

***The Outcomes of Changed Delivery for a
First-level Accounting Course***

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Abstract

This research was undertaken subsequent to a sudden, sharp fall in student success in two consecutive semesters of a first-year accounting course delivered by distance. The research aimed initially to investigate whether increased communication in the form of emails and web forums, reorganised course material, and increased self-assessment activities would have an effect on student persistence and retention. An analysis of the findings of the research revealed that students' academic outcomes were enhanced as a result of a higher level of tutorial support. Students who sat the final exam were surveyed the following semester concerning their contact with other students, their use of the online campus facility, and their reaction to self-assessment activities. Respondents' student records and participation in web-based communication were included to enhance analysis of the questionnaire. Only two respondents failed the course. Analysis showed that students valued the communication, that all but one worked alone, and that most used the self-assessment activities to some extent and were generally satisfied with the course and its facilitation. The retention rate and number of successful completions did increase in the semester and a higher percentage of students attained A grades than in the previous three semesters. The improvement in final grades indicated that the course lecturer's increased effort was in turn reflected in greater student effort.

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The Outcomes of Changed Delivery for a First-Level Accounting Course

Background

Setting the scene

The stimulus

The stimulus to carry out this research was the sudden, sharp fall in student success in semester three 2000 and semester one 2001 in a first-level accounting course. Successful student completion rates had fallen below 50 per cent in each of the six semesters to semester three 2001. Table 1(a) illustrates the trend in decreasing rates of retention.

The reader may observe that a climb in the retention rate from 45% in one semester to 54% in the next does not seem to be significant, particularly when it is followed by a drop to 35% in the following semester. However, the need to exceed a 50% retention is indeed significant because the Tertiary Education Commission would not fund courses that achieved less than 50% for 2001 or 2002. It was tempting to make no comment about semester three retentions, but this would have biased the research. Semester three retentions are traditionally poor. This is no surprise, given the potential for the already short 17-week semester to be shortened a further two weeks for the many people who have families and go on holiday over the Christmas holiday season. The Open Polytechnic also closes down during this period, so the students cannot contact their tutor during that time. Only once has the retention rate risen above 50% during the four years that the course has been offered in semester three. The rates were 47% in 2000, 36% in 2001, 52% in 2002 and 44% in 2003. It has been suggested that offering the course in this semester should be abandoned in 2006.

As yet unpublished research, undertaken after this paper was written, has found several possible explanations for poor retention rates and sudden drops in retention. Poor retention rates have been found where

- reluctant students were funded to enroll
- students transferred to a subsequent semester
- secondary education was inadequate at the time of enrolment.

Statistical tests were run on semester two 2002 data (regression and correlation analyses on SPSS¹). The results were not significant ($p = .066$) but suggested that there is a relationship between the degree of student success, the way students are funded, and their prior education. The tests were not run on the 2001 data because the result would have been even less significant. The percentage of students funded by Work and Income/loan-funded² enrolments was close in semester two 2001 and 2002 and the incompletes lower in 2001. In addition, the percentage of Work and Income/TIA-funded³ enrolments was very low in 2001.

The statistical analysis pointed to the students who may have been persuaded to enrol in the course by their Work and Income New Zealand (WINZ)/TIA case managers when they applied for the unemployment benefit, the domestic persons benefit or a hardship grant. In addition, the New Zealand Navy enrolled students who were not necessarily consulted about the enrolment. They were enrolled in semester one 2001 and transferred to semester two 2002.

Just over half of those in the class with limited secondary qualifications were also students with Work and Income/loans or Work and Income/TIA funding.

Another variable that affects success is the students' right to transfer from one semester to a subsequent semester once for every enrolment. In 2002, 27% of the class transferred from a previous semester. Of these, 21% did not complete and 6% completed.

¹ Statistical Package for the Social Sciences

² Students are on a benefit and have a study load through Study Link

³ Students are on a benefit and have enrolment fees paid in part or in full by WINZ

Table 1(a): Retention and completion graph for first-year accounting in the Bachelor of Business 1996–2001

