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Evaluation: Challenging Boundaries

**EVALUATION OF STUDY SKILLS MATERIAL FOR
STUDENTS STUDYING MICROECONOMICS
PRINCIPLES AND MACROECONOMICS PRINCIPLES**

(long summary)

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EVALUATION OF STUDY SKILLS MATERIAL FOR STUDENTS STUDYING MICROECONOMICS PRINCIPLES AND MACROECONOMICS PRINCIPLES

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ABSTRACT

Students beginning the study of Economics at university are often overwhelmed by the unfamiliar language of the discipline and the multitude of concepts with which they are expected to quickly become familiar. In their initial semester, many feel disoriented and unable to cope because, as a consequence of their inexperience in the culture of higher education, they lack knowledge of appropriate study practices. Without explicit explanations of the expectations of the institution with respect to independent learning, guidance in organisational strategies and advice on sustainable study activities, some students may flounder. In 1998, the Department of Applied Economics and the Student Learning Unit of Victoria University collaborated to develop academic skills guides for students who perceived themselves to need direction regarding the demands of university life. Through the guides, the project aimed to assist students develop understandings, attitudes and behaviours related to university culture which would lead to success in their studies. The project, funded by an internal grant, involved the preparation of guides which mirrored, on a week-by-week basis, the mainstream course activities of students studying first year Economics subjects. At the end of the 1998 academic year, the guides were evaluated to determine students' perceptions of their quality and their effects on students' academic progress. This paper outlines the project, describes the design and administration of the evaluation questionnaire, reports the key findings and comments on their for the project's future directions in light of the current higher education milieu.

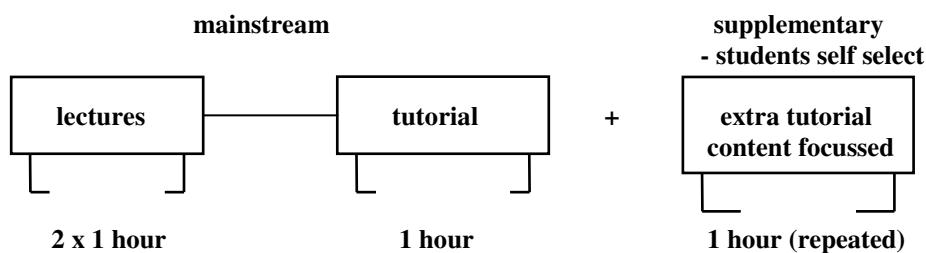
INTRODUCTION

The focus of this paper is the evaluation of a series of academic skills guides devised for independent use by students studying first year Applied Economics at Victoria University (VU). This evaluation was conducted in an environment where the authors use a variety of evaluation strategies at various times in the 'life of a project' (Owen, 1993) as a regular feature of their professional practice. While brief references are made throughout the paper to a number of evaluation points, we report only details of the purpose, the methodology, the findings and the implications which pertain to the summative phase.

BACKGROUND

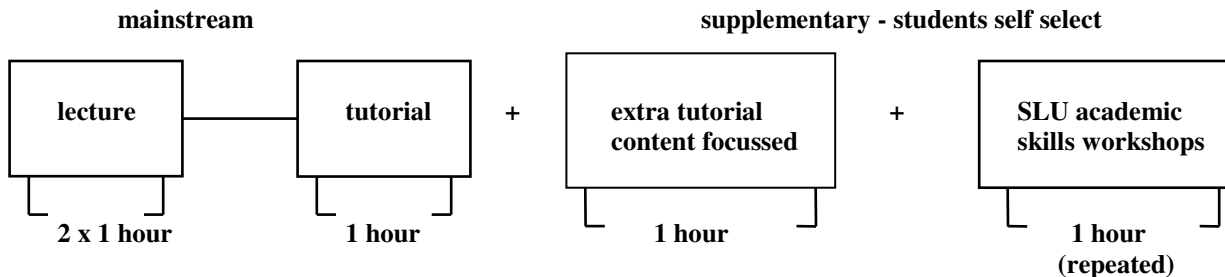
Since 1991, the Department of Applied Economics at VU has conducted supplementary classes to assist students in reaching understandings of the subject content in Microeconomics Principles and Macroeconomics Principles. Each week of semester, participants in these classes attend two one-hour mainstream lectures, a one-hour mainstream tutorial and the one-hour content-focussed optional supplementary class (Fig.1).

