
Electronic courses: old wine in new bottles?

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Abstract

Offerings of electronic courses and degrees are growing at a surprising rate. Some have surmised that E courses represent the future for higher education and that the traditional university may soon be a relic of the past: do E courses represent a significant improvement over traditional pedagogy for educating students? In this context, 305 questionnaires were sent by e-mail to accounting chairpersons in the USA. A total of 94 usable responses was received. Nearly 65 per cent of the respondents indicated that E courses are simply correspondence courses presented with new technology. Those who view E courses as correspondence courses are more negative on offering E courses in university programs or offering degrees through the completion of only E courses. They are also more restrictive with E courses, favoring the proctoring of exams and requiring students to come to campus as part of the E course. Additionally, they tended to agree that "the student-to-student and the student-to-instructor interaction that are missing in E courses makes them less valuable to the student." Instead of viewing E courses and E degrees as the "university of the future", they see them as adjuncts to university programs just as correspondence courses have been for decades.

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There is little doubt that the number of colleges and universities offering electronic courses (E courses) is growing rapidly. Vasarhelyi and Graham (1997, p. 32) state that:

In the last two years, the emergence of the Internet has opened the doors for a permanent revolution in the classroom and educational processes. Already, cyberprograms and cyberuniversities are proliferating around the country. Peterson's College Guide listed 93 "cyberschools" in 1993 – the 1997 Distance Learning Guide lists 762. About 55 percent of America's 2,215 colleges and universities have courses available off site (Vasarhelyi and Graham, 1997, p. 32).

Some institutions offer all of the courses necessary to complete a university bachelor's or masters degree via the Internet. McCartney (1996, p. 32) relates that:

At a Masonic Temple on San Francisco's Nob Hill, several hundred students, all working adults, recently received graduate and undergraduate degrees in technology, business, and management from the University of Phoenix. What's unusual about these graduates is that none of them set foot in a classroom. Instead, they earned their sheepskins through a so-called distance-learning program, taking courses exclusively online (McCartney, 1996, p. 32).

The prediction is for an increasing number of universities to follow suit and the future of the traditional university education is uncertain.

In his article "Electronics and the dim future of the university", Noam says that:

Instead of prospering with the new tools, [communications technologies] many of the traditional functions of universities will be superseded, their financial base eroded, their technology replaced and their role in intellectual inquiry reduced (Noam, 1996, p. 6).

There is little doubt that offering E courses and E degrees represents a dramatic departure from the traditional university teaching model. The new direction may be fueled by fiscal and political considerations rather than educational. Noam adds that:

If the university's dominance falters, its economic foundations will erode (Noam, 1996, p. 9).

Perhaps the conventional wisdom is to embrace the trend in the hope of surviving as a viable institution.

The articles cited purport to reflect the direction in which university education is moving, that is toward Internet-based

education, and there is no doubt that E courses will have an impact on the traditional university. However, the magnitude and extent of that impact are far from known at this time.

Certainly faculties and administrations of universities will have substantial influence on the timing and the shaping of that impact. Their views will play a major role in the unfolding of Internet-based education for traditional university degrees. The determination of their views would increase the knowledge base relevant to Internet-based education. Their attitudes may provide a glimpse of the future for Internet degrees from traditional universities.

This research reports the results of an e-mail questionnaire sent to 341 university accounting department chairpersons in the USA. The study considers only the attitudes of chairpersons of accounting departments at universities in the USA and does not address any pedagogical gains or losses from offering Internet based courses.

Discussion of results

The questionnaire contained 17 statements, relating to E courses, with five Likert-type response categories ranging from "Strongly agree" to "Strongly disagree". No effort was made to slant either questions or response categories in a direction that might influence responses and no effort was made to detect any response bias from the question arrangement or the direction of the response categories.

