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FRAMING WRITING SUPPORT ONLINE FOR AN INTERNATIONAL STUDENT POPULATION

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The provision of stand-alone, web-based materials is one way of making language and academic skills support for first-year students accessible, flexible, and more or less permanently available. "Writing in Subject Areas" is a web-based resource developed at Monash University in Australia to facilitate students' transition to the kinds of thinking and writing valued in higher education. The research and pedagogy underpinning the site is based on the significance for first-year students of understanding: (1) textual structures; (2) discursive processes; and (3) institutional practices in the academy. Using a common template, the site provides materials for ten subjects in four faculties. The current paper discusses the student evaluation of the resource, elicited via questionnaire from almost 1,000 respondents over two years. In 2005, 29% of students at the University were international and so the learning needs of this group are of particular interest. The paper compares the international to the local student response on a series of key issues. The results suggest significant differences between the two student cohorts. While the resource's usefulness was commended by both groups, the international student cohort was more likely to use all elements and to be more motivated, even while finding it more difficult than local students. The difficulty was found to be more pronounced for a subgroup of offshore students. The study concludes by reinforcing the benefit of theoretically grounded and specially targeted assistance. Further, it underscores the need for ethnographically inspired investigations by staff providing online teaching and academic support for diverse cultural groups.

Keywords: Online writing support; international students; discipline-specific.

1. Introduction

The transition experience of new students as they become acculturated to the new disciplinary demands of their courses in tertiary education has become a familiar preoccupation in the literature (for example, Chanock, 2000; Krause, 2001; Tang, 2000), researchers often segmenting the cohort in order to focus on the needs of different subgroups (Chang & Swales, 1999; Hyland & Milton, 1997; Lea, 1994). As a consequence, the making of any easy assumptions about the "transparency" of academic discourse and conventions is now routinely highlighted as problematic, especially for certain students of diverse language and cultural backgrounds

(Lea & Street, 1999; Lillis, 1999; Street, 1999). The point has been made that academic staff have not always been aware of the extent to which they typically require of students culturally and contextually shaped ways of encoding and representing knowledge (MacKinnon & Manathunga, 2003). In order for students to develop deep and personal understandings of their learning, the texts, the discursive processes, and the institutional practices of the learning context should be foregrounded as the basis of discussion. In a globalized world, responsive higher education curricula need to extend this further and engage in dialogue with the knowledge base of students, particularly of international students (Laurillard, 2002; Schoorman, 2000).

The difficulties experienced by students in transition from secondary school to university have been amply documented (Krause, Hartley, James, & McInnis, 2005). The literature on international students too has, until comparatively recently, focused on the challenges and problems facing students moving to a second country from their home country to complete a degree. Especially since the early 1990s, there have been numerous studies in Australia examining features of the phenomenon, such as students' acculturation to the university culture (Volet & Ang, 1998), issues concerning different learning styles or approaches (Kennedy, 2002; Watkins & Biggs, 1996), and what has been identified as different patterns of participation in learning contexts within the university (Marriott & Miyazaki, 2000). The subtle shifts in educational expectations and how these mesh with previous learning experiences are as yet not well understood. Some studies have examined the experiences of particular national groups, taking care not to stereotype (for example, Volet & Renshaw, 1996, on Singaporean; Novera, 2004, on Indonesians; Nield, 2004, on Hong Kong Chinese enrolled in distance education). Ryan (2005) highlighted the dangers of simplistic generalizations about national backgrounds and educational systems, based on stereotypical notions of the "Asian" or "Western" student.

Many students coming to Australia from overseas are not familiar with assignment writing in their own first language (Kennedy, 1995; Ryan & Hellmundt, 2003) and have articulated what they see as significant difficulties with it (Clerehan & Walker, 2004; Tang, 2000). International students have not always been encouraged, in the Western context, to bring their diverse perspectives and knowledge to bear on the work at hand (Ryan & Hellmundt, 2003). Assignment topics may have very local content (Clerehan & Walker, 2004, p. 85). The challenge here is then to take account of cultural and contextual factors which may impact on a student's learning in a new setting, but not to essentialize — whether in terms of international and local (domestic), or Western and Asian/Confucian heritage.

In the case of online learning devised in Western institutions for diverse student audiences, therefore, an obvious problem is that the design models themselves may be the product of a particular culture and the learning experience available to students not fully contextualized as a consequence (Henderson, 1996). The dominant cultural literacy can unwittingly disadvantage a student if the curriculum materials lack sociocultural responsiveness (MacKinnon & Manathunga, 2003). Leask (2004) was positive about the opportunities presented by Information Communication Technologies (ICTs) for diverse learners, but emphasized the need for educational planning questions to take into account several key points: the characteristics of the learners; the proposed internationalization outcomes; the role of technology; support for both teachers and learners; and the nature of the assessment.

These considerations are of particular interest to a university such as Monash University in Australia, in 2005, more than one in four students in 2005 was international (Monash University, 2006). Interest in both the sociocultural and the academic aspects of international student transition has resulted in a widening of inquiry into the particular types of interventions which may lead to improved levels of student satisfaction (Clerehan, 2003; Clerehan, Kett, & Gedge, 2003). An ecologically oriented approach — one attending to the reflexive relationship between the writing and the environment — is concerned with identifying those aspects of the learning experience and environment which need to be individualized for optimum benefit for learners (Beetham, 2005; Garner & Borg, 2005). For curriculum design in online learning, an important determination is precisely which activities will lead to high quality learning and which are sustainable for large numbers (Mason, 1998, cited in Alexander, 2002, p. 190).