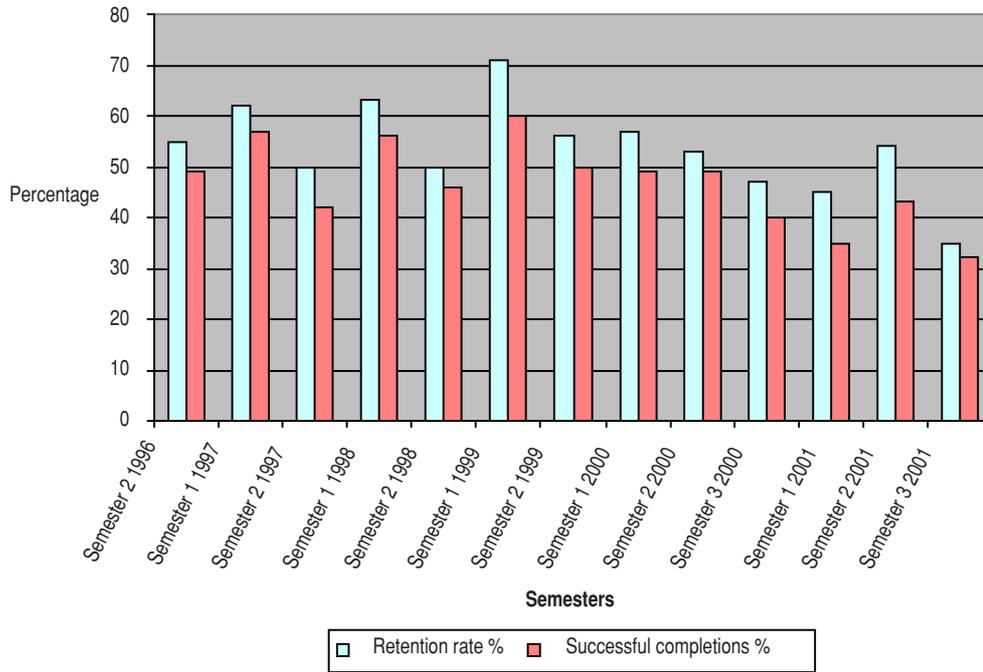


Table 1(b) gives the statistics on which the graph of Table 1(a) is based.

Table 1(b): Retention and completion statistics for first-year accounting in the Bachelor of Business 1996–2001

Year	Semester	Retention rate	Pass rate	Successful completions
2001	three	36%	93%	32%
	two	54%	80%	43% (target cohort)
	one	45%	78%	35%
2000	three	47%	84%	40%
	two	53%	93%	49%
	one	57%	86%	49%
1999	two	56%	89%	50%
	one	71%	85%	60%
1998	two	50%	91%	46%
	one	63%	89%	56%
1997	two	50%	83%	42%
	one	62%	92%	57%
1996	two	55%	90%	49%

Percentages were calculated thus:

- **Retention rate:** Number of students who sat final exam divided by number of students enrolled
- **Pass rate:** Number of students who passed final exam divided by number of students sat final exam
- **Successful completions:** Number of students who passed final exam divided by number of students enrolled.

Table 1(c) shows the increasing annual numbers of student enrolments in the course and the corresponding decreasing rates of retention and successful completion.

Table 1(c): Retention and completion numbers for first-year accounting in the Bachelor of Business 1996–2001

Year	Semester	# Enrolled	Entered for Final Exam	Sat Final Exam
2001	three	79	27	25
	two	112	60	48 (target cohort)
	one	108	49	38
2000	three	83	39	33
	two	139	73	68
	one	155	89	76
1999	two	102	57	51
	one	93	66	56
1998	two	90	45	41
	one	115	72	64
1997	two	103	52	43
	one	100	62	57
1996	two	100	55	49

The initial aim and limitations of the research

The initial aim of this research was to find out whether changed delivery of a core accounting course would encourage its students to persist with their studies. As the study evolved, it was found that a somewhat different issue was being addressed: whether and how changed delivery affected the academic outcomes of those students who persisted with their programmes of study.

One limitation of the research in addressing the initial question is that students who did not complete the course were not surveyed, so we have no idea whether the changes in delivery affected them at all. (Students who did not complete the course in semester two 2001 and in other semesters have been the subject of subsequent research.) A second limitation is that the questionnaire

was sent only to students who sat the final examination, which led inevitably to a biased result. This choice was made because it has been found that students who complete the course are more likely to complete a questionnaire about it. In addition, the students who achieved As and Bs appeared to be more willing to respond to the questionnaire than those who achieved Cs and Ds. Thirdly, it was difficult to identify which of the changes discussed in the paper (online communication, the structure of the learning material, and increased self-assessment) were responsible for improvement in the performance of students. Finally, this study is on a single group only, semester two 2001 students, so comparisons are not possible. This limitation has been addressed in subsequent research on the semester two 2002 class. The results, which are not presented here, were similar.

The focus now

This research design prevented the author from reaching useful conclusions about the effects of changed delivery on retentions. However, it addressed another issue: whether and how changed delivery affected the academic outcomes of the students who persisted with their studies.

Description of course

The course under discussion is *71 100 Accounting* offered by The Open Polytechnic of New Zealand, a wholly distance/open learning institution.

This is one of six first-level core courses of the Bachelor of Business offered by The Open Polytechnic of New Zealand. Students of *71 100 Accounting* are expected to know bookkeeping when they begin the course (which does not stop them from attempting the course without knowledge of bookkeeping). Topics covered in the course are what one would expect in a first-level accounting course:

- a theoretical unpinning of several accounting standards, in particular the *Statement of Concepts, Explanatory Foreword* and *Financial Reporting Standard 2*
- basic financial statements for a sole trader, and the valuation and discussion of assets, liabilities, revenues, expenses and inventories
- basic cash flow statements, an understanding of organisational structure, partnerships and not-for-profit organisations, including the Statement of Service Performance
- analysis and interpretation
- an introduction to tax and auditing.

The opportunity to carry out the research arose when three changes occurred:

- The learning material was revised after a new edition of the course textbook was published.
- The learning material was converted for presentation as a web-based course.
- Enhanced student support became available for the traditional paper-based course via a campus website.

Changes to learning material

Changes to learning material usually take a full semester to implement. They cannot be made as quickly as they can in face-to-face teaching because courses are offered entirely at a distance by The Open Polytechnic of New Zealand (The Open Polytechnic). All material has to be written by the content specialist, moderated by another specialist, then revised by instructional designers and editors to ensure quality.