Figure 1: Student contact hours within Department of Applied Economics



Through observation and discussions with their students, it became evident to the supplementary tutorial staff that many students experiencing difficulties with the subject content also lacked knowledge of appropriate organisational strategies and study behaviours that are inextricably linked to successful outcomes for students. As a consequence, in 1997 the Student Learning Unit (SLU), in response to a formal request from the Department of Applied Economics, conducted a series of one-hour academic skills workshops throughout Semesters I and II, aimed at addressing this problem. These workshops, which reflected mainstream course activities, were offered for each of the two streams of Applied Economics studies. Two, one-hour sessions per week were conducted for each subject (Fig. 2).

Figure 2: Student contact-hours within Department of Applied Economics and the Student Learning Unit



While consistent attendances and formal evaluations indicated that this strategy benefited some students, we were informally aware that many potential participants who were at risk, and knew of the workshops, chose not to attend. A survey conducted at the end of 1997 with elements designed to determine why students from the target group chose *not* to attend, revealed two dominant reasons:

1. the total commitment of five hours to formal class attendance for one subject was considered to be too great, particularly as many of the students were also experiencing difficulties in other subjects (for example, Business Law and Accounting); and
2. the times that the workshops were offered clashed with mainstream classes, especially for those students enrolled in elective programs.

In response, we decided that students' access to the academic skills information should not be dependent on their availability to attend a workshop session, and planned to develop stand-alone guides based on the SLU workshop presentation notes.

THE PROJECT

Pedagogy

The project involved the preparation of stand-alone in-context academic skills guides to assist students' transition into university life. The timeliness of the project, in terms of it addressing issues at the beginning of the students' studies for a Business degree, is encapsulated by Bourner and Barlow (1991) who write: "Transitions into higher education [have] critically important consequences for the quality of [students'] entire experience of learning ... students are at the *change fulcrum* when they arrive. It will not be easier to introduce new expectations at any other time."

In this project, the issues of transition related to the culture of learning in universities and concomitant student behaviour are addressed through focussing on challenges that confront students in their studies of principles of Applied Economics. The emphasis is on helping students to adopt study practices appropriate for courses in which there is

1. continual assessment throughout a semester rather than at a single point at the end of semester (Nightingale, Wiata, Toohey, Ryan, Hughes & Magin, 1996; Ramsden & Dodd, 1989);

2. an emphasis on independent learning (Ballard & Clanchy, 1988); and
3. an emphasis on a deep, rather than surface approach to knowledge acquisition (Biggs, 1991; Nightingale et al., 1996).

The approach is premised on 'learning to learn' principles espoused by Novak and Gowin (1984) and is underpinned by the notion that academic skills advice is most meaningful when it is linked directly to a student's mainstream course activities (Parry, 1989).

Target cohort

For this project, the profile of the target group was self defining as it consisted of those first-year students, enrolled in Applied Economics, who perceived themselves to be under-prepared for higher education and therefore in need of information and guidance on ways to approach their studies.

Development of the Guides

Needs Analysis

During the development of the guides, a formal approach to needs analysis was adopted whereby a system of close consultation with students and colleagues in the Department of Applied Economics and the SLU was established. The purpose of the consultative processes was to monitor the appropriateness of several aspects of the guides' development, including the: relevance and appropriateness of the study skills information; relevance and accuracy of the subject content; and visual appeal of the layout.

Study Skills Information

A wide range of topics typically covered in academics skills texts and workshop programs was covered by the guides. The major titles included: *Learning to Learn in a University Environment*, *Developing a Personal Semester-long Study Program*, *Planning Study Activities for the Week*, *Preparing for Tutorials*, *Answering Review and Problem Questions*, *Preparing for Lectures by Developing a Topic Map*, *Taking Notes in Lectures*, *Preparing for Class Assignments*, and *Preparing for and Doing Exams*. With respect to the relevance and appropriateness of the study skills information, the guides have been developed to mirror the 'real-life' experiences of and demands made on the students as they progress through the subject both in terms of the topics addressed and the way they are discussed. For example, the handouts which describe taking notes in lectures do not simply discuss generic note taking skills, but include: a description of the lecture setting at VU, an account of the delivery approach used by lecturing staff in Applied Economics, suggested strategies which suit such a context, and examples of notes which would be appropriate for one of the semesters' initial topics.