Learning opportunities are created by means of the texts, processes, and practices of a particular community: what students are learning in tackling assignments is a particular way of viewing the world which they negotiate through their reading and writing. As Wenger (1998, p. 235) noted, as educationists, in reality we can only "design for learning", orienting the practices and identities of learners to various forms of participation (or nonparticipation). The significance of how support might best be offered takes on increased importance with the decline in face-to-face, small-group learning in most Western higher education institutions. As universities work out how to retool for a global mission, internationalize their curricula, and expend a significant amount of resource on provision of online teaching, what kind of learner support to offer, and whether it can be successful if offered via ICTs, are questions yet to be fully answered. While there is a growing body of research into students' responses to the use of ICTs in education (Henderson, 1996; Bannon & Milheim, 1997; Franklin & Peat, 1998; Sims, 2001), there has been less research into the value of stand-alone online material to assist in orientation to assignment writing. Krause (2001) commented on the need for more research to investigate students' perceptions of their interactions with — and learning from — the technology, stating that we need to spend more time listening to students' needs and concerns: "ongoing research investigating these issues should be a priority" (p. 164).

2. Background

Students' growth towards management and application of knowledge in the disciplines at university involves *knowing about* these discourses, and *knowing how* to participate in them. Having a positive and confident attitude to assignment writing has been linked to success in higher education (Taylor & Drury, 2004). Krause (2001), moreover, sought to promote the conceptualization of the initial university writing experience as "a far-reaching and influential vehicle contributing to the relative success of the academic integration of first-year students" (p. 147).

Development of online resources to support students' academic language and skill development is a strategy undertaken by most universities in the Western world, as a cursory scan of the web can tell us. Some of these sites are password-protected due to the resource-intensiveness of their development and the keenness of universities to create and inhabit a market niche. Of those which can be easily visited, it must be said that many consist solely of print materials which have been made available online. For a web-based program to create "a meaningful learning environment where learning is fostered and supported" (Khan, 1997, p. 6), it is important for the resource to be planned and developed in a theoretically sound way, and evaluated systematically on a broad scale, preferably over a period of time (Alexander, 1999).

Different approaches to online writing support have been identified: the generic, the parallel or adjunct, and the integrated, all having their advantages and disadvantages (Hicks, Reid, & George, 1999). Some have focused on provision targeted at one subject and have been able to move in the direction of a fully integrated approach, with good outcomes (Clerehan, Kett, & Gedge, 2003; Clerehan, Kett, Gedge, & Tuovinen, 2003; Drury, O'Carroll, & Langrish, 2003; Taylor & Drury, 2004). The provision of stand-alone, web-based learning support materials, which may contain elements of both the parallel and the integrated, has been identified as one way of making writing support available for students in transition.

The first stage of the research into online support for student writing which is discussed in the current paper involved a survey on preparedness for writing, administered over two years to international and local (domestic) students (the terms referring to immigration categories for visas in Australia). At Monash University, of 1,500 students in a first-year Marketing subject, 37% of domestic (local) students and, even fewer, only 21% of international students, believed they understood well or very well what their assignment task required them to do (Clerehan & Walker, 2004, p. 82). For certain groups — Confucian-heritage culture (CHC) students in Hong Kong, for example — it has been postulated that they have developed a high sensitivity to task requirements (Tang & Biggs, 1996). Still, in the endeavor to facilitate better assessment outcomes, it is not difficult to argue that academic staff in Australia teaching domestic Australian students, CHC, and students of other backgrounds, would do well to work on shaping students' perceptions of course requirements in order to support them in their approaches to study in the disciplines (see also Volet & Renshaw, 1996).

Funding was given by the University to develop a suite of stand-alone, web-based resources for ten subjects to facilitate the transition of first-year students to the kinds of thinking and writing valued in higher education. A small-scale study was previously undertaken by two of the present project participants (Moore & Oppy, 2002). It compared a group of students who used the resource for the philosophy subject with a group who did not and investigated student grades as one outcome

measure. Students who used the resource felt they had a better understanding of the writing requirements than those who did not use the resource at all. In addition, the results suggested that the more time spent on the resource, the higher the student's grade (p. 103). This is an interesting finding, but the authors were cautious as the sample size was small (29 users, 19 nonusers). The researchers recommended that the materials were best utilized within an integrated framework to engender more positive attitudes in students and that genre approaches to the teaching of academic writing (Drury, 2004), including exposure to generic models, were those most likely to be valued by students.

With this background, the current paper discusses the overall student evaluation of the Writing in Subject Areas (WSA) resource, elicited via questionnaire (see Appendix) from almost 1,000 respondents over two years (phase two of the project). All the students were enrolled in oncampus mode. In 2001, at Monash, in the first year of the project, more than 24% of the university's students were international, mostly from South-East Asia. The principal "feeder" countries for the Australian campuses were, in order, Singapore, Hong Kong, Indonesia and Malaysia (cf. in 2005, PRC, Hong Kong, Singapore, Malaysia). The proportion of international students had grown in 2002 to 25%, and increased again, to 29%, in 2005–2006 when we redesigned the entire site to address the preferences of the students and improve the user interface, navigation, and accessibility.