Questionnaires were sent via e-mail over the Internet and three different response modes were suggested. If respondents were concerned about anonymity, it was suggested that they either:

- print the questionnaire, complete it, and mail it to the author; or
- click on an Internet address and complete a Web page version.

Both of these response methods would help ensure anonymity. The third method of responding was to choose "reply" in their e-mail program, complete the questionnaire, and click on "send." Responses began arriving within hours of the initial mailing. Approximately one week later a reminder message was sent.

A total of 36 of the questionnaires were undeliverable because of e-mail address problems that could not be resolved, resulting in 305 valid questionnaires sent. A total of 94 usable responses was received, 18 from the Web site, nine through the post office, and 67 directly from the respondent on the Internet. Most of the responses that were received via the US postal service were mailed in an envelope with the university's return address on it. Apparently, anonymity was not the major motivation in using this mode of response.

Schuldt and Totten (1994) in a 1992 study, obtained a response rate to an Internet questionnaire of 19.3 percent. The questionnaires were mailed to MIS and Marketing professors and most of the responses were from MIS professors. The 94 responses yield a response rate of 30.8 percent for accounting chairpersons, substantially higher than in the Schuldt and Totten study.

Offering e-courses

Table I contains the questions and the percentage of responses in each response category. In response to the statement that "Except for the delivery medium e-courses are essentially correspondence courses", almost 65 percent of the respondents agreed or strongly agreed. Obviously, a substantial majority of the accounting department chairpersons view e-courses as essentially correspondence courses delivered over the Internet. Any baggage that correspondence courses carried is apparently attached to e-courses, in the minds of those chairpersons.

Responses to the second statement that "e-courses should be offered in accounting programs" were almost evenly split. Slightly more than 36 percent indicated that e-courses should be offered in accounting programs and 37.4 percent said they should not be offered. When the same statement was posed relative to business programs, responses shifted toward the agree end of the scale. Almost 46 percent of the respondents agreed or strongly agreed with the statement that "e-courses should be offered in Business programs" while only 16.3 percent disagreed or strongly disagreed. A large segment, 38.0 percent, was neutral with respect to the issue. A further shift is found in responses to the statement related to offering e-courses in non-business programs. In response to the

Table I Percentage of responses for each response category

	Percentage of responses in each category				
	1	2	3	4	5
1. Except for the delivery medium E courses are essentially correspondence courses	23.1	41.8	9.9	17.6	7.6
2. E courses should be offered in accounting programs	4.4	31.9	26.3	23.1	14.3
3. E courses should be offered in business programs	6.6	39.1	38.0	13.0	3.3
4. E courses should be offered in non-business programs	9.8	42.3	37.0	8.7	2.2
5. A student should be able to obtain a degree in accounting by taking only E courses	2.2	3.3	3.2	18.5	72.8
6. A student should be able to obtain a degree in business by taking only E courses	2.2	5.4	1.1	20.6	70.7
7. A student should be able to obtain a degree in non-business programs by taking only E courses	1.1	6.5	9.8	25.0	57.6
8. When E courses are offered, they should be available to on-campus as well as off-campus students	21.7	46.7	24.0	6.5	1.1
9. When E courses are offered, SOME exams should be proctored by an independent person	41.8	24.2	19.7	7.7	6.6
10. When E courses are offered, ALL exams should be proctored by an independent person	37.0	12.0	27.1	16.3	7.6
11. When E courses are offered, the student should be required to come to campus at <i>least once</i> during the course	28.6	20.9	23.0	19.8	7.7
12. When E courses are offered, the student should be required to come to campus <i>more than once</i> during the course	18.9	22.2	27.8	24.4	6.7
13. The student-to-student and the student-to-instructor interaction that is missing in E courses makes them less valuable to the student	46.7	35.6	4.4	10.0	3.3
14. As the number of E courses grows, the importance of the formal university will diminish	12.1	24.2	12.0	33.0	18.7
15. If the importance of the formal university diminishes, society will benefit	0.0	2.3	6.9	28.7	62.1
16. As the number of E courses grows, the importance of the university professor will diminish	9.9	24.2	10.9	33.0	22.0
17. If the importance of the university professor diminishes, society will benefit	1.1	3.3	6.6	27.5	61.5

Notes: Scale: 1-Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly Disagree

statement that “e-courses should be offered in non-business programs”, 52.1 percent agreed or strongly agreed and only 10.9 percent disagreed with the statement. The neutral responses remained about the same at 37.0 percent.