The need to make changes to the learning material was fortuitous. Besides the need to use the new edition of the course textbook, the material itself needed changing because over time shortcomings and vacuums had become obvious and had been addressed inefficiently. The important changes made were

- the inclusion of more self-assessment questions and answers, to make the assessment and final exam process more transparent to students
- additional teaching in cash flow statements and audit because these areas were inadequately covered.
- improved presentation of the taxation and analysis and interpretation sections.

Web-based communication with students enrolled in the course was introduced in semester two 2001, following two semesters of sharp falls in retention. The communication was aimed initially at facilitating student interaction with sometimes dense learning materials and secondly at enhancing student understanding of these materials through the sharing of the lecturer's answers to their questions with other students who might benefit from knowledge of both the questions and the answers to them.

The web-based communication was accompanied by essential revisions to the course materials and the introduction of more self-marking exercises, which may have influenced the completion statistics. Thus, a range of variables may have had an effect.

A major difference in the presentation of the course was that for the first time Assessment 1 was sent out with the learning material and Assessment 2 was posted out earlier than before.

As a result, more discussion and teaching around the assessments was possible. Access to the Web meant that each discussion was not restricted to lecturer and one student but was inclusive, involving the lecturer and the whole class, as in face-to-face teaching. However, such inclusiveness could not reach the 17% of

the class who did not have online computer access or those who did not read their emails, so the use of online media by the class was voluntary and partial at this point. When the online media was first offered to students, academics commonly held that until the use of the Web became an integral component of a course, it was unlikely to generate the desired level of commitment from students (and staff). Now that the Web has been used for three years, the students have 'caught on' that valuable information is available on it. By mid-2004 between zero and three students were not using the Web. In 2005, all students will be required to have access to the Web.

Conversion to web-based teaching

At the same time as changes were being made to the traditional paper-based course, The Polytechnic was converting courses for web-based teaching through Open Mind Online (Open Mind), a site managed by an outside provider. *71 100 Accounting* was one of these courses. The conversion impinged on the time taken to make changes to the paper-based course because stringent editing was applied to create consistency in material that had been changed piecemeal over the years. The time taken was frustrating, but the conversion to a web-based course resulted in a benefit to the students studying the paper-based course in the form of enhanced support.

Enhanced support

The instructional designer assigned to convert the course for Openmind delivery had substantial experience as an online learning student. Beyond the professional debates surrounding the conversion, her key message was that for online delivery to succeed, students needed to hear from their lecturer twice a week to prevent a sense of isolation. These 'Announcements' took the form of reminding students of the topic they should be studying each week and raising issues pertinent to the course. Since students studying the paper-based course pay the same course fees as the Open Mind students and there are many more of the former, in the interests of equity 'bulk emails' dealing with the same topics were sent to all students of the paper-based course via the Polytechnic's internally managed website, 'Campus Online'.

The 'Campus Online' system is not so sophisticated as that of Open Mind, but it has achieved the same end for communication purposes. In addition to the announcements/bulk emails, forums and threads make it possible for students to introduce themselves to one another and to receive information about the

course. In addition, because many students are first-time learners at a tertiary institution and left school years earlier, some forums deal with succeeding at the course. Among other topics, the forums have dealt with the following:

- The marks students need to get for assessments in order to pass the course if they get only a minimum mark for the exam. Some first-year students lack knowledge of the business environment, do not work hard enough at the assessments and do not realise the consequent effect on the final grade. (The standard of assessment work submitted has improved.)
- Where to look in course material for information to answer assessment questions. The course is large and, again, the naive, first-time learner needs a guiding hand.
- Answers to students' questions. They are posted in the forums. Thus, when one student asks an important question, the answer is shared with all.
- A reference point for important dates and information (which cannot be lost by the students!).

Students were told when new information was posted to the forums in the bulk emails. There is also a Polytechnic policy that when students post an introduction or ask a question, lecturers should respond within 48 hours. (The researcher has wondered whether this makes her presence too 'big' and whether it discourages discussion among the students themselves.)

A hard copy of all information from Campus Online, such as responses to student questions (see above), was sent out to the whole class to ensure that all can read it. While not all students have access to the Internet, the lecturer has suggested a visit to cyber cafés, the local library or information centre to use the computers there.

The research

Literature review

The research was guided in part by

- David Kember's *Open Learning Courses for Adults: A Model of Student Progress* (1995). The researcher believes that improved communication via email adds to the outcomes of Kember's research. The way The Open Polytechnic sets out to reach its students also makes it impossible to follow all of Kember's recommendations.
- Moxley, Najor-Durack and Dumbrigue's *Keeping Students in Higher Education. Successful Practices and Strategies for Retention* (2001). The authors call for proactive, institution-wide efforts to identify students who are not persisting with their studies and to redirect them before they drop out of tertiary education altogether. Several points made by the authors were relevant to this research. However, many points will never be applied by The Open Polytechnic because of its policies and funding.

Methodology

The questionnaire was developed by the researcher to test student reaction to the changes in delivery, including the degree of satisfaction with the course and its facilitation. It was pilot-tested on colleagues and alterations made at their recommendation. Immediately after the semester two, 2001 final examination, the questionnaires were sent to all students who sat the exam.

