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Electronic mail as a pedagogical tool to teach international accounting

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We thank the British Accounting Association and the University of Texas at Arlington for selecting us as doctoral fellows to attend the American Accounting Association 1994 Doctoral Consortium where we met. We are grateful to our students for their enthusiastic participation in the project. Also Dianna Coker, Zaida Martinez, Michael McDowell and Aileen Pierce gave us many useful comments on the paper.
Electronic mail as a pedagogical tool to teach international accounting

Abstract

This paper reports on the use of electronic mail (e-mail) as a pedagogical tool in accounting instruction. E-mail has potential significance as a teaching tool particularly from its ability to link students internationally. It is therefore of particular interest in teaching international accounting. It provides a low-cost, relatively easy-to-implement approach to enhance instruction of comparative international accounting regulation and practices. However, application of e-mail to many other classroom situations is discussed.

E-mail was used as a means of accounting instruction in a joint international accounting project between students at University College Dublin and at The University of Texas at Arlington. The project, a joint comparative study of Irish/UK versus US accounting practices, was conducted entirely by e-mail. The paper reports how e-mail expanded the learning experiences of students working together internationally.

This paper establishes the feasibility of using e-mail as part of students’ learning experiences. Further research is underway to measure specific learning improvements attributable to e-mail as a method of instruction and to examine whether e-mail has potential as an effective teaching tool.
The increasingly international nature of business has been widely noted in texts, scholarly articles and the popular press. This change in business environment has resulted in increased globalisation and internationalisation pervading all aspects of the business curriculum at many schools. Adding an international dimension to existing courses can enrich the learning experience of students who are increasingly more conscious of a broader marketplace.

Research shows that the demand for international accounting in the accounting curriculum is likely to rise (Conover, Salter and Price, 1994). However, accepting the necessity of internationalising the curriculum is of little benefit if business educators have no tools to allow incorporation of international aspects in an already crowded curriculum. Cavusgil (1993) points out that little knowledge exists to help business educators internationalise their curriculum. A project such as the one discussed in this paper allows incorporation of a significant international component within the current curriculum of many courses. It allows instructors to provide students with an active international experience (from within current courses) to complement classroom discussion of international issues.

To be successful business people, students must develop adequate oral and written communication skills. The role of communications skills in accounting education and the accounting profession is becoming increasingly important. Traditionally, developing these skills required students to prepare written business memos, written research reports, and oral class presentations. However, increasingly, students will be required to use e-mail to communicate with their peers in the workplace. Therefore, providing students with an opportunity to develop skills in communicating through e-mail enhances their educational experience.

E-mail is one of the most rapidly developing methods of long distance communication. It is especially useful in international communication because it is cost effective, quick and can reduce problems of time differences between countries. With access to the Internet, world-wide communication is possible by sending electronic messages that are delivered almost immediately and can be responded to at the convenience of the recipient.
E-mail as a business communication device is relatively new. It poses unique problems as well as advantages. One such problem is that standard formats as used in hard copy communications may not be possible. Also, e-mail messages may appear less formal than hard copy memos or letters. The advantages however outweigh the disadvantages. Sending e-mail messages is relatively simple. Immediate receipt and response facilitates a conversational type of communication. For instance, if both participants are on-line simultaneously, messages can be exchanged in a matter of seconds. Participants can ask for clarification of unclear points or can comment immediately on the message received. Misunderstandings can be addressed more quickly than by using hard copy communication. These advantages, along with widespread access to the Internet, are making e-mail an important communication medium in the workplace.

This paper reports the first stage of a longer-term teaching experiment using e-mail in the classroom. We describe its application in teaching international accounting, but the approach is applicable in teaching any aspect of accounting or other business subjects. Initial results suggest that the use of e-mail as a teaching tool is feasible and practicable, and benefits students’ learning experiences. Work is underway designing a controlled experiment to examine whether students learn better using e-mail and whether e-mail is better than more traditional methods of teaching comparative accounting practices.

E-mail is particularly apposite for teaching international accounting. As Sherman (1987) noted “The issue of internationalizing the accounting curriculum has passed from the stage of asking if it should be done to one of exploring how it should be done”.