Opinions of accounting department chairpersons are about evenly split on the subject of

offering e-courses in accounting programs but are more tolerant of offering them in non-accounting programs. In fact, a majority of the respondents believed they should be offered in non-business programs. Whether these views stem from a belief that accounting topics are less amenable to being mastered over the Internet or whether it is simply a “not in my

area” reaction is not known. Independent study courses typically lack the structure, deadlines, and regular face to face student-instructor interaction that traditional courses possess. Most would agree that some topics are more easily learned through independent study than are others. Perhaps all that the respondents are conveying is that structure, deadlines, and student-faculty interaction is more important in accounting and business topics than in other areas.

Offering degrees solely through e-courses

The next area considered dealt with the question of awarding degrees based solely on completion of e-courses. In response to the statement that “A student should be able to obtain a degree in Accounting by taking only e-courses,” only 5.5 percent agreed while an overwhelming 91.3 percent disagreed. A surprising 72.8 percent, almost three-quarters of the respondents, strongly disagreed with the statement. Unlike responses to statements relating to offering E courses in programs other than accounting, a major shift toward the agree end of the scale did not occur when the statement related to offering degrees in other programs. When responding to the statement that “A student should be able to obtain a degree in Business by taking only e-courses,” 91.3 percent disagreed and only 7.6 percent agreed. Responding to the related statement that “A student should be able to obtain a degree in non-business, programs by taking only e-courses,” 82.6 percent disagreed and 7.6 percent agreed.

Accounting chairpersons are solidly opposed to universities offering degrees in any academic discipline totally through the Internet. They apparently believe that the campus experience gives the student a component of their education that should not be left out of the degree experience. Little doubt exists that a degree that does not contain the campus experience is different from one that does. Whether it is better or worse is a question left for time and experience to answer.

Enrolling on-campus students

One dilemma universities face with e-courses is that of on-campus students registering for courses and causing regular on-campus courses

to have low enrollments. Because e-courses are normally paid as an overload course, this shift in enrollment will result in less efficient use of one of the university’s more costly resources, professors’ class time. This issue was addressed by the statement that “When e-courses are offered, they should be available to on-campus as well as off-campus students.” Only 7.6 percent disagreed with this statement while 68.4 percent agreed that on-campus students should have the same access to e-courses as off-campus students. Perhaps accounting chairpersons view this issue from a perspective of fairness. While they did not strongly endorse offering e-courses, if e-courses are offered they believe that on-campus students should have equal access to them.

Proctoring of exams

Another issue that faces designers and instructors of e-courses is the proctoring of exams. Two statements addressed this issue. The first stated that “When e-courses are offered, *some* exams should be proctored by an independent person.” Sixty-six percent of the respondents agreed with this statement and only 14.3 percent disagreed. The largest group, 41.8 percent, strongly agreed that some exams should be proctored. A companion statement that “When e-courses are offered, *all* exams should be proctored by an independent person” had only 49 percent of the respondents in agreement and 23.9 percent disagreed. This result suggests that some independent confirmation of the level of student learning with e-courses is considered essential but, not necessarily for all exams.

Visiting campus

Some universities that offer degrees solely through completion of e-courses require students to come to campus for some of the classes during a term. Three statements were included that referred to that facet of e-courses. Responding to the statement that “When e-courses are offered, the student should be required to come to campus at *least once* during the course,” 49.5 percent agreed and 27.5 percent disagreed. Almost one-quarter, 23.0 percent, were neutral on the issue. By almost a two to one margin (49.5 percent to 27.5 percent) accounting chairs believe the campus

experience is a valuable component of a university course and that it should not be left completely out of e-courses. They believe that students taking e-courses should come to the campus, presumably to attend class, at least once during the course.