Discipline-specific Content

To ensure both the relevance and the accuracy of Applied Economics concepts referred to in the guides, the prescribed texts (Mc Taggart, Findlay & Parkin, 1996; Waud, Hocking, Maxwell, Bonnici & Ward, 1996) and the recommended texts (for example, Quayle, Robinson & McEachern, 1994; Jackson, McIver, McConnell & Brue, 1997) were consulted. In addition, the subject lecturers wrote elements of the guides and provided critical feedback on the examples devised by the SLU staff.

Presentation

In relation to the visual appeal of the guides and accessibility of the information, the students participating in the needs analysis were adamant that they did not want to have to read through excessively detailed notes, and that they appreciated the incorporation of illustrations.

Dissemination of the Guides

To facilitate greatest possible student access to the guides by those who did not attend the workshop program in 1998 but who wanted information on academic skills, a range of strategies was employed. Staff in Applied Economics distributed the notes personally to students who attended the extra tutorial program, students collected them from designated offices in the Department of Applied Economics and the SLU, and students registered their names on a mailing list so that the information could be posted to their home addresses.

EVALUATION

Rationale

The approach to the intervention used in this project to assist 'at risk' students in Applied Economics had not previously been attempted at VU, nor elsewhere to the knowledge of the authors, so in order to determine the usefulness of the guides and to meet the requirements of funding authorities, an evaluation was conducted.

Aims of the Evaluation

At the end of the first year of their availability, the guides were evaluated primarily to determine students' perceptions of their usefulness and their effects on the students' academic progress. In particular the evaluation sought information on:

1. the profile of students who self-selected to participate in the project;
2. what it meant to the students to have access to the guides;
3. in what ways and to what extent the guides influenced students' study related activities and results;
4. the appropriateness of the guides' design to the students' needs; and
5. the appropriateness of how the guides' distribution was organised.

Development of the Questionnaire

In early October 1998, a draft questionnaire was piloted with selected project participants from a range of non-traditional backgrounds including: overseas born and educated; Australian born, but with a language other than English spoken at home; mature-age; and TAFE articulation. The final version of the survey was subsequently posted to all students participating in the project so that receipt would coincide with the end of the examination period.

Distribution and Response Rate

In an attempt to survey the entire pool of students receiving the guides for independent use, the mailing list for the questionnaire was compiled from the following data bases:

1. the mailing list for the dissemination of guides;
2. lists kept by office staff responsible for the distribution of guides to students who elected to collect them in person; and
3. lists kept by academic staff in Applied Economics and the SLU who were approached by students requesting the guides.

The questionnaire mailing list did not include students who had attended the workshop program. These students were excluded as we wished to investigate the effectiveness of the guides from the perspectives of students who were using them independently of further explanation or elaboration. Forty questionnaires were mailed with a covering letter which explained that their responses would be anonymous and encouraged students to provide constructive critical comments on how they believed the guides could be improved. A pre-paid return envelope accompanied the questionnaire and letter. A reminder letter was mailed in early 1999.

Twenty-nine students returned completed questionnaires, giving a 72.5 per cent return. Three envelopes were returned marked “no longer at this address”.

Main Findings

Profile of Students who Perceived themselves to be Under-prepared for the Study of First-Year Applied Economics

The students who sought the guides during the project and who provided evaluation feedback were from a wide range of Business courses; as a group seemed not to have a natural aptitude for the study of Economics; were from a language background other than English; and were studying full-time.

What it Meant to the Students to have Access to the Stand-alone Guides

It was evident that, at both the cognitive and affective level, benefits were derived from students being able to obtain copies of the guides independently of workshop attendance, since students experienced feelings of inclusivity and appreciated having access to information that otherwise would not have been available to them. The guides provided insight into issues related to the ‘hidden curriculum’ (Snyder, 1971; Bergenhenegouwen, 1987) of higher education that students were aware that they had a need for. The guides also gave students new insight into a range of aspects related to adaptation to the culture of the institution.

In What Ways and to What Extent did the Guides Influence Students’ Study Related Activities and Results

Analysis of the student respondents’ end-of-semester results showed that 28 passed, with nine being awarded a grade in the 80s, 11 a grade in the 70s, five a grade in the 60s, two a grade in the 50s, and one a grade in the 20s. The pass rate of the respondents was 99 percent compared with a total subject enrolment pass rate of 72.5 percent. It needs to be noted, however, that a possible bias may exist in the data used in this report in that students who did well and were pleased with their results may have been more inclined to complete and return the questionnaire than those who were dissatisfied with their performance.