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LITERATURE REVIEW

The American Accounting Association (AAA 1986) “Bedford Committee” report on the future of accounting education was critical of traditional classroom-orientated, textbook-based teaching methods, when “the learning process risks becoming uninspiring to capable future accountants”. The report commented that “many accounting graduates do not know how to communicate...” and that “Students should also be led to take active roles in the classroom...”. Many of the 28 recommendations made in the Bedford Report are addressed by this project including designing educational experiences for students that require them to be active, independent learners and problem solvers and designing learning technologies that increase contacts between students and faculties on intellectual issues, emphasising the personal development of students.

The Accreditation Council Policies, Procedures, and Standards of the American Assembly of Collegiate Schools of Business (AACSB 1989-90) states that a business education should include attention to social, economic and technological developments. This project allows students to experience international social and cultural differences in a business-like environment and attain expertise in an emerging communication technology.

Burns (1979) Mintz (1980) and Sherman (1987) have studied the internationalisation of the accounting curriculum in the US. A comparison of the results of the three surveys clearly indicates an increase in the number of courses offered in international accounting. Cohen, Pant, and Sharp (1991) surveyed both department chairpersons and members of the AAA international section to identify possible reasons for internationalising the accounting curriculum. Reasons given included:

- Internationalising the curriculum provides a greater global orientation for students;
- Students become aware of international differences in financial statements;
- More interesting class discussions are possible;
- Students are more sought after in the marketplace.

Agami (1983) examined the methods of teaching employed in 31 US, Canadian, British and New Zealand international accounting courses. He found lecture,
discussion and case methods were used in presenting the topics in class, supplemented by term papers, oral presentations and submission of special projects by students.

Several papers suggest specific methods or approaches to incorporate international accounting in undergraduate programmes. Meek (1985) suggests an approach for teaching three managerial accounting topics incorporating an international dimension. McClure (1988) describes teaching materials used at Illinois State University in an introductory financial accounting course. Stout, Wygal and Volpi (1988) suggest adding an international component to courses by asking students to compare financial statement disclosure differences among different countries. Bloom, Fuglister and Kantor (1992) suggest that, by focusing on a comparison of accounting principles over a selection of countries, students are motivated to consider possible reasons for differences among specific accounting principles and thus gain a better understanding thereof.

Tondkar, Adhikari and Coffman (1994) describe the use of foreign annual reports to teach international accounting. The annual reports of seven foreign companies were selected for comparison with one set of US accounts as a means of illustrating varying methods of accounting in different countries.

No previous study used e-mail to teach international accounting. E-mail represents a powerful tool and offers an exciting opportunity for teaching a wide variety of international accounting topics.

**DESCRIPTION OF PROJECT**

This section of the paper describes the assignment and the background of the students participating in the project. The project took place between February and May 1995.

Irish students participating in the project were final year business undergraduates at University College Dublin (UCD) studying Advanced Accounting Topics as an optional course. There were 141 students in the class. There were 57 students from the University of Texas at Arlington (UTA) enrolled in Design of Accounting Information Systems, a senior level elective. Most of the students were accounting majors - four
were information systems majors. As there were 57 US students and 141 Irish students, the project was done on a group basis by Irish students and individually by US students, i.e. one US student for two/three Irish students.

Students were required to teach themselves how to use e-mail. Basic typed instructions were made available to them at the start of the project. A full list of e-mail addresses of US students was circulated to the Irish students who therefore made the first contact. Use of mailing lists was recommended so that each Irish student in a group would get copies of messages from his/her US counterpart. Undergraduate students at UCD do not have automatic access to the Internet. They were allocated Internet addresses for the duration of the project. Their addresses expired shortly after the deadline date for submission of the assignment. US students had e-mail accounts before the project since their course involved frequent computer use and required a computer fee of $15 for the course.