The second question relating to campus visits said "When E courses are offered, the student should be required to come to campus *more than once* during the course." A slightly smaller percentage of respondents, 41.1 percent, agreed to this statement than to the previous statement, 49.5 percent. The percentage disagreeing rose to 31.1 percent, from 27.5 percent disagreeing that at least one visit should be required. The third statement relating to visiting campus asked "If more than once, how many times in a three semester hour course?" and 39 of the 92 respondents (42 percent) entered a number. The average number of campus visits indicated by respondents for students completing e-courses was 5.54 times during the course.

The next statement, "The student-to-student and the student-to-instructor interaction that is missing in e-courses makes them less valuable to the student," related more directly to the campus experience. A total of 82.3 percent of the respondents agreed or strongly agreed with the statement. Only 13.3 percent disagreed and 4.4 percent were neutral. Accounting chairpersons strongly believe that a course which contains no student-to-student or student-to-instructor interaction is a move in the wrong direction and the course is less valuable to the student.

Impact of e-courses on the university and on professors

The final four questions dealt with the perceived impact of e-courses on the formal university and on university professors. Regarding the statement that "As the number of E courses grows, the importance of the formal university will diminish," 36.3 percent of the respondents agreed and 51.7 percent disagreed. A similar statement "As the number of e-courses grows, the importance of the university professor will diminish," had 34.1 percent of the respondents agreeing and 55 percent disagreeing with the statement. Accounting chairpersons are apparently not very

apprehensive about any negative effects of expanded offerings of e-courses since a majority did not see them threatening either the university or professors.

The last two statements related to the perceived impact on society of a decline in the importance of the formal university and university professors. One stated that "If the importance of the formal university diminishes, society will benefit." Only 2.3 percent of the respondents agreed with the statement (none strongly agreeing) and 90.8 percent disagreed (62.1 percent strongly). The percentages were very similar for the last statement that "If the importance of the university professor diminishes, society will benefit." Eighty-nine percent disagreed with the statement (61.5 percent strongly) and 4.4 percent agreed. Accounting chairpersons see both the formal university and the university professor as valuable elements of society and believe that if their importance decreased, society would be a loser.

Significant relationships

Table II contains Pearson correlations and significance levels for responses to the 17 different statements. Responses to the first statement that "Except for the delivery medium e-courses are essentially correspondence courses," were significantly related to nine of the other 16 statements. That relationship was negative, and significant, for statements two through six. Those results indicate that as respondents tended to agree that e-courses were "essentially correspondence courses," they also tended to disagree that universities should offer E courses in accounting, business, or non-business programs. In other words, respondents who thought e-courses were essentially correspondence courses tended to believe that e-courses should not be offered in university programs. They also tended to believe that students should not be able to obtain degrees in accounting or business by taking only e-courses.

Respondents who believed that E courses were essentially correspondence courses also tended to believe that all exams should be proctored for e-courses, that students should be required to come to campus more than once, and that the student-to-student and instructor-to-student relationship that is missing makes the courses less valuable to students. As the

Table II Pearson correlation coefficients and significance levels for the statements