A questionnaire was used because the responses needed to be obtained soon after the exam, before students lost interest because they had moved on to another course. As well, in December people become busy at home and work and difficult to locate. A questionnaire also gives respondents time to think about any written comments they want to make, is less expensive, and is less time-consuming than a telephone survey or a face-to-face interview.

In addition to questionnaire responses, data used in the analysis was drawn from personal source material (such as emails from several respondents), course statistics, and students' personal data (Ethics Committee and student permission was obtained to do this).

The questionnaire

A copy of the questionnaire is included in Appendix 1.

The questionnaire was divided into four sections, dealing with contact with other students, use of the Online Campus, self-assessment activities, and overall evaluation. Most of the questions required a quick *Yes* or *No* answer.

Respondents had an opportunity to provide qualitative data by making comments below some of the questions.

The questionnaire was sent to all 60 students who sat the final exam in semester two 2001. The limitations of this small target cohort were discussed earlier in the paper. While the percentage of respondents did not precisely reflect the composition of the class in gender and age, the respondents were reasonably representative of the class demographics.

Tables 2, 3, and 4 compare the numbers (and percentages), ages and grades of the respondents with the numbers, ages and grades of those who sat the exam.

Table 2: Comparative numbers

	Number of respondents (%)	Number of those who sat the exam (%)
Men	6 (26%)	10 (17%)
Women	17 (74%)	50 (83%)

Table 3: Comparative ages

Age	Number (%) of respondents	Number (%) of those who sat the exam
19	2 (9%)	3 (5%)
20–29	5 (22%)	21 (35%)
30–39	7 (30%)	21 (35%)
40–49	5 (22%)	11 (18%)
50+	4 (17%)	4 (7%)

Table 4: *Comparative grades*

Grade	Number (%) of respondents	Number (%) of those who sat the exam
A+	2 (9%)	2 (3%)
A	6 (26%)	12 (17%)
B+	2 (2%)	5 (7%)
B	9 (39%)	18 (26%)
C	2 (9%)	11 (16%)
Fail	2 (9%)	11 (16%)

(Also see Table 5(a) and (b) for comparisons with previous semesters and the subsequent semester.)

No attempt was made to survey the fifty-two enrolled students who did not start the course, transferred to another semester, or withdrew after starting it because the questions dealt with the use of course material and communication with students throughout the semester. These silent non-participants are a matter of deep concern, but addressing non-completions has been well researched by others, for example, Lentell (as cited in Dreaver & Scott, 2002).

Discussion on the questionnaire responses

Working with other students

Kember (1995) and Moxley et al (2001) stressed the need for students to work together; and the instructional designer involved said, 'It is academic suicide for students to study alone'.

During the semester students were encouraged to contact one another. A list of the names, phone numbers and addresses of students who had indicated that they wanted to work with others was sent to the class at the beginning of the semester. There was a forum on the Online Campus website where students were invited to meet one another.

Twenty-three students took up the opportunity to introduce themselves on the Web. Three found that they knew one another and suggested working together, but at least one eventually transferred to another semester and no more was said about working together. Of the 23 who introduced themselves on the website, nine completed the course (15% of those who sat the exam). Those students who did not complete may have been looking for a distraction from study or may just have been a chatty group. The fall-off after the initial enthusiastic introductions has continued semester after semester, so there seems to be no link between initial introduction and actually working together or even getting down to work.

There appeared to be a limited sense of Internet community among the students and a slight (15%) indication that community with other students encouraged completion.

Five of the students who sent introductory emails also returned questionnaires. Presumably they did not have the opportunity to meet other students face to face because of their isolation from big population centres. These students also reflect a fair cross-section of the class in their spread of ages, work and family responsibilities, experience, and achievement in the face of disability. Relevant extracts from their introductory emails are shown below:

I live in the Sounds [in the north of the South Island], a beautiful, tranquil environment. My partner writes text books on hair dressing. I'm 33 years, doing mobile hairdressing at the moment, while looking after my daughter who is six months old. I came originally from England. I enjoy walking our dog, swimming, music and a few pints of Guinness (sic) now and again. Have to go for now, my daughter is calling, great to meet you all. Be in touch.

She passed the course.

A 22-year-old who lives in an isolated small town in the eastern central North Island had worked in an accountant's office for 5 years after leaving school and was currently working at a local sawmill. She says:

This is my first year studying since leaving school. I did business management last semester. I find it quite hard to make myself make time to do my study.

She and her husband enjoy fishing and boating:

We spend most of our spare time when the weather is good at [a beautiful isolated beach holiday area] and when we have spare time and money, we try to do renovations on our house, which is about 100 years old.

She passed the course.

One of the male students has a vision impairment. He lives in a fairly isolated small town:

This is my first semester with The Open Polytechnic. I am unemployed at the moment, but looking. I am doing three subjects this semester. Accounting, statistical analysis, and economic reasoning. It sure is a challenge, but I feel worth while, for the future. Hope everyone enjoys the course and does well.

He also passed the course.

The other male student in this group lives in a small town about half an hour from the small city where he works in a business supporting the trucking industry:

I have 5 children but only three currently living at home. This is my 6th course and I transferred from semester one due to extremely high business loads at work.