3. The Application

The work of Wenger (for example, Wenger, 1998) emphasizes that learning is most effective when it occurs in the context where knowledge is created and used. Learning, from this perspective, is a process of enculturation whereby tools, skills, values, beliefs, and understandings are acquired, and then personally developed, within a framework of participation. A situated approach involving representatives of all the stakeholder groups lay behind the development and the construction of WSA (http://www.monash.edu.au/lls/llonline/writing/index.xml). The site is a substantial one, a major section of the "mother" site (http://www.monash.edu.au/ lls/llonline/index.xml). It is based on the research of Candlin (1998) and colleagues (Candlin, Gollin, Plum, Spinks, & Stuart-Smith, 1998; Candlin & Hyland, 1999) into the significance for students in transition of understanding: (1) textual structures, (2) discursive processes, and (3) institutional practices in the academy (see below for discussion of these concepts). The platform originally used was NetObjects Fusion to enable the presentation of text and the kinds of interactivity we sought at the time. Using a common template, the resulting resource covered subjects in four faculties.

WSA involved a collaboration between language and academic skills staff in the Language and Learning Services Unit at Monash University, subject lecturers, and between one and three first-year students from each of the ten subject areas. The background research on which the site was based centered on three main areas. First was the evidence provided by Year 12 teacher observations in interviews about the likely difficulties teachers expect students to experience in making the transition to university. The second area concerned the first-year students' comments about writing their first assignment and how well-prepared they felt themselves to be. These were gleaned from journals kept by the students and also from audiotaped interviews. The third area involved eliciting appropriate lecturer feedback for the student assignments to be presented online. These were derived from initial ("authentic") comments on the assignments, then discussed with lecturers in interviews, and reworked for the web resource (see below). These three sources informed the model of tertiary writing which was used to shape the development of the site.

Candlin (1998) laid out three "perspectives" that need to be drawn on to understand the nature of writing in the tertiary domain:

- (1) textual structures or "linguistic descriptions" of the different genres of student writing;
- (2) discursive processes, involving students' understandings of the participant relationships that obtain in the academy between student-writer and tutorreader; and
- (3) institutional practices, involving "ethnographic accounts" of those elements of the process that have become conventionalized and valued in the discipline.

These three perspectives provided the theoretical warrant and, further, the template for the web modules. Before we proceed to the evaluation, the website and its objectives will be briefly described, in terms of the Candlin model. In each of the web resource's ten modules there are three sections: Lecturer's Advice, Skills for Writing, and Annotated Assignments (Figure 1).

The first section of each module has as its focus the "institutional practices" of writing in the discipline, using the subject lecturer as informant, and so also invoking discursive processes. Students can elect to read what one or two of their lecturers have to say about key questions regarding the assignment, for example, for the History subject: "In researching an essay, how does the use of primary and secondary sources differ?"

The second section is organized around a range of interactive tasks aimed at facilitating students' understanding of the nature of textual structures in their discipline (Moore & Clerehan, 2000), for example, for "Writing the Recommendations for the Management Report". These tasks were developed by the language and academic skills lecturers on the basis of their experience with students' problems in the subjects and from the student interviews.

The third section focuses on the student, the processes involved in writing in the discipline, and the institutional expectations and response. It comprises Lecturer Expectations, the Student Essay, and the option to download a printable version of the sample assignment. Lecturer Expectations focuses on the teasing out of the assignment requirements in an FAQ format. The student is then invited to engage



Fig. 1. Structure of a module — Law as an example (taken from the site as originally designed; there have been subsequent modifications).

with how well the essay in question responds to these expectations in the Student Essay segment — first the "vanilla" version; then the version with commentary; and, finally, the opportunity to download and print the sample essay. There is a counterpoint created between the student's understandings of the task and the lecturer's response to the finished essay: both in the form of annotation on the assignment, and also elaborated and extended (MacLellen, 2001) in pop-up boxes (Figure 2). The voice of the student (accessible via audio icons) provides an interaction modeled to some extent on the notion of peer mentoring (Lillis, 1999; Yorke, 2001). At the end of the paper, the student's impressions of their completed essays are juxtaposed with the lecturer's own final assessment. Based upon the experience of the language and academic skills staff, in the view of the project team, the key component of the module for students was anticipated to be this one.

4. Method

The objective was to gain a broad understanding of how a large cohort of first-year students studying particular subjects responded to the targeting of these areas: that is whether the theory (as embodied in the resource) correctly identified the students' learning needs from the students' perspectives. The needs had been identified in the preceding survey, in the language and academic skills, and faculty lecturers'

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Fig. 2. Example: Sociology assignment — introductory material (taken from the site as originally designed; there have been subsequent modifications).

experience, and in the accounts of the student participants themselves. (For an account of the objectives and the processes of the project involving 29 students, 13 lecturers, and 25 school teachers, see Clerehan, Moore & Vance, 2001.) For the evaluation of the site, while initially some triangulation was attempted, it was decided to rely wholly on the questionnaire responses. Other approaches employed, post-development of the resource, were: administration of the questionnaire (teacher version), site demonstration and informal discussion with the student informal discussion with the Year 12 teachers, and informal discussion with the lecturers who participated. While these methods yielded some useful information and produced nothing that was specifically contrary to the findings from the questionnaire, it was difficult to systematize the information gleaned. So, it was decided not to treat it as usable data. A brief summary comment will, however, be made in Section 7.