Significance levels for the statements	Correlation coefficient and significance level															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Except for the delivery medium E courses are essentially correspondence courses	NA															
2. E courses should be offered in accounting programs		-0.452 0.000														
3. E courses should be offered in business programs		0.765 0.000	NA													
4. E courses should be offered in non-business programs		0.589 0.000	0.787 0.000	NA												
5. A student should be able to obtain a degree in accounting by taking only E courses		0.411 0.000	0.372 0.000	0.393 0.000	NA											
6. A student should be able to obtain a degree in business by taking only E courses		-0.226 0.031	0.311 0.001	0.309 0.003	0.399 0.000	0.936 0.000	NA									
7. A student should be able to obtain a degree in non-business programs by taking only E courses		0.178 0.191	0.194 0.064	0.366 0.000	0.778 0.000	0.800 0.000										
8. When E courses are offered, they should be available to on-campus as well as off-campus students		0.194 0.103	0.103 0.327	0.047 0.656	0.132 0.210	0.148 0.160	0.097 0.356	NA								
9. When E courses are offered, some exams should be proctored by an independent person		0.028 0.893	0.128 0.227	0.112 0.292	0.044 0.681	0.056 0.598	0.021 0.841	0.057 0.589	NA							
10. When E courses are offered, all exams should be proctored by an independent person		-0.258 0.001	-0.303 0.003	-0.326 0.002	-0.156 0.137	-0.105 0.319	-0.027 0.795	0.048 0.647	0.212 0.044	NA						

(continued)

Table II

Significance levels for the statements	Correlation coefficient and significance level															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
11. When E courses are offered, the student should be required to come to campus at least once during the course	0.244	-0.039	-0.031	-0.077	-0.127	-0.081	-0.061	-0.122	0.279	0.334	NA					
12. When E courses are offered, the student should be required to come to campus more than once during the course	0.415	-0.370	-0.349	-0.459	-0.250	-0.196	-0.095	-0.241	0.186	0.498	0.596	NA				
13. The student-to-student and the student-to-instructor interaction that is missing in E courses makes them less valuable to the student	0.384	-0.480	-0.387	-0.353	-0.411	-0.397	-0.262	-0.136	0.035	0.267	0.252	0.450	NA			
14. As the number of E courses grows, the importance of the formal university will diminish	0.064	-0.148	-0.271	-0.193	0.007	-0.012	0.033	-0.063	0.078	0.043	0.068	0.169	0.102			
15. If the importance of the formal university diminishes, society will benefit	0.550	0.163	0.009	0.067	0.944	0.911	0.757	0.554	0.466	0.683	0.523	0.112	0.340	NA		
16. As the number of E courses grows, the importance of the university professor will diminish	-0.203	0.309	0.226	0.264	0.454	0.397	0.289	-0.188	-0.013	-0.142	-0.191	-0.159	-0.380	0.243	NA	
17. If the importance of the university professor diminishes, society will benefit	0.061	0.004	0.035	0.014	0.000	0.000	0.007	0.082	0.906	0.190	0.076	0.143	0.000	0.023	NA	
	0.090	-0.214	-0.282	-0.187	0.011	0.013	0.075	-0.113	0.109	0.099	0.058	0.153	0.204	0.726	0.223	
	0.399	-0.043	0.007	0.076	0.916	0.899	0.477	0.286	0.303	0.349	0.587	0.152	0.055	0.000	0.039	NA
	-0.003	0.253	0.186	0.158	0.298	0.255	0.181	-0.120	0.125	-0.105	-0.073	0.018	-0.180	0.307	0.648	0.316
	0.975	0.016	0.078	0.134	0.004	0.015	0.086	0.256	0.240	0.321	0.493	0.864	0.089	0.003	0.000	10.002

respondent views e-courses more like correspondence courses, their opinion of e-courses appears to be lower and more restrictive.

On the other side, respondents who believed that e-courses were not essentially correspondence courses had more favorable views toward offering degrees for e-courses and for not proctoring exams. Additionally, they tended to believe that e-course students should not be required to come to campus and that missing the student-to-student and instructor-to-student relationship did not make the courses less valuable. Remember, only about one quarter of the respondents did not believe that e-courses were essentially the same as correspondence courses.

One interesting observation is that respondents who agreed that e-courses and e-course degrees should be offered in accounting and business tended to disagree that, as the number of e-courses grows, the importance of the formal university and the professor will diminish. However, they tended to agree that if the importance of the formal university and the university professor diminishes, society will benefit.