This student needed plenty of bookkeeping support. He passed the course.

The fifth student in this group did not sit the exam in semester two because of a misunderstanding. She was able to sit it at the end of semester three, when she failed:

Hi, I beat everyone when it comes to procrastination. I am a single mother with two children and two cats, I live in an exciting household with my 21 year old sister, 24 year old cousin, a female cat and an extremely active male cat. There is always something interesting happening in my home environment and being an inquisitive person I don't like to miss out on the action. I have work experience in the Freight Industry (customer services). I enjoy studying and hope to be a successful Manager within a specialised industry.

Only one of the students who responded to the questionnaire actually worked with another student did so, and that was with a student at another institution. She said:

Bouncing ideas and thoughts off someone who understood what I was saying helped me clarify things for myself.

Another did try:

I telephoned approx 15 people from the student list to see if anyone wanted to study for the exam together. Over 60% had dropped out or had deferred and the rest weren't ready to start studying. So I worked on my own.

Students explained why they preferred to study alone. One said she could achieve a lot more if she set a timetable and slowly worked on achieving the goals on her own. Another

did not want contact with other students. I had completed full-time study at (another tertiary institution) in 2001 and it was a relief not to have to attend seminars or meet other students. I liked 'doing my own thing and I am doing reasonably well without contact with students because I feel that the information provided is easy to understand.

Five of the 23 respondents indicated that they would like to have contact with others in the future and three made comments about contact and performance.

According to research carried out for The Open Polytechnic, its students elect to study with this polytechnic because they want to do so by distance, 'at their own pace and at their own place', and this is the slogan used in advertising our courses. This research finding may imply that students prefer isolation from other students and independence, but it may also have to do with their lifestyle, career and place of residence. It is probable that many students do not realise how difficult it is to study alone when they first enrol. The researcher has had students who say that this method of study does not suit them, and they move on to contact study.

Most of the students in this class are already in employment. Many are also heavily involved in family life, with all its related life events. As a result, the majority are indifferent to studying with others or find it difficult to meet with others. However, the researcher is aware that some of the students who do not succeed do crave contact, because their learning style is aural, or they are first-time tertiary learners, or they are simply naïve about accounting and business in general. It is unreasonable to expect busy students who understand the course work, to spend time working with students who are struggling with it.

Online campus/Bulk emails from lecturer

Sixty-one per cent of the respondents did use Online campus forums and of these, 56 per cent said that they received some help from them. Ninety-six per cent of the Online campus users remembered receiving the regular bulk emails from the researcher, found them useful and felt they were sent out often enough.

Sixty-five per cent of the respondents made written comments on the usefulness, tone and content of the forums and emails and how they might be improved.

Only one student was particularly critical of distance study and did not feel supported, most of the respondents making positive comments. The critical student called for improved structure in the emails. Although most email communications take up a great deal of the lecturer's time and thought, sometimes they need to be written rapidly.

The comment *I didn't really find the email forum helpful because there wasn't really any discussion on aspects of the course content* has been accepted. A little additional teaching is now given on topics at the stage students should be studying them and they are related to current issues when possible.

This student also called for the lecturer to work with the students online with each week's topic to ensure people meet set deadlines, but this is not possible in a distance/online programme because each student works at his or her own pace. This is illustrated by other students' comments:

I was always so far behind that the emails weren't relevant to my point of study,
and

The emails made me feel included, but they generally came after I had worked through the issues that I had problems with, which was slightly annoying.

However, other students said that they looked forward to the personalised contact and weekly reminder, which brought a bit of encouragement, made a difference to motivation, and helped them keep to deadlines. They found them useful for their suggestions on the more important topics in the course and for understanding various questions in the assessments:

There was always something in the content with experienced advice or to clear something up or simply encouragement which was just as appreciated and useful.

One student commented that the emails and forums

left you with the feeling the tutor was reading your mind and was responding to your questions!! I felt very comfortable in terms of asking further questions or seeking help.

The lecturer may have appeared to be reading students' minds because when one student asks an important question, the answer is shared with the whole class for equitable treatment. This was much more difficult to do when responses were made individually over the telephone.

And finally:

I consider the emails and forum messages to have been very relevant to areas of the course where a tutor's guiding hand was necessary. Frequently, that guiding hand is lacking in a distance course, when, even more so than in a normal lecture room atmosphere, that assistance is necessary for a student who cannot see the wood for the trees.

So, while the class members did not really form a community among themselves, they appear to have found community around the lecturer's communications. It was very encouraging that the 'monster image' (Dreaver & Scott, 2002) of the lecturer was overcome because students found they got *to see the personal side of both the lecturer and the students [who can also contribute to the fora] which is nice.*

Another said:

It makes everyone seem more accessible and reminds us that there are humans on the other end of the computer!

A majority of respondents described the tone of the communications as friendly, chatty, helpful, with a personal touch, relatively informal, and well suited to the type of study.

However, a minority of students were not so receptive. One student had *used forums on a previous course and found them too time consuming and wasted too much precious time and then hard to find what they were on about anyway.* Another student found that the site was not user-friendly, a problem currently being resolved by The Open Polytechnic.