When students were commenting on the extent to which the guides impacted on their study activities and assessment outcomes, by far the majority claimed that the guides had positive effects. In those instances where students claimed that the effect was ‘small’, little was said that was negative about the guides, indeed students tended to put forward comments that suggested that other factors acted to limit the potential benefit that could be derived from the guides. Typically, students making such comments made direct or oblique references to their personal lack of proficiency with the English language. In contrast, others expressed surprise that despite their level of English language skills; they had still performed well and attributed their success to their application of suggestions made in the guide. Pleasingly, one student raised the notion of the guides’ potential benefits for raising students’ awareness of issues and inspiring them to devise their own effective approaches to study. Most of the students believed that the guides would be useful in their study of other subjects in the future, and some were already applying strategies to other study areas. It is possible that the guides may serve as a useful support not only for introducing new students to academic culture but also as a support for failed students to reorient their practices.

The Appropriateness of the Guides’ Design to the Students’ Needs

A clear majority of students found the design of the guides to be appropriate in all aspects. However, there were some who believed that the guides could be improved. There was no consensus, however, in the suggestions made for improvement. Indeed, across a range of aspects, different students offered contradictory perspectives on the problems and the possible solutions. That this occurred attests to the disparate needs within the participating group.

The Appropriateness of How the Guides' Distribution was Organised.

In general, although students indicated satisfaction with the methods of distribution, some would have preferred to access the information earlier. Two workable suggestions for alternative methods of distribution were made; these were to make the information available on the Internet and the other to lodge the guides with the library.

IMPLICATIONS

It is becoming increasingly clear in the contemporary Australian higher education milieu that students must take more and more responsibility for self-directed learning as economic pressures drive institutions to timetable larger classes. As a consequence, academic skills support units such as the SLU, which typically operate with very limited resources, must reassess their modes of working. In the past, academic support has predominantly been based on individual and small group face-to-face student contact. To institute changes, however, presents two problems. The first is to devise alternative, efficient and effective ways of assisting large numbers of diverse students develop strategies for self-directed study, and the second is to manage the reduction of opportunities for interactive personal assistance for which students have consistently expressed strong preference. The stand-alone guides which were the focus of the evaluation described in this paper, were our first attempt to provide discipline-specific academic skills support in the Department of Applied Economics for a large number of students unable to attend SLU classes.

The findings indicate that there is scope for the program to be improved. However, some tensions need to be addressed for this to occur. For example, whereas a large majority of the participating students reported that they had benefited from the insight they gained into the 'hidden curriculum' through the program, there were some criticisms. These criticisms it would seem are related to the difficulties which typically arise in a diverse student cohort. Responses indicating differing student perceptions as to whether more or less detail in the guides would be an improvement, exemplify such problems. While the majority of students rated the detail as 'just right', there was a small number who thought there was 'too much' detail, and another small group who thought there was 'not enough'. Similar variations emerged in students' reactions to questions about the guides' 'general readability', 'amount of information' and 'appropriateness of the illustrations'. That the criticisms were made by a minority of students does not justify them being overlooked or dismissed in such an investigation as this, particularly in the light of the unavoidable possibility of the sample being biased. Indeed, wide variation in students' perceptions of the appropriate complexity of academic support material is a continuing problem when assisting current higher education students. The responses in this evaluation indicate that, ideally, the materials should be simultaneously accessible to students who are relatively unfamiliar with the higher education environment and whose language skills lack sophistication, and rigorous for those who are seeking deeper understandings.

In response to this dilemma, in addition to maintaining the current hardcopy format and extending the distribution net work, we will redesign the materials for a website adaptation. By presenting the material contained in the guides in a nested format, students will have the option to either skim a topic or access it in greater detail, according to their needs. This strategy will allow each student to take more individual control of the timing, rate and depth of their learning pathway. The authors are aware, however, that many VU students are not *au fait* with the use of computers in general, or the Internet in particular. Therefore, whilst some of the difficulties of dissemination of meaningful information to students will be alleviated by the development of a website, introduction of the strategy itself will present new challenges. We envisage, at least in the initial years of its application, students will need an introduction to working with computer-based student support, and we will be investigating ways to assist students to access appropriate websites.

