sophistication.

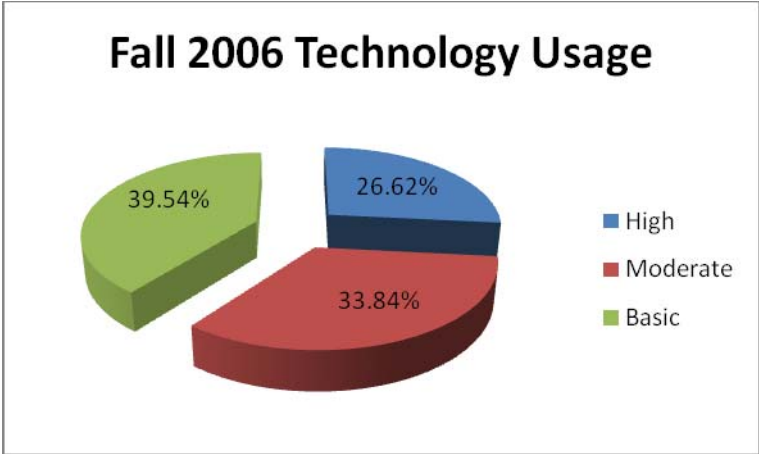


Figure 1

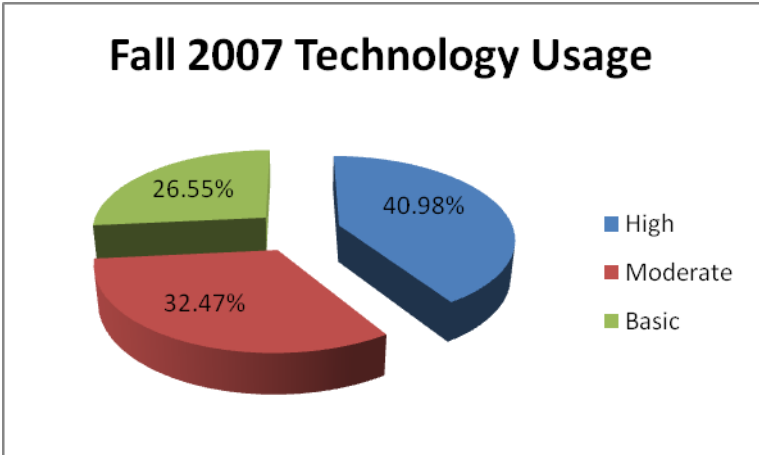


Figure 2

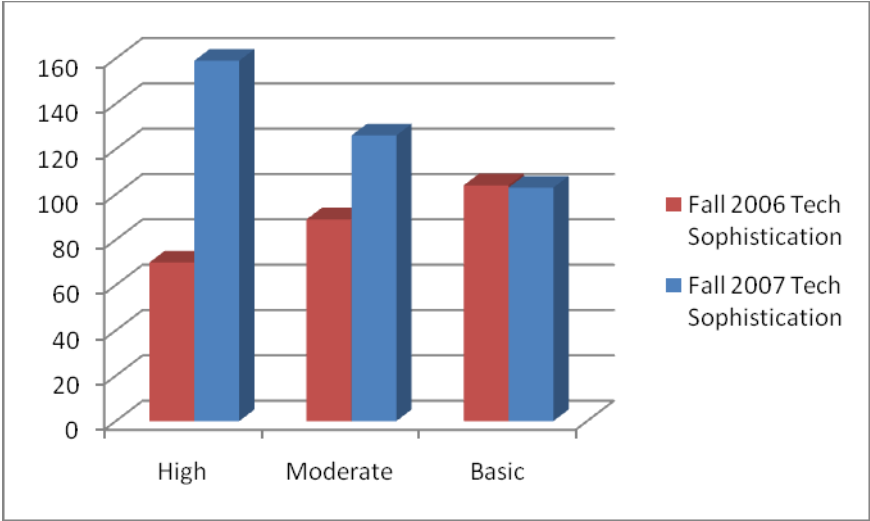


Figure 3