Self-assessment activities

There is a long history to self-assessment exercises in this course. When the course was first written for the first edition of the current text book in 1995, students were sent the answers to the self-assessment exercises on a compact disk. It was a nightmare. Some students could not use the disk because they did not have the equipment or the disk was not compatible with their equipment. These students could ask for a hard copy of the answers, but the lecturer suspected that many did not do so.

When the course was revised during 1998, the answers were included in hard copy at the end of the course material. Other revisions were also made. The retention rate for semester one, 1999 was the best it has ever been (but it did not last. See Table A1 in Appendix A.) When the course was revised during semester one, 2001, more exercises and answers were included in the material, adjacent to the teaching topics, to make them more relevant and to make assessment questions and the exam more transparent to students. Use of the forums and emails has made this arrangement of material very useful, because the students can now be told where to look for examples of topics under discussion, and for relevant activity questions when they are having difficulties with assessment questions. Some, of course, still do not use them, but by and large the quality of the responses to the assessments and the exams has improved, which in turn saves time because marking takes less time.

Fifty-two per cent of the respondents worked through all of the activities, 39 per cent through some of them and 9 per cent (2 students) through none all, but these two students passed. Twenty-six per cent looked at all of the answers only and 22 per cent at some of the answers. Seventy-eight per cent felt that the activities helped them a great deal in their studies and 91 per cent felt there were sufficient activities. A minimal number felt there were too many or too few. The two students who had transferred from a previous semester noticed that there were more activities.

Student comments included the following:

Activities and answers are very useful to help ensure you are on the right track.

Not many papers provide 'answers.

Cash flow activities helped a great deal.

At one time additional examples were sent out with the assessment. Sending them out resulted in a distinct improvement in assessment answers. Now the examples are included as activities. Instructional design considered there were too many activities, but students have asked for more. Work is being done on teaching cash flows with a workbook and a CD for voice.

A few students suggested that

- self-assessment activities should be sent in for evaluation and comment
- there should be regular individual calls or emails to check on progress and to see if there are any areas of difficulty.

Overall evaluation

Sixty-five per cent of the respondents felt that they had enough interaction with their lecturer, while the rest wanted more. Written comments included:

I feel the tutor hit exactly the interaction (quantity and quality) necessary to keep a distance education student committed. I personally got through 71 100 Accounting with an A — I did not complete my other course in the same semester despite having attained an A for the first assessment. What more can I say — the encouragement in 71 100 was inspirational!

I think interaction is adequate. If needed, the lecturer is there ready, always available and ready to respond to any requests for advice, on top of the regular contact.

An online conference would be useful. (This has only just become possible for Online Campus students, as discussed earlier. An archive of each session is available, which is very useful.)

Thirty-five per cent enjoyed the course and thirty per cent did not.

While several students comment that the course was 'excellent' and 'enjoyable', one pointed out:

My answers probably are a reflection of how well I did — at the start the answers may have been different — especially the screeds about the statement of concepts, and so on, but eventually it all sunk in because of the referral to this material throughout the course.

More than twice as many respondents considered the course useful and relevant to their needs than those who did not, while slightly less than half considered that the learning outcomes were clear.

Seventy per cent thought the tutor support was good and that assessments tested learning outcomes fairly. Several suggestions indicated that there was a desire for more one-on-one contact, for example, a phone call

- after each assignment to discuss what students did wrong or right
- at the beginning of the course for introductory purposes.

Each student is sent a carefully marked assessment and a full marking schedule. A phone call would indeed be friendly, especially for aural learners.

Each student in the class was phoned until about 1997. It was discontinued because the workload increased and because it was so time-consuming with only one lecturer controlling the course. Frequently students cannot be reached at the first or even the third attempt.

However, other students considered that there was sufficient written comment:

Comments on our assessments and advice built confidence in one's ability to succeed.

International experience relevant to The Open Polytechnic

The researcher is grateful for the introduction of web-based learning and the students probably are too, because increased and improved communication has been the result. Educational institutions, however, have not yet found a way to make online education cost-effective. So far it has been a very costly experiment, as illustrated by Hafner, in an article headed 'Lessons learned at Dot-Com U', in the *New York Times*, (May 2, 2002):

Fathom, a start-up financed by Columbia, was founded two years ago with the goal of making a profit by offering online courses over the Internet. But after spending more than \$25 million on the venture, Columbia has found decidedly little interest among prospective students in paying for the semester-length courses.

Fathom's partners included the London School of Economics and Political Science, Cambridge University Press, the British Library, the University of Chicago and the New York Public Library and many courses were 'provided by its member institutions, and many offer credit toward a degree'.

Selected courses are now offered free to attract students to web-based learning. Colombia was not the only university in America to fail at this experiment. New York University, University of Maryland University College and Temple University, are examples of others that have failed.

University presidents got dollars in their eyes and figured the way the university was going to ride the dot-com wave was through distance learning, said Lev S. Gonick, vice president for information services and chief information officer at Case Western Reserve University in Cleveland. They got swept up.

American universities have spent at least \$100 million on Web-based course offerings, according to Eduventures, an education research firm in Boston.

Now the groves of academe are littered with the detritus of failed e-learning start-ups as those same universities struggle with the question of how to embrace online education but not haemorrhage money in the process.