Students were required to complete the assignment shown in table 1 entirely by e-mail and to submit a written report of their findings. Students were expected to find out all the information necessary from their international counterpart and were discouraged from using the library to complete the project (other than to research domestic

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<td>• Compare and contrast US and UK/Irish approaches to regulation of accounting</td>
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<td>• Find out how the layout and presentation of a set of published accounts differs in the UK/Ireland and the US.</td>
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<td>• Identify similarities and differences in methods of accounting for any one of the following: Goodwill Methods of consolidation Stocks/Inventory Pension costs Foreign currency</td>
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<td>• Identify three topics/issues which have been the subject of a standard in the US but have not yet been dealt with by the Accounting Standards Board (ASB) in the UK/Ireland.</td>
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accounting regulations). Thus, in addition to learning about accounting in the other country, each student had to be fully familiar with domestic accounting regulations to provide the necessary data to his/her international partner. The project was independently completed by US and Irish students using the data obtained by e-mail from their international colleague(s).

Students were supplied with a list of major objectives (summarised in table 2) against which the final project would be evaluated, depending on each student’s attainment of these objectives.

| TABLE 2 |
|---|---|
| **Objectives of the Assignment** | |
| After completing the assignment students should: | |
| • Understand similarities and differences between UK/Irish and US accounting standards; | |
| • Have an appreciation of some of the current accounting issues in the other country; | |
| • Be able to use e-mail to transfer files and to communicate with others in an international setting; | |
| • Be able to complete a group project using e-mail as a communication medium; | |
| • Understand the need for clear, concise communication; | |
| • Develop skills in co-ordinating a group project without direct verbal interaction. | |

The project carried ten percent of the marks/grade for the course. Maximum length for the project was seven typed (single-spaced) pages, in addition to any e-mail printouts included as appendices. Students were told that the assignment would be assessed generously, provided they were able to demonstrate clear evidence of a reasonable level of communication with their foreign counterpart(s). Each instructor retained complete autonomy in supervising student participation, setting standards and marking the projects.
Students were advised that the project would require special attention to written communication. It was suggested that students begin the project by "introducing" themselves through brief biographies. Students were encouraged to consider the effect of international time zone differences on the speed of responses to messages.

In addition to examining accounting issues from an international perspective and to learning how to use e-mail, students had the opportunity of working with students in another country and could begin to understand some of the advantages and difficulties that might be encountered when working with someone internationally. Students had the added opportunity of finding out about student life in another country.

Because all communication was written, students had to develop written communication skills to correspond more efficiently and effectively. Students learned to appreciate the importance of clear, concise written communication.

Most students develop teamwork skills during their time at university through participating in group projects for various classes. The e-mail project was similar in many ways but somewhat different in others. The usual difficulties encountered in any group project of unavailability and lack of response of some group members was encountered. The project gave rise to other difficulties unique to e-mail. Rather than face-to-face group meetings, students had to co-ordinate projects via the Internet without direct verbal interaction. They also experienced difficulties with written communication in which the possibility of misunderstanding was magnified.

All communication between the course instructors in setting up the project, during the period of the project and in writing this paper was through e-mail. At no time was there a need for other forms of communication. E-mail is a particularly suitable means of communication given the time differences between Ireland and Texas (six hours).

**INITIAL EVALUATION OF PROJECT**

Whereas the logistics of organising such a project at undergraduate level might appear difficult, our experience was that the project runs well provided that it is well planned and provided students are motivated to participate fully. Objectives of each instructor
need to be spelled out and agreed fully in advance so that each is aware of what the other expects of the students.

The response of students to the project was enthusiastic. Novelty value of using e-mail, together with the incentive to represent their country abroad, motivated them to complete the project to a high standard. They enjoyed the experience of interacting with foreign students and of learning about cultural differences as well as accounting differences. They generally viewed the project as interesting and at the same time challenging.

A number of problems arose during the project. The most difficult problem was uncooperative students who did not respond to messages or provide the information necessary for the corresponding student/group to complete the project. Ways of dealing with this problem include assigning the project early in the academic year, establishing a time frame within which responses are to be sent and awarding a substantial percentage of course marks to the project. Some form of evaluation of their international counterpart by the students at the end of the project might provide an additional incentive for active participation by all students.

As the completion date for the project approached, some students alleged lack of co-operation as excuse for not doing a good project. This difficulty could be overcome through careful monitoring by the instructor of some/all correspondence by the students. It would not be necessary to evaluate all communication.