Ethical approval was granted by the University. The questionnaire was piloted with students attending the Language and Learning Services Unit's individual consultation program. It was then administered in successive years for the majority of the subjects. This was intended to gain a more comprehensive picture of the "institutional embedding" (Alexander, 1999). The questionnaires were administered in lectures by subject lecturers, returned to the project leader, and the data entered into a database. All returns were from Australian onshore campuses, save for the second (2002) Economics response which was from the Monash Malaysian campus in Kuala Lumpur (n = 55) where the lecturer concerned volunteered an interest in taking part (students at this offshore campus are taught mainly by local Malaysian staff). The questionnaires in Economics, Education, Management, and Marketing were administered twice in each of two years and, for logistical reasons, English twice in the first year and once in the second, twice in one year for Philosophy and Commercial Law, and History and Legal Process once only. Sociology produced too few responses to be usable, so the discussion here is based on analysis and interpretation of results for nine of the ten web modules.

The study is viewed as preliminary and will not focus on individual subject results. Response rates varied markedly from subject to subject, total responses varying from a low of 27 for the English module to a high of 351 for the Marketing module. Nonrespondents comprised those students present at the lecture who did not complete the questionnaire (and thus presumably had not used the web module), as well as those students who did not attend that lecture. The simplifying assumption made is that the aggregate of these nine cohorts is a reliable sample.

The instrument contained 11 questions relating to the resource (Appendix), information being gathered as to whether students were international or local. Age and gender were also identified, but not reported on in this paper. It should be noted that any differences in response between international and local students would be attributable to a complex of "linguacultural" and other factors. All international undergraduate students are subject to the University's requirements of previous English-medium instruction or an International English Language Testing System (IELTS) score of 6.0. Any of these constructs compared (for example L1 other; or an English pathway of an Australian school versus an IELTS result) would yield further directions for future research. While the international student participants in this study are treated as a single group, it is recognized that they are in no way a homogeneous group. It should also be noted that, on average at Monash, there is also a cohort of 5% to 7% who are local non-English-speaking background (NESB). For the present study, language background was not recorded, so these international and local NESB students are not differentiated, either inter- or intra-group.

In order to determine any differences in reception of the resource, the local and the international student responses are compared on a series of key issues, including perceptions of the three sections of the resource; motivation to use it; and particular aspects of the technology. The data were analyzed using Chi-square contingency table tests as implemented in XLSTAT (http://www.xlstat.com). Student comments in response to open-ended questions are examined to explore how far the discourse-specificity was perceived by students as a value.

5. Results

Of the total of 985 students who responded to the questionnaire, 629 stated they were local students, and 291 international: that is, 30% international compared with the 24% overall at Monash at the time, reflecting the relatively high proportion of business and economics students in the sample. In the following, where distinctions are made between international and local students' responses, only those who clearly identified themselves as one or the other are considered.

5.1. Perceived level of difficulty

Students were asked in question 3 how easy it was to understand the instructions and explanations in the three sections of the particular subject module the student used. There was a significant difference between the local and international students in the way they answered this question ($\chi^2 = 25.465$; d.f. = 4; p < 0.001). International students were more likely to report the module elements as difficult or very difficult to understand than were the local students. Correspondingly, local students were more likely to report them as easy or very easy. Combining the two years, a total of 59% of local students found the Lecturer's Advice section easy or very easy, compared with only 37% of international students. For the Skills for Writing section, 53% of local students found it easy or very easy, compared with only 38% of international students. Finally, for the Annotated Assignments section, 57% of local students found it easy or very easy, compared with 40% of international students. These results are summarized in Figure 3. In each case the difference in responses between local and international students was significant.

Comparing onshore international students with the group of offshore students at the Kuala Lumpur campus, fewer students in the Economics–Malaysia cohort found understanding the Lecturer's Advice section easy (22% compared with 51%). Similarly, 18% found Skills for Writing easy, compared with 41% of onshore international students in Australia, and 22% for the Annotated Assignments section, compared with 44% of onshore international. So, compared with the whole group of onshore international students in all subjects, the Malaysian cohort found all sections significantly less easy.

5.2. Perceived helpfulness

Students were asked in question 4 how *helpful* they found each of the three sections. Combining the two years, just over 50% of all students, on average, found the Lecturer's Advice and the Annotated Assignments sections quite helpful or very helpful. An average of only 7% found the resources "not very" or "not at all" helpful. There was no significant difference between local and international students: a majority of both groups found all sections quite helpful or very helpful. Annotated Assignments was rated most helpful (61% quite or very helpful), followed by Lecturer's Advice at 54%, with Skills for Writing at 45%.



Fig. 3. Local and international students compared on "ease of understanding" module sections.

With respect to *time on task*, if students spent 30 minutes to an hour on the resource, they were more likely to report that they found elements helpful than were those who spent less than 30 minutes. Data for over one hour were not conclusive.

