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PRELIMINARY RESULTS ON U.S. VERSUS NON-U.S. PERCEPTIONS OF ONLINE COURSE MATERIALS

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Abstract

The phrase "online course materials" means different things to different people. A common characterization is that online course materials are delivered and consumed via a Web-based interface. Online education requires certain resources to be in place. Technological resources are easy to identify: computers with browser software, Internet access, servers, and so forth. Some resources are less obvious: student skills relating to computers, computer-related skills of people developing online materials, and the resources needed to sustain the development and delivery of online materials.

One important resource is the continuing development and redevelopment of online materials. Content and concepts in college courses change and the online materials must change as well. Additionally, the delivery methods for online materials change as technology changes. Faculty must be motivated to update and renew the content and also the delivery of online course materials.

This article looks at the similarities and differences of U.S. and non-U.S. faculty in their perceptions of developing online course materials. Resources, demographics, and other factors will be considered. College faculty must believe that developing online materials has academic value in order to assure that online courses become a permanent feature of higher education and not merely a fad of the "dot com" era.

Introduction

The efficacy of online course materials has been established (Alvi et al, 1997, Benbunan-Fitch, 2002, Hiltz and Turoff, 2002) as comparable to traditionally taught class materials. Faculty perceive that the effort required to develop online course materials detracts from traditional course development and research. Faculty continue to develop and deliver online course materials even though they realize the extra effort may hinder their academic career (Schell, 2004). Faculty seem to be devoted to the development of online course materials even after the initial incentives have been discontinued. Since studies find that online materials are comparably effective (not superior) to traditional materials and developing online materials can negatively impact promotion and tenure decisions, it is important to study the motivation of faculty who develop online materials and the factors that influence the development.

Online course materials are developed all over the world. Content for online courses is "localized" in the sense that it is specially designed for consumption by students of the class and is generally not designed for consumption beyond that local audience. "Localization" for language, culture, laws, and other issues impacts the effectiveness of the site (Yunker, 2003). The U.S. currently accounts for the majority of Web use, however, non-U.S. countries are increasing their Web use and the amount of content posted on the Web. It is useful to examine non-U.S. views about online materials because the Internet knows no borders.

Survey

A survey was developed to collect demographic information about the faculty member, his/her school, and perceptions of the academic value of developing online course materials. For this analysis, schools in the United States and non-U.S. schools were compared. There were 481 observations from U.S. schools and 48 observations from non-U.S. schools. Twenty-six non-U.S. countries were represented from Australia to Saudi Arabia, Mexico to Turkey, the United Kingdom to the Ukraine. No more than 6 observations came from a single non-U.S. country. It is important for this article that non-U.S. schools represent a wide number of different countries.

Responses from Canada (36 observations) are not included in this analysis. It was felt that while Canadian schools are certainly distinct from schools in the U.S., the close proximity and the resulting shared conference experiences as well as faculty trained in each other's universities combine so that Canada might not be viewed as distinctly non-U.S.

All survey respondents have developed and used online course materials. They are expressing their views based upon first-hand experience. Only responses from colleges offering at least a bachelors degree were included in the analysis, i.e. community colleges were excluded. The focus of the survey is to determine the academic value placed on developing online course materials for four-year universities.

Preliminary Results

An analysis of variance was performed on questions from the survey. The results were informative for where statistically significant differences were found and also for where no significant difference was found.

For U.S. versus non-U.S. schools the distribution between public versus private institutions was very similar. The distribution of school size of the academic institutions was also similar - the most frequent response was a school size less than 5,000 students and about 10% of respondents reported more than 30,000 students. Doctoral programs were offered frequently at responding U.S. and non-U.S. schools. The length of time the respondents had been teaching was similar and faculty computer expertise/experience was also similar.

Overall, non-U.S. faculty placed a higher academic value on developing online materials than U.S. faculty. The reason may be that non-U.S. faculty generally have a more favorable opinion of the effectiveness of the online learning experience. Faculty were asked "How would you compare the effectiveness of a Web-based learning experience to a traditionally taught learning experience?" Their responses are shown in Table 1. The differences did not prove statistically significant but the trend of the last two responses implies non-U.S. faculty believe more deeply in the effectiveness of Web-based learning.

Table 1
How would you compare the effectiveness of a Web-based learning experience to a traditionally taught learning experience?

non-U.S.	Response	U.S.
0.0%	Web-based experience is much less effective than traditionally taught experience	2.1%
17.0%	Less effective than traditionally taught experience	20.1%
27.7%	Equivalent to traditionally taught experience	37.3%
40.4%	More effective than traditionally taught experience	31.2%
14.9%	Web-based experience is much more effective than traditionally taught experience	9.3%

The terminal degree for respondents were markedly different. Non-U.S. faculty reported 48.9% had masters degrees while 44.7% had doctorates. In contrast, U.S. respondents reported 22.9% had masters degrees while 74.8% had doctorates. The distribution of job titles reflects the differences in terminal degrees. Table 2 shows titles from adjuncts to full professors.