Unequal numbers of students in the two classes resulted in individual US students carrying an unequal burden of work in completing the project compared with their Irish counterparts who were working in groups of two/three.

Scheduling differences between the two universities presented some minor difficulties. The students did not begin or end semesters on the same dates, so projects were assigned at different times for the two groups. Responses of students out of semester to their foreign counterparts in semester were predictably poor. Again, these
problems can be reduced by allowing the students a reasonable length of time to complete the project.

There were some differences in student profiles between the two classes. Irish students were all full-time students in their early twenties. Many of the US students were adults in their forties and fifties and were studying part-time. This made the project even more interesting as students were dealing with differences in both nationality and age.

Differences in terminology between the two countries caused some minor difficulties, such as: inventory/stocks; stocks/shares; allowances/provisions; receivables/debtors. This problem actually presented a learning opportunity for the students. Many texts discuss differences in terminology between countries. However, the students completing this project experienced these difficulties, rather than just reading about them. Students will not easily forget the importance of clarifying issues under consideration because failure to do so caused extra work for several.

The e-mail package on the network in UCD is Pegasus e-mail. UTA students used either PINE mail or the operating system mail utilities. Compatibility problems between software made transfer and reading of files difficult. This proved hard to resolve because the source of the problem was not recognised early enough in the project.

There were a number of advantages of using e-mail for a student project. Students enjoyed the challenge of using e-mail and of making contact with counterparts from another country. Having to explain the accounting environment of their own country encouraged them to develop an overview of domestic accounting practices. Students learned international accounting in a more stimulating way from fellow students, as the quotes in table 3 illustrate.

| TABLE 3 Feedback from Students |
From the course instructor’s point of view, e-mail presents a number of advantages. Dealing with queries from students by e-mail rather than in person can be more efficient. At the same time, e-mail offers the opportunity of giving personal attention to students which can be difficult where classes are large. Instructors can respond to messages when convenient (outside other commitments) and students avoid time wasted calling to empty offices.

Some students may be more comfortable sending messages to the instructor than calling to his/her office. E-mail thus encourages reticent students to communicate more actively with the instructor. This is especially important for students who may be less comfortable in individual face-to-face meetings.

The project should be assigned early in the semester. As with any group project, scheduling conflicts present difficulties that cannot be overcome quickly. Adequate time to learn to use e-mail is important for the success of the project.
DISCUSSION AND CONCLUSIONS

Initial experiences using e-mail as a teaching tool were encouraging. It is low-cost and easy to learn and use. Logistics of organising the project were less difficult than we had anticipated. Students enjoyed the project and seemed to learn better from other students and through using e-mail. They were more actively involved in the learning process than in a traditional lecture-only approach.

Having established the feasibility of using e-mail, its effectiveness as a teaching tool is currently being assessed. A research study is being designed which tests whether e-mail is an effective teaching tool for attaining specific learning objectives. This study will deal with problems highlighted in the initial study such as differences in ages and numbers of Irish versus U.S. students. The extent to which students achieved the cognitive learning objectives specified in Table 2 will be considered. More formal assessment of student responses to the project will be carried out.

The potential of e-mail as a teaching tool is enormous. Many topics other than the one in this paper could be assigned to students. E-mail is especially powerful for international communication but joint projects with other local colleges dealing with domestic accounting topics could be designed.

The project was well received by the students. They viewed it as challenging but well worth the effort. They participated in a project that demonstrated their ability to use emerging technology in a way that many businesses find useful. They not only learned about international accounting and gained knowledge of how to complete such a group project but they also appreciated the usefulness of rapid world-wide communication.

One major difficulty in establishing such a project is making contact with a foreign course instructor who is interested and willing to participate in the venture. Finding partners is likely to become easier as e-mail addresses become more widely available (for example, they are now included in Hasselback, 1995), and more universities put home pages on the world wide web. The American Accounting Association International Section Research Thrust Committee currently has an International
Faculty Exchange Homepage project underway for completion in 1997 which might be a source of potential partners. The authors are examining the feasibility of developing a home page that could be used as a clearing house/discussion group for faculty interested in developing similar projects.

The rewards of using e-mail and its potential as an effective educational tool are an ample return for the effort involved.
REFERENCES