REFERENCE LIST

- Ballard, B. & Clanchy, J. (1991) *Teaching Students from Overseas*, Melbourne: Longman Cheshire.
- Bergenhengouwen, G. (1987) 'Hidden Curriculum in the University', *Higher Education*, vol. 16, pp. 535-543.
- Biggs, J. (1991) 'Teaching: Design for Learning', *Research and Development in Higher Education*, vol. 13, pp. 11-26.
- Bourner, T. & Barlow, J. (1991) *The Student Induction Handbook: Practical activities for use with new student groups*, London: Kogan Page.
- Jackson, J., McIver, R., McConnell, C. & Brue, S. (1997) *Macroeconomics* (5th ed.) Melbourne: Longmans.
- McTaggart, D., Findlay, C. & Parkin, M. (1996) *Microeconomics*, Sydney: Addison Wesley.
- Nightingale, P., Waita, I.T., Toohey, S., Ryan, G., Hughes, C. & Magin, D. (1996) *Assessing Learning in Universities*, Sydney: University of NSW Press.
- Novak, J. & Gowin, R. (1984) *Learning how to Learn*, London: Oxford University Press.
- Owen, J. M. (1993) *Program Evaluation: forms and approaches*, St. Leonards, NSW: Allen & Unwin.
- Parry, S. (1989) 'Achieving Academic Literacy: Disciplined Discourse', *Higher Education Research and Development*, vol. 8, No 2, pp. 147-159.
- Ramsden, P. & Dodd, A. (1989) *Improving Teaching and Courses: a guide to evaluation* (2nd ed.), Parkville, Victoria: CSHE, University of Melbourne Press.
- Quayle, M., Robinson, T. & McEachern, W. (1994) *Microeconomics: A contemporary introduction*, Melbourne: Nelson.
- Snyder, B. (1971) *The Hidden Curriculum*, Cambridge, Massachusetts: MIT.
- Waud, R., Hocking, A., Maxwell, P., Bonnici, J. & Ward, I. (1996) *Macroeconomics*, (3rd ed.), Melbourne: Longmans.

[the profile of students who self-selected to participate in the project,]

(a) Responses to the survey indicate that the students seeking access to the information were from a range of courses, (15 courses in all).

(b) There were three categories of questions which indicated that, as a group, the respondents may not have had a natural aptitude for the study of economics. Planned major, compulsory unit, no study prior to VU,

© The guides were sought by those who were studying eco for the first time in addition to some who were repeating

(d) Permanent residents (23) as well as International Students (5) were seeking insight into the culture of higher education through the guides. This suggests that there are transition issues that need to be addressed in higher education.

(e) The large majority of students were from language backgrounds other than English, suggesting that they were less secure about making the transition than English speaking peers.

(f) All full time students – [to put on internet will contribute to awareness and access to part time students?]

(g) [results]

From the questionnaires, we were able to assemble the following profile of the students who had self-selected as participants in this project, which allowed us to derive some directions for future planning and focus of distribution of guides. Firstly, it was clear that students seeking access to the guides were from a wide range of courses, with 15 courses mentioned in total. However, there were responses to three categories of questions that indicated that, as a group, the respondents may not have had a natural aptitude for the study of economics. These questions referred to the students' planned major studies (none indicated that they would major in economics), whether economics was a compulsory or elective unit, (only one student had elected to do the subject), and whether the students' had studied economics prior to enrolling at VU (none of the respondents had prior experience with economics). This relatively unprepared background in economics could explain why the guides were sought by those who were first year enrolment students rather than having a majority of repeat students which is often the case in student support.

Surprisingly, perhaps, there were 23 permanent residents in addition to the expected International Students (5) in the group. Since the guides were designed primarily for those seeking insight into the culture of higher education, this balance of students suggests that there are important transition issues that need to be addressed in higher education. Not so surprisingly, the large majority of students were from language backgrounds other than English, which is consistent with our observations that this group is less secure about making the transition than their English speaking peers. Finally, we noted that all participants were full time students. [We suspect that this was due to difficulties in contacting the part-time cohort during the period of the project, and are considering the possibility of making the material available on the internet, which would contribute both to awareness and access for part time students.]

the appropriateness of how the guides' distribution was organised,

- (a) range of distribution was important. Negatives were slowness of distribution a quicker way needed. [Internet?]
- (b) new ideas for distribution – fax/email/internet (electronic distribution –3) Library (1) Suggests that students are not in internet modes.