Summary

Respondents tend to separate into two groups, those who think that “except for the delivery medium e-courses are essentially correspondence courses” and those who do not agree with the statement. Roughly two and one half times as many respondents agreed with the statement as those who disagreed (64.9 percent to 25.3 percent). Those who agree with this statement are more negative on offering e-courses in university programs or offering degrees through the completion of only e-courses. They are also more restrictive with E courses, favoring the proctoring of exams and requiring students to come to campus as part of the e-course. The average number of campus visits recommended by the 39 (42 percent of total respondents) who responded to that statement was 5.54 visits per course. They also tended to agree that “the student-to-student and the student-to-instructor interaction that are missing in e-courses makes them less valuable to the student.”

If the view of the nearly 65 percent of the respondents is accurate and e-courses are simply correspondence courses presented with new technology, then will they be more successful in the university paradigm than correspondence courses have been? Experience teaches that successful completion of correspondence courses requires a level of dedication that many do not possess. Degree programs in technical areas have been available from some colleges for decades and they have not challenged the existence of the formal university. Technical knowledge can usually be best learned in a do-it-yourself environment, such as that provided by a vocational-technical school. If the objective is simply to gain technical knowledge, probably few professors would assert that a university setting is either required or, necessarily the best setting.

Traditionally, universities have awarded degrees to students who satisfied “educational” requirements by successfully completing courses in a broad-based curriculum. Universities are challenged to develop students’ interpersonal and group skills and to teach students how to “think critically.” Meeting these particular challenges would seem to be next to impossible when a student never has direct, face-to-face contact with either an instructor or other students, as in the pure e-course degree program. That is not to say that e-courses may not have a role to play in complementing the traditional university degree program, just as correspondence courses have had but, supplanting the traditional university, hardly.

On the basis of the current research, Noam’s view of “the dim future of the university” may be more hype than substance. Surely universities will change, such is called evolution. Surely the new technology will be integrated into the university paradigm but, it is unlikely that “this system of higher education [that has] remained stable for more than 2,500 years” (Noam, 1996, p. 7) will be discarded to be replaced by the Internet. At least accounting chairpersons do not seem to think so. They appear to recognize E courses for what they are, correspondence courses delivered over the Internet.

A Bible story relates that men do not put new wine in old bottles because the aging process will burst the bottles. Instead, new wine is placed in

new bottles to preserve the wine. There is little doubt that e-courses represent new bottles, a new delivery system. The question remains, however, are e-courses old wine in new packaging? Have universities taken an academic concept that garnered limited acceptance in the past, wrapped it in the glitzy attire of Internet technology, and presented it as the pedagogical discovery of the century? By more than a two and one half to one margin (64.8 percent to 25.3 percent) the accounting chairpersons responding to the survey appear to think so.

References

- McCartney, L. (1996), "Virtual MBA – going back to school doesn't have to mean sitting in a classroom again", *Informationweek*, November, pp. 32-6.
- Noam, E.M. (1996), "Electronics and the dim future of the university", *American Society for Information Science. Bulletin of the American Society for Information Science*, Vol. 22 No. 5, pp. 6-11.
- Schuldt, B.A. and Totten, J.W. (1994), "Electronic mail vs mail survey response rates", *Marketing Research*, Vol. 6 No. 1, pp. 36-41.
- Vasarhelyi, M.A. and Graham, L. (1997), "Cybersmart: education and the Internet", *Management Accounting*, August, pp. 32-6.

Further reading

- Oppermann, O. (1995), "E-mail surveys – potentials and pitfalls", *Marketing Research*, Vol. 7 No. 3, pp. 29-33.
- Vazzana, G. and Bachmann, D. (1994), "Fax attracts", *Marketing Research*, Vol. 6 No. 2, pp. 18-25.

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