... the universities have come to understand that there is more to online learning than simply transferring courses to the Web. (*New York Times*, (May 2, 2002))

This is what the Polytechnic has done with fifty-two of its courses. It has agreements with two foreign institutions to teach their students on the Web. There will be tutorial support for the students from the contracted institutions.

Only time will tell whether The Open Polytechnic will have a different experience from universities in America.

According to newspapers and television, tertiary institutions in many countries are concerned about the shortage of funding for education. It is not surprising that institutions hoped that they had found a way to deliver education to increased numbers of students via the Web.

Ironically, funding for tertiary institutions in New Zealand will be tied to retention rates. However, without additional funding the real problems of students entering courses without sufficient skill and background to succeed, social integration, and poor language skills (Kember, 1995) are not going to be resolved. Nor is retention helped when government entities enrol unemployed students in courses in an effort to encourage them to gain the skills that will make them employable (and by enrolling them, remove them from unemployment figures). In addition, people on certain benefits will not receive those benefits in the future unless they are enrolled in a course of study. The overall aim is probably to fill the skills vacuum, but students have to want to study to make successful completion a possibility.

Conclusion

The question was, could increased communication, changes to the learning material, and an increased number of self-assessment activities influence retention and successful completion rates? And the answer? 'Perhaps' or even 'Not at all'. The retention and successful completion rates in semester two 2001 did rise over the previous two semesters but fell in semester three. (See Table 1(a), (b), and (c).) Course grades rose, with more students achieving A grades in semester two than in previous semesters. (See Table 5 below.) It seems that the increased communication and the changes made helped those students who were always going to work, to achieve higher grades.

Table 5(a): Graph of percentages of final grades allocated to students for first-year accounting in the Bachelor of Business 1996–2001

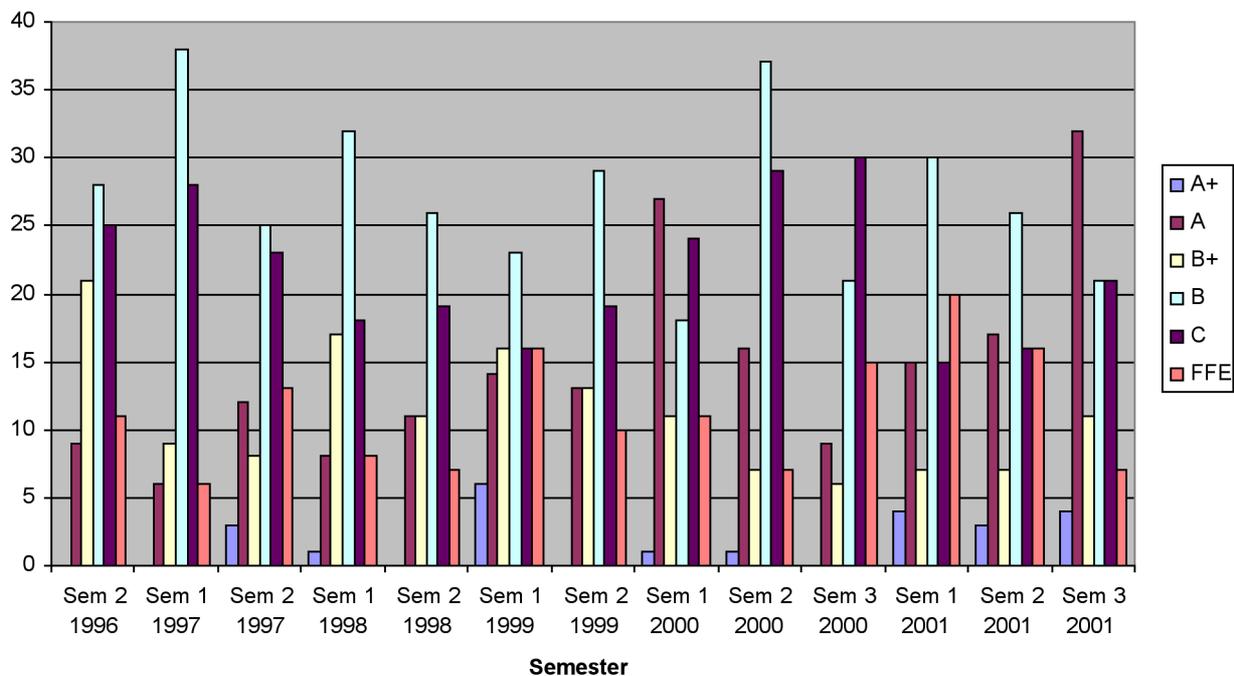


Table 5(b): Numbers and percentages of final grades allocated to students for first year accounting in the Bachelor of Business 1996–2001

Year	1996		1997		1998		1999		2000			2001			Grade
Semester	two	one	two	one	two	one	two	one	two	three	one	two	three		
	0	0	3	1	0	6	0	1	1	0	4	3	4%	A+	
	9	6	12	8	11	14	13	27	16	9	15	17	32%	A	
	21	9	8	17	11	16	13	11	7	6	7	7	11%	B+	
	28	38	25	32	26	23	29	18	37	21	30	26	21%	B	
	25	28	23	18	19	16	19	24	29	30	15	16	21%	C	
	11	6	13	8	7	16	10	11	7	15	20	16	7%	FFE	

Percentages have been rounded.

Grades D and E have been deleted.