Question 5 focused on the three options available in the Annotated Assignments section, Lecturer Expectations, Student Essay, and Download (printable) Sample Essay, asking how helpful students found these. For the whole cohort, around 50% found the three segments helpful to very helpful, with 10% finding them not helpful. There was again no significant difference between local and international students. Approximately 50% of the Economics–Malaysia group consistently found all the materials "quite" helpful, but only for the Sample Essay part of Annotated Assignments was there some acknowledgment that this was "very" helpful (17% of respondents).

5.3. Use of activity and design features, and navigation

Students were asked in question 6 how easy it was to use *activity features* such as pop-up explanation boxes and the like. Unlike responses to the other questions where the number of respondents was relatively stable, total numbers of responses to this set of questions varied, ranging from 680 to 896 for different items (of a possible total of 973). Perhaps the terms were unfamiliar to some and so were harder to answer. There were some comments relating to the pop-up boxes which clearly caused problems for some browsers. Differences between local

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					Ease c	of use				
	Very Difficult (%)		Difficult% (%)		Neither Easy nor Difficult (%)		Easy (%)		Very Easy (%)	
Feature	Local	Int'l	Local	Int'l	Local	Int'l	Local	Int'l	Local	Int'l
Hyperlinks	1	1	4	6	31	43	50	44	15	6
Forward & back arrows	1	0	2	3	29	38	49	48	19	11
Text boxes	1	1	3	8	42	49	43	38	10	4
List boxes	1	1	2	4	39	51	45	41	13	3
Pop-up explanation boxes	1	0	5	5	34	48	45	42	15	5

Table 1. Local and international students compared: Ease of using and interpreting activity features of modules.

and international students were statistically significant throughout, however: for using hyperlinked text ($\chi^2 = 24.856$; d.f. = 4; p < 0.0001); navigation arrows ($\chi^2 = 14.829$; d.f. = 4; p < 0.005); text boxes ($\chi^2 = 20.897$; d.f. = 4; 0.000); list boxes ($\chi^2 = 23.715$; d.f. = 4; p < 0.0001); and pop-up explanation boxes ($\chi^2 = 24.564$; d.f. = 4; p < 0.0001) (Table 1).

Students were asked in question 7 if they had any difficulty with navigating around the resource. The vast majority did not: only 10% had any difficulty with navigation, though there was a statistically significant difference in responses between local and international ($\chi^2 = 4.152$; d.f. = 1; p < 0.042). Eight per cent of local students and 13% of international students stated they had difficulty (and, here, the Economics–Malaysia response lined up with the Australian onshore international cohort). The comments made (n = 36) reflected the complexity of the site. For instance:

- The site could be made more linear.
- Some of the links did not take me where I expected.
- Have step by step instruction or guided navigation.

The color and the layout (question 8) were preferred by more local than international students, but the difference was not significant. Students were further asked, in question 9, whether the online help was adequate. A statistically significant difference was found between the two groups ($\chi^2 = 7.317$; d.f. = 1; p < 0.007).

In addition, students were asked (in question 2) whether they had any browser problems, and 31% had. Compared with international students in Australia, significantly more students in Malaysia had had problems ($\chi^2 = 5.706$; d.f. = 1; p < 0.017).

5.4. Level of motivation

Finally, students were asked to say *how motivated* they felt to use each of the three sections, on a four-point scale ranging from "not at all" to "a little", "quite", and

	Motivated to Use								
	Not at all (%)		A little (%)		Quite (%)		Very (%)		
Section	Local	Int'l	Local	Int'l	Local	Int'l	Local	Int'l	
Lecturer's Advice	7	3	36	23	37	56	20	18	
Writing Skills	12	2	38	28	38	56	12	14	
Annotated Assignments	8	4	31	22	39	53	21	22	

Table 2. Local and international students: Comparison of motivation to use Lecturer's Advice, Writing Skills and Annotated Assignments.

"very". Motivation was greatest for the Lecturer's Advice and Annotated Assignments sections: 65% of respondents overall were quite or very motivated to use each section, compared with 57% for Writing Skills. Comparing local and international students, international students were more highly motivated to use all three sections: Lecturer's Advice ($\chi^2 = 31.339$; d.f. = 3; p < 0.0001), Skills for Writing ($\chi^2 = 36.526$; d.f. = 3; p < 0.0001), and Annotated Assignments ($\chi^2 = 16.305$; d.f. = 3; p < 0.05). An average of only 3% of international students was not at all motivated to use them, compared with an average of 9% of local students (Table 2). No significant difference was found between the Economics– Malaysia and the Australian onshore international cohorts.

Significantly greater motivation is associated with students' spending more time on the resource. Overall, about two-thirds of the group reported spending over 30 minutes on the module, while more, approximately 70%, of the students reporting themselves as quite/very motivated to use the resource spent over 30 minutes on it. International students at the Australian campuses tended to spend the longest time on the resource, 44% spending more than one hour, and only 17% spending less than 30 minutes, compared with Australian domestic students (16% and 46% respectively) ($\chi^2 = 5.91$; d.f. = 2; p < 0.0001). The Economics–Malaysia cohort, spending more than one hour (24%), occupied the middle ground. Not all students used all sections of the module: on average, between 10 and 21% of local students claimed not to have used one of the sections, but only 3 to 8% of international. The widest discrepancy occurred for downloading and printing the sample essay: 21% of local, and only 8% of international students reported they did not use this option.