Notice that for U.S. and non-U.S. faculty, among the categories of professorship, the rank of the respondent was evenly distributed.

Table 2
Distribution of Respondents' Rank

non-U.S.	Response	U.S.
31.1%	full time adjunct/lecturer	7.7%
15.6%	assistant professor	23.0%
17.8%	associate professor	24.8%
13.3%	full professor	27.6%

It has been shown that faculty perceive their efforts to develop online course materials reduces their chances for promotion and tenure - probably because it detracts from time spent on research and other traditional tasks. Faculty were asked about the importance of teaching and of research in their promotion and tenure process.

A scale of 0 to 10 was used to rank the importance of teaching and research in regards to promotion and tenure. A value of zero meant "no importance" while a value of 10 meant "critical importance." 50.0% of the non-U.S. respondents' reported a 9 or 10 value for research, only 19.1% reported 9 or 10 for the importance of teaching. U.S. respondents reported only 31.1% of values 9 or 10 for research importance and 38.9% for teaching. The non-U.S. respondents clearly respect research as an academic endeavor more than their U.S. counterparts while U.S. faculty are more concerned about teaching.

In earlier studies (such as Schell, 2004) a negative relationship was found in U.S. schools between the value of research and the value of developing online materials. Non-U.S. schools show a positive relationship. This may be due to their higher opinion of an online learning experience. On the other hand, the survey showed that U.S. faculty use online materials significantly more than non-U.S. faculty. These intuitively conflicting results appear to be caused by a fewer computing and Internet resources available to non-U.S. students.

Few schools from either group required their students to own computers (6.4% for non-U.S. and 8.1% for U.S). The computer lab resources available to students was significantly different. 29.8% of non-U.S. schools reported their lab resources were either "not enough", or "poor" while U.S. respondents reported only 5.9% in these categories. In fact, 40.1% of U.S. respondents reported their lab resources were "excellent." While non-U.S. faculty may have a higher regard for online materials, their responses show non-U.S. students have less access to the resources required to consume online materials.

Both U.S. and non-U.S. faculty note a significant increase in the effort required to incorporate technology into their courses. While the compared responses between U.S. and non-U.S. faculty were not statistically different, the increase itself is significantly different. In both groups over 25% of respondents reporting a value of 9 or 10 when asked if their efforts had increased. The value 10 was labeled "increased dramatically."

Both groups were asked their views of the academic value of developing online materials as it affects the promotion and tenure decision. The respondents' believed there was more value in development of online materials compared to the beliefs of their colleagues, chairs, promotion/tenure committees, or administrators. The U.S. and non-U.S. responses were not statistically different. However, in one respect the non-U.S. respondents were more optimistic than their U.S. counterparts.

The scale of choice was from 0 (no academic value) to 10 (critical). Looking at the responses of the faculty members' views across all values from 0 to 10 there was little difference. However, we can estimate the momentum of the views by comparing the optimistic responses (the value is critical) to the pessimistic values (no value to develop online materials). Differencing the percentage of respondents reporting a value of 9 or 10 versus respondents reporting 0 or 1 will provide a measure of the optimism of the respondents.

The difference of optimistic (9 or 10 reported) compared to pessimistic (0 or 1 reported) was 15.2% compared to 2.2% for non-U.S. faculty. U.S. faculty had a 10.8% optimistic view versus a 8.2% pessimistic view. Non-U.S. faculty are more optimistic in the view of developing online materials as an academically valuable effort.

Summary

The responses have not yet been analyzed beyond some descriptive but tantalizing facts. Further analysis needs to be performed in order to determine the if interactions among predicting variables combine to become statistically significant predictors. Also, is there a "tipping point" along any of the scalar measures beyond which development of online materials is considered either decidedly good or bad? These questions have not been answered from the preliminary analysis but some results are already decided.

Non-U.S. faculty and their schools have much in common with their U.S. counterparts. There are also differences. When it comes to believing in the value of developing online course materials, both groups agree in the academic value. Both groups also respond that their colleagues, chairs, and administrators attribute less value to developing online materials than the respondent.

Non-U.S. faculty place higher academic value on developing online materials. They feel more strongly in the value of developing materials to help them achieve promotion and tenure. While both groups rate the efficacy of online course materials higher compared to traditional face-to-face teaching, non-U.S. faculty believe more strongly that online course materials are more effective. It should be noted that quantitative measures of learning in published research suggest that online learning is as effective as face-to-face learning but the literature stops short of calling online materials superior.

These results are surprising because non-U.S. faculty reported that their students have less access to the technology needed to utilize online materials. Personal ownership of computers as well as the access to computer lab resources are lower for non-U.S. respondents.

The survey did not contain questions that would explain the oddity of non-U.S. faculty believing more in the value of online course materials even though they have less resources. Perhaps that is the answer itself, those less affluent with resources more highly regard their worth.

Both U.S. and non-U.S. faculty believe in the academic value of developing online course materials. Non-U.S. faculty even more than U.S. faculty. As the utilization of Web resources shifts towards greater and greater non-U.S. users, we can only expect that the development and use of online course materials will grow.

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