FFE = Failed final exam.

For students to experience any influence from additional communication, they do have to study in order to participate. A substantial number never do, frustrating as that is to a lecturer!

Although most of the respondents persisted with and succeeded in the course, it was no surprise that their responses did not prove that the changes influenced retentions and successful completions.

However, it was rewarding that those who did complete the course expressed satisfaction, particularly with the communication.

So, was it worth making all those course changes? The answer was a resounding yes regarding the increased number of self-assessments but not so clear regarding the changes to the learning material.

Finally, access to the Web does not mean that students use this for learning or prefer to communicate this way. However, web-based communication is the best community distance/online students are going to get. It also fits the policy of The Open Polytechnic. Students can access it at their own pace, at their own place.

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TEC

Appendix A

15 December 2001

Dear 71 100 Accounting Students,

Because you have been a student enrolled in the 71 100 Accounting paper, I am seeking your help with a research project aimed at helping future students. I am trying to find out whether changes to the 71 100 Accounting course and the way it is delivered might result in improved retention rates. Retention rates are the percentage of students who complete the course divided by the number who enrol each semester. I am sure you will understand that the views of all students who were enrolled in this course are important.

For ethical reasons, I need your written permission to allow me to extract data from your student academic record at The Open Polytechnic of New Zealand, in conjunction with data to be collected by questionnaire. All data collected for the research will be strictly confidential and the results will be reported using only aggregated statistics. No student will be directly identified in the report and questionnaire data will be destroyed after reporting is complete. The research has the approval of The Open Polytechnic of New Zealand Ethics Committee.

Your participation in the research is voluntary and you may withdraw at any time. Nevertheless, I hope to gather a full set of student responses from students who were enrolled in semesters two and three 2001, and semester one 2002. If you are willing to help, please sign the consent form, complete the questionnaire and return them both in the enclosed reply-paid envelope by 15 January 2002. If you would like a copy of the report, please write your address on the consent form.

I am happy to answer any questions that may concern you about the study. I can be contacted by email: nargwy@topnz.ac.nz or telephone 04 560 5901, or 0508 650 200 extension 5901.

Thank you very much for your co-operation and time taken to complete the questionnaire.

Yours sincerely

Gwyn Narraway
Lecturer
School of Accounting Finance and Law

Consent Form

I give my permission for Gwyn Narraway to examine my student academic record at The Open Polytechnic of New Zealand solely for the purpose of her research project.

Name: (Print) _____

(Sign) _____

Student ID Number (if known) _____ Date: _____

If you wish to receive a copy of the findings of this research please provide your address below.

Address: _____

Questionnaire on 71 100 Accounting

A. Contact with other students.

For each of 1-3 below, please circle either Yes or No.

Did you work with other students by

- | | |
|--|--------|
| 1. Meeting together face to face? | Yes/No |
| 2. Making contact by phone? | Yes/No |
| 3. Making contact by email? | Yes/No |
| 4. If you answered yes for any of the above, was the contact useful? | Yes/No |

Please comment below, if you would like to do so, on your contact experience with other students.

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5. Do you consider having contact with other students improved your performance in this course? Yes/No

Please comment on this, if you would like to do so.

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B. Use of Online campus

If you do not have email and did not look at on-line campus at all, please go to section C.

- | | |
|--|--------|
| 6. Did you use the <i>online campus</i> ? | Yes/No |
| 7. Did you receive <i>regular emails from your tutor</i> ? | Yes/No |
| 8. Did you like receiving the <i>regular emails</i> ? | Yes/No |
| 9. Did you find the <i>regular emails</i> useful? | Yes/No |

10. Did you receive the regular emails Often enough/Too often?

11. Did the forum (threads) help you? A lot/A little/Not at all?

12. Did you get to study with other students because you met them on online campus? Yes/No

13. Please comment below, if you would like to do so, on whether the emails and forum (threads, messages) on online campus were useful to you, and how they might be improved.

14. Please comment on the tone and content of the emails and forum.

C. Self-assessed activities

15. To what extent did you use the self-assessment activities? All/Some/None

16. Did you work through the self-assessment activities? Yes/No

17. Did you look at the answers only? Yes/No

18. To what extent did the self assessment activities help you in your studies? A great deal/A little/Not at all

19. Were there Enough/Too many/Not enough activities?

If you circled 'not enough' activities, please indicate in what areas more activities are needed?

20. Did you transfer your enrolment from semester 1 2001? Yes/No

21. If you transferred from semester 1 2001, did you notice that there were more self-assessment activities than the previous semester? Yes/No

D. Overall evaluation

22. Would you like more interaction with your tutor? Yes/No

23. If yes, in what ways?

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24. Please circle as many of the following statements concerning the 71 100 Accounting course as you identify with:

	Agree				Disagree
The course was enjoyable	1	2	3	4	5
The content of the course was relevant to my needs	1	2	3	4	5
The course was useful	1	2	3	4	5
The learning outcomes were clear	1	2	3	4	5
The tutor support was good	1	2	3	4	5
Assessment fairly tested the learning outcomes	1	2	3	4	5

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All responses will be treated with confidentiality

Thank you for the time you took to complete this questionnaire.

Please return to:
Gwyn Narraway
Private Bag 31914
Lower Hutt
in the envelope provided