The suggestions for improvement produced a large percentage of unsolicited positive comment, but also included the following:

- The students report should cover good and bad sample so that other students looking at the website will have a clear view.
- The URL is difficult to remember, there should be a direct line on each student's "my Monash" page.
- Student voicefiles too big wouldn't matter if it was lower quality if it was faster to download.

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• Lecturers' comments presented better. Make more printer friendly. I personally prefer not to have to go into various sections and sub-sections which means going backward and forward. Prefer a complete document under each section.

These issues will be taken up in the next two sections.

6. Discussion

As long as we continue to replicate traditional approaches online — and continue to treat students as if they were the same — we will once again find the "no significant difference" phenomenon vis-à-vis quality, and we make only a negligible dent in the access problem rather than taking full advantage of the networked environment. (Twigg, 2001, p. 4)

The provision of stand-alone web resources can be no guarantee that students will learn *how* to write in their discipline, but analysis of the initial findings from the evaluation of the WSA project suggests that students believed they were assisted successfully in learning *about* writing in their discipline. This paper reports on the results of one questionnaire with a sample of learners in nine subjects taught face-toface across six Monash University campuses, one off-shore. It should be remembered that using the resource was not compulsory, so that those responding to this questionnaire were a self-selected group in a sense: that is, they were motivated to the extent of having a look at the site. In addition, of the nine subjects, four were Business and Economics; so the results may be viewed as being particularly pertinent to that disciplinary area.

Results indicated that the majority, 50% to 63% of the whole group across two years, found the three sections of the writing module they used helpful or very helpful for their purposes, and 59% to 67% claimed to be quite or very motivated to use it. This is in an era where observers note large-scale disengagement from noncompulsory areas of university life (McInnis, James & Hartley, 2000), where students typically want, as they put it, "more help in lectures and tutorials instead of on the internet only" (Krause, 2001, p. 159; see also Williams, 2002, for differences between lecturers' and learners' perceptions). The discipline-specific materials on the site aimed not so much to instruct, as to provide rich contexts where, as Hannafin and Land (1997) put it, "understanding and insight can be uniquely cultivated" (p. 169). The opportunities for student self-directedness, the range of student assignments presented, the nuanced nature of the lecturer comment, all made for a learning environment where students were exposed to external (lecturer) expectations, but encouraged to pursue personal understandings.

The theoretical focus of the site was to foreground the texts, processes and practices particular to the different discipline-based tasks. We know that, in students' eyes, many staff do not regularly make the distinctive features of their requirements sufficiently explicit (Lea & Street, 2000). These issues, taxing enough for a local student, assume greater significance for students new both to the discipline and the culture (see also Tompson & Tompson, 1996). International students are widely acknowledged as having significant difficulties in acculturating rapidly to the demands of contemporary Western academic culture and to the subcultures of the disciplines (Chambers, 2003; Kennedy, 1995; McNamara & Harris, 1997). This should be interpreted, though, not as a "lack" or deficiency in the students, but as a comment on all participants in the teaching and learning contexts.

The project's findings suggests that both learning support staff and subject lecturers need consciously to be attuned to ways in which the learning experience for international students can be improved. According to a report at the University of Sydney, while staff sought improvement by means of diagnostic testing accompanied by support for students at risk, students wanted recognition of the diversity of international/NESB students, clarification of expectations and appropriate feedback in order to "concentrate on the real learning" (Asmar, 2003). Truly innovative curricula require reflexive and open attitudes to the possibilities offered by an internationalized student body and a globalized teaching and learning context.

Motivation of international students to use the web resource was reported as high to very high, especially for use of the Annotated Assignments section. More than 92% of international students used every section of the subject module selected; international students also spent more time on the modules than local students. This is not unexpected. A recent Australia-wide study found that international students devoted significantly more hours to study (14.2) than domestic students (10.7) per week, and made significantly greater use of the web (5.9 compared with 4 hours) (Krause, Hartley, James & McInnis, 2005, p. 34). The data from the current survey, while pointing to a commonality in perceptions of helpfulness, consistently revealed more time spent by international students, and a significant motivational difference between international and local students in the face of challenges in using the learning materials (navigation and online help also being greater issues for the international student). Motivation of international students to use the web resource was reported as high to very high, especially for use of the Annotated Assignments section. More than 92% of international students used every section of the subject module selected; international students also spent more time on the modules.

Clearly, the findings highlight the determination of the international student group to persist with a resource which, while not always easy for them, was found to be helpful. This is further emphasized in the evidence from the evaluation that, even in what we might think of as the less language-based elements of the site — that is, the features which permit the interactivity — the international student typically found more difficulty. This finding is potentially informative for the design of interactive web materials for international students. At the simplest level, almost 50% of the students, both local and international, who were offering a comment (n = 60) had (browser-related) problems with the pop-up boxes, an issue which needed to be addressed (see below). There has been some suggestion that there could be cultural preferences for design of informational web design based on national background (Marcus & Gould, 2000). One might hypothesize that, for the international student already finding language and cultural factors challenging, any interface features in an educational website which do not appear seamless might compound a sense of general difficulty. An interesting finding to put beside this is a small UK study of 66 international students' learning styles (De Vita, 2001), which showed that over 75% of the group (compared with 52% local) displayed a preference for visual rather than verbal inputs (in English). The recognition that these two findings might need to be married in some way to enable effective learning in a diverse student body could be one step towards a more learner-centered focus. Certainly, a number of the open-ended comments students made have now been taken into account, with the availability of more responsive web design tools (see Section 7).