We found that students were generally grateful that a range of distribution strategies for the guides was used. Even so, there were a few who would have liked the information to be made available more quickly, and this again suggests that an electronic distribution mode might be useful. We are tempered in this idea, though, by many open responses which indicated that students are not yet familiar or confident with electronic distribution of material.

what students anticipated they would gain from participating in the project,

We found that students had two prime motivations for participating in this project. First, some students wanted the printed information in order to use it in their own time. This is not an unfamiliar motive for students since, in general, each day of lectures is relatively crowded, and absorbing study material, which requires some time for reflection and practice, is often not possible in a one hour session. Second, some other students indicated that they wanted a copy of the material since they prefer an individual study mode rather than to work in a group.

in what ways and to what extent information in the guides influenced students progress, results and approach to their study

- (a) meeting needs, relevant, (26 positive responses) time management, exam strategies, principles of studying, patterns of assessment,
- (a) 17 small, 7 large. 1 no diff. (wanted content) Hence most student liked help with study techniques not just conten. Process orientation rather than merely task oriented..
- (b) 9 large difference- organisation confidence effectiveness
- (c) 13 large diff to results. Multiple choice tests. Interpret text book. Approach without background (2). formulating exam answers.

When asked about the ways in which the guides had influenced their academic progress, 26 students claimed that there were a number of positive instances. They mentioned issues such as time management, exam strategies, principles of studying, patterns of assessment which indicated that the guides were fulfilling our aim of meeting the students' needs. More importantly, the majority of students indicated that the assistance with the elements of academic study were important to them, indicating they had a focus on process rather than merely having a task orientation. The differences were couched in terms of influencing organisation strategies, a growth in confidence toward the assessment in the subject, and a feeling of greater effectiveness in their study. Examples were given in their approach to Multiple Choice Tests, which some students had never previously experienced, strategies which were useful in reading the prescribed textbook, ways in which the principles of economics could be approached in the absence of previous background studies, and finally in ways in which answers to examination questions can be prepared.

the usefulness of the topics addressed in the guides, and

These comments were reinforced by responses to the students' perceptions of the usefulness of the study guides. Twenty-one students claimed to have been introduced to new ideas about studying economics by the guides. All topics covered by

the guides were specifically mentioned, implying that the students had a wide range of study needs. Students rated all of the topics as 'useful' or 'very useful', and with the exception of only one or two students in each topic, most students reported having read *every one* of the 12 topics. To emphasise this point, there were no additional topic suggestions, which implies the initial needs analysis had uncovered most of the immediate student needs.

Pleasingly, 11 students reported that they had shared the handouts with other students, and 27 indicated that they would recommend them to others particularly for exam preparation, assignments, and note taking skills. Most students claimed that they would be keeping the guides for later reference, and 22 indicated that they had used them in other subjects. This again is an important comment on the contribution of the guides to the processes of study rather than the content of economics.

- (a) 21 introduced to new ideas about studying economics. All topics mentioned – wide range of needs.
- (b) All topics rated useful or very useful
- (c) with the exception of only one or two students, most students reported having read every one of the 12 topics
- (d) no additional topic suggestions – seem to have met most needs
- (e) keep for later reference- used in other subjects (22 yes 7 no). Important comment on process rather than content
- (f) particularly for exam preparation, assignments, note taking
- (g) 25 keep for future 3 pass onto friends
- (h) 27 recommend to others, 2 no
- (i)

the quality of the guides' design.

- (a) 28 easy to read
- (b) amount of info 3 too much 4 not enough 28 just right. (an issue which could be helped by hyperword on internet)
- (c) detail 3 too much 6 not enough 20 just right
- (d) illustrations 1 6 22
- (e) appropriateness of illustrations 28 help
- (f) use of colour suggested

Finally, students said that the guides were 'easy to read', indicating that we had been able to strike the right level of complexity of language. Although some found the detail too much (3), some not enough (6) the majority (22) indicated that it was just right. This spread of opinion we thought to be inevitable since the matter of subject content

Future directions

Extending availability

While to-date, the target group has been students attending the supplementary tutorials, because of the guides' potential benefit to all first-year students studying Economics, the guides in their final form will be available for wider distribution in the form of printed handouts and through the VUT/SLU Web site.

part-time students

NOTE

Interested readers are welcome to contact the authors regarding further details or documentation related to this evaluation.

References