The findings of the present research support other investigations which suggest that international students are enthusiastic adopters of online support and consistently claim it is helpful to them, despite any difficulties they may encounter (Clerehan, 2003). The difficulty level of the instructions and explanations was not perceived as high by local students, but it seems apparent that the language may need to be further refined to make it clearer for the international students, even though it was devised by specialists in teaching English as a second language with lengthy experience in addressing the diverse learning needs of the first-year cohort. That said, "difficulty" may be equivalent to "challenging" for some learners and, without focus group or interview information, it is difficult to know. In any case, faculty staff could do well to take note, and seek specialist advice regarding the difficulty level of the instructional language in any materials they may develop for online use.

An interesting sideline is that the students at the Kuala Lumpur campus, while equally motivated to use the materials, found them significantly more difficult than did international students studying at Australian campuses, and spent less time on them. It should be conceded that interpretation of these results is qualified by the fact that the international onshore students were spread across nine subjects, compared with the Malaysian group who were all studying Economics. The Malaysian lecturer, despite being impressed by the site, had received no briefing on it and its purpose, and would not have been in a position to provide much orientation for the students, or to source support from the language and academic skills staff involved, compared with the faculty staff in Australia. The Malaysian cohort responded similarly to the onshore international students on the question of the module's helpfulness. At the least, this suggests that more effort needs to be devoted to tailoring materials to groups studying within a different culture in a country different from where the curriculum and pedagogy were developed. What we believed to be the learner-centeredness of the material worked only partly for this cohort. As MacKinnon and Manathunga (2003) argued, the dominant culture may be making assumptions about the "other" culture's students' understanding of essay writing which are quite unfounded (p. 139), leading to unhelpful conclusions about students' needs and abilities.

This leads us to a final point which is that, as Drury (2004) indicated, support resources on the web are most effective when the lecturer is successful in integrating them with their curriculum and assessment practices. While these materials were designed for stand-alone support, ongoing engagement from the subject lecturer will always mean students are more likely to find their way to them and use them in appropriate ways to stimulate their writing development.

Culturally-sensitive formative evaluation strategies have been identified by Henderson (1996, pp. 101–102) as:

- including members of the target group(s) at each step of an innovation; indepth knowledge of the learners and their needs;
- a systematic awareness of learners and their needs, including the notion of diverse learning styles and strategies;
- an evaluation which allows for students' groups at multiple points along a range of instructional design continua; and
- "ecologically-valid" research to support improvement.

We believe these considerations have been instrumental in the formation of the WSA site. The next section outlines how, together with the results of the evaluation, they have influenced the development of the new architecture of the site.

7. Responding to the Evaluation

As indicated earlier, an unavoidable limitation of the evaluation was that it ended up being largely via questionnaire. The pattern of administration of the instrument differed across the nine subjects. The response rate varied from subject to subject, and we have no way of knowing why nonrespondents did not use the resource, though anecdotal evidence from some of the subjects suggest this may have been due simply to lack of information. Anecdotal evidence from the subject lecturers has reinforced the points made by the students, however:

I direct all of my students to this resource ... and I receive universally positive feedback — both verbal and written ... There is no doubt that the work ... on these projects has influenced and motivated a large number of students ... My colleagues and I keep a close watch on the development of online teaching resources in philosophy: we have not found anything we would wish to recommend above the Language and Learning website. (Philosophy lecturer)

We also have anecdotal evidence that faculty staff are making use of the site at times in the classroom and have reported using it to inform their teaching approaches, for example, in the way they frame their advice about essay-writing to students (writing as situated social practice, rather than as manipulating the technicalities).

The site has been used as a model by others: we understand from requests sent to us that there are sites which have built on the texts, processes, and practices template for their own pedagogical purposes. The site itself is well-known among Language and Learning practitioners in Australia and overseas, and the discipline-specificity is always remarked upon by external and international (especially American) academics. Marland (2003) observes that: "It is most impressive that bringing together the LAS and subject lecturers produces that specific and contextual approach that is so important. I should imagine both lecturers and students find their work enriched by this major project" (pp. 202–203). Finally, in a review of the BA degree funded by the Australian Universities Teaching Committee (Pascoe, Macintyre, Ainley, & Williamson, 2003), WSA was discussed as "strengthening internet-based resource learning opportunities for students ... one of Australia's leading examples of online tuition ..." (p. 142).

Ongoing improvements to the site on the basis of this evaluation have focused on further enhancement and updating of those elements the students found particularly valuable: the provision of student exemplars and tailored lecturer advice. Further funding in 2005 has enabled a redesign of the site, guided by the same pedagogy. The major areas of change have been:

- better navigation and "cleaner" interface: for example, inclusion of hierarchical expandable menus;
- better accessibility and usability features: for example, elimination of pop-up windows, more accessible downloads of printable pages, and improved access to student samples and lecturer advice (such as text versions of student audio comments, as requested by students);
- "packaging" of materials for reuse, using XML to enable output to a range of delivery technologies, such as WebCT Vista, CD-Rom;
- more "authentically framed" interactivity: for example, inviting the student to enter a response and click on "Comments" to see examples demonstrating the sequence of activity as already worked through, thus eliminating any learner expectation that the teacher feedback may be synchronous; and
- further development of discipline-specific content, such as linking the text versions of the student audio to language and academic skills specialist responses.

In 2006, the Skills for Writing section is being reviewed to provide for further learning pathways and, allowing for different difficulty levels. Offshore campuses are now included in the discussion. Future evaluation will enable a "time series" picture of the effectiveness of the site. Informal assessment by students will continue, and more formal focus groups are planned to test usability and perceived educational value.

8. Conclusion

The theoretically grounded web resource at the heart of this project, although a noncompulsory part of the curriculum, was found to be highly motivating and useful by the majority of student respondents, in subjects differing as widely as Commercial Law and Philosophy. While the resource's usefulness was commended by both the international and local student groups, the international student cohort was more likely to use all elements and to be more motivated, even while finding it more difficult than local students. The difficulty was found to be more pronounced for a subgroup of offshore students.

A central recommendation arising from the current research is that universities with diverse student cohorts who are concerned to internationalize their curricula and to improve their online teaching and support for student learning, research theoretically sound ways of doing so. There are tensions in the literature as to whether technological and other shifts in education will disturb the formation of the disciplines in productive ways — towards more open and internationalized pedagogy, curricula and assessment — or result in homogenization and further subtle regulation of possibilities for student learning (Edwards & Usher, 2000, p. 56). To optimize the learning possibilities for diverse groups, discipline-based academics must become more contextually aware — conducting needs analyses, action research and other forms of ethnographic investigation in the endeavor to develop pedagogies which are culturally sensitive.

There remains a dearth of work on comparing how domestic and international students cope with online resources designed to support their disciplinary writing. Web materials to facilitate and support writing should be framed by theoretical understandings of tertiary literacy in their use of the available technologies, but the point to be made is that the three perspectives laid out by Candlin (1998) need to be refocused for each new learning context. The findings from the analysis of the innovation outlined in this study suggest that students, especially international, believe they benefit from a pedagogy which allows them directly "into the camp" of disciplinary discourse. If our students can be highly motivated to improve their learning about participating in academic discourse, the least we can do as academics is to find ways of helping them.

For this particular project, it would be instructive for the questionnaire to be run again, concentrating on fewer subjects but with more participants, so cross-subject comparison can take place. It would be advantageous to refine the data collection to encompass student focus groups — and even focus groups of students and staff together — to probe existing and potential approaches to disciplinary initiation. Findings from the study suggest that further investigation of the value of standalone, theoretically based resources which impact across cultures should involve comparative studies of the local, international, and offshore student cohorts. The effectiveness of specific learning technologies (for example, interactivity features) needs to be explored in close conjunction with educational issues central for the students. This involves specifying further the most beneficial ways to utilize student writing "samples"; the most useful ways to represent lecturer expectations; and the most promising ways to chart the boundaries of "discipline-specificity" in learning support resources.

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Appendix

Student Questionnaire — Writing in Subject Areas Website (Transition to Tertiary Writing Project)

Please complete this form after using the website. [spaces provided and appropriate instructions included]

Name, Student ID, Age in years, Email (*optional*) Are you an International Student? Subject studied.

Each module for each subject contains three main sections: *Lecturer's Advice, Skills* for Writing, and Annotated Assignments.

1. How much *time* did you spend on the resource? Less than 30 mins, 30 mins to 1 hour, over one hour

2. Did you experience any browser problems (such as error messages)? Yes/No

3. How easy was it to understand the	instructions and explanations used in:
a. Lecturer's Advice	Five-point scale from
b. Skills for Writing	Very difficult to Very easy
c. Annotated Assignments	+ Did not use
Comments? [space provided]	

0

4. How helpful did you find:	
a. Lecturer's Advice	Five-point scale from
b. Skills for Writing	Not helpful at all to Very helpful
c. Annotated Assignments	+ Did not use
Comments? [space provided]	
5 Within Annotated Assignments	how helpful did you find the following section

5. Within Annotated Assignments,	how helpful did you find the following sections?
a. What the lecturer wants	Five-point scale from
b. Student essay with comments	Not helpful at all to Very helpful
c. Download sample essay	+ Did not use
How might this part of the resource	e be improved? [space provided]

6. Overall, how easy was it to interpret and use the resource? Answer all parts of
this question.
a. The links to pages using words
highlighted in the text
b. The links to pages using for-
ward and back arrows
c. The boxes for you to write in Five-point scale from
your text
d. The list boxes to select an Very difficult to Very easy
answer to a question
(if applicable)
e. The pop up explanation boxes
How might this be improved? [space provided]
7. Did you have any difficulty with the navigation around the resource? Yes/No

If yes, how do you think the navigation could be improved? [space provided]

8. How appealing did you find:	
a. The typeface	Five-point scale from
b. The layout	Not appealing at all to Very appealing
c. The use of color	
9. In your opinion, is there adequa module?	te online help to enable effective use of this

If no, how do you think this could be improved? [space provided]

10. How motivated did you fe	eel to use:	
a. Lecturer's Advice	Four-point scale from	
b. Skills for Writing	Not at all to Very	
c. Annotated Assignments		

11. Do you have any suggestions for how the overall resource could be improved? [space provided]