

Enabling learning, addressing retention: Supporting students via online tutorials with *Smarthinking*

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Enabling student learning through the provision of enhanced and positive distance learning as opposed to delivery often proves problematic for online learning. In 2007 Open Universities Australia (OUA) began an innovative long-term trial of an online writing tutorial intervention to deal with varied levels of academic writing skill competence amongst its students. The trial set out to provide a supplementary writing support tuition service that would enable the development of learner knowledge and skills that then might impact on learner satisfaction. The trial also set out to ascertain any effect this intervention strategy would have on retention into subsequent units, unit completion rates and student grades. A trial of the Smarthinking.com online writing lab ran over three study periods in 2007 and is reported upon in this paper.

Keywords: student retention, completion; writing lab, learning support; Smarthinking; distance learning

Introduction

Whilst some commentators argue that technology assisted learning poses particular issues with distance and isolation felt by students and teachers, information and communication technologies (ICT) are also hailed as facilitating a range of learning and teaching opportunities for distance learning. Given the feedback from both tutors and students about distance learning, the objective of creating a dynamic and responsive teaching and learning experience poses a challenge for e-learning educationalists. Open Universities Australia is the leading online distance learning provider in Australia. The open enrolment scheme means that students are not required to have academic qualifications to enroll in undergraduate programs. Thus OUA is focused on providing a positive learning experience for students in terms of their academic experience. In investigating the study experience, OUA noted a tension between student and tutor expectations: while students reported they struggled with academic writing and looked to their tutors for detailed individualised writing guidance, their tutors often reported this proved untenable in terms of work load pressure and they did not necessarily have the expertise to teaching writing composition skills as their focus was discipline content. This paper reports on how an academic support intervention through Smarthinking.com's online writing lab (OWL) was implemented to facilitate in addressing these tensions and provide an enabling environment that might result in improved retention and student progress.

Literature review

Whilst educationalists are united in their stance that learning environments must be enriching, positive experiences for all participants (students and teachers) they are certainly divided on the issue of e-learning as a modality that provides such experiences. Commentators such as Noble (Noble 1997; Noble 1998) and Feenberg (Feenberg 1999) provide arguments that remind educationalists that ICT are not necessarily going to provide an enabling environment where quality learning will take place. However, others argue that the development of ICT are now at a point where it can take an educational situation from a didactic one to a more dialogic one, particularly through computer mediated communication (Brown and Duguid 1995). E-learning is being regarded as providing opportunities to address issues of distance and ensuing difficulties (such as low student retention and satisfaction issues) that have traditionally plagued distance learning. Distance learning seems like a great idea overcoming limitations of time, geography, extra financial burden of traveling (Lockwood and Gooley 2001) and its appeal to varied groups of students including those who have added family/work responsibilities (Collins 2000) and who may not necessarily enter via traditional academic pathways with a solid educational background (Schuetze and Slowey 2000).

It is widely recognised that "learning in higher education involves adapting to new ways of knowing: new ways of understanding, interpreting and organising knowledge." (Lea and Street 2000), p.32) One aspect of academic scholarship that proves difficult for students is that of academic written discourse. It is argued that students need to be enabled to address their surface-level type writing errors to extend their repertoire of skills and understanding to then enter into the discipline discourse (Lea and Stierer 2000; Lea and Street 2000). The conversations on the development of academic writing competencies (Laybourn, Falchikov et al. 2000; Milne 2000; Nunan, George et al. 2000; Paltridge 2002) have brought in focus how such competencies demonstrate student ability to think at a deep critical level rather than at a superficial level (Biggs 2003).

It is argued that feedback to students is provided at a deeper level than on spelling and grammar level type corrections (Van Rensburg and Lamberti 2004). These authors go on to recommend that lecturers provide models of good writing and teach explicitly the different genres as part of their teaching programs. Students themselves often seek feedback on their writing skills and this may prove difficult in a distance environment as online tutors who may deal with quite a number of students are not always able to provide corresponding substantial individualised support (De Fazio 2007). Thus, a tension occurs between student and lecturer expectations. Such tensions on an online environment may exacerbate an already difficult situation whereby a learner seeks to overcome feelings of isolation and distance. Further, discipline lecturers do not necessarily have the skillset and understanding to teach writing as part of their course (Baynham 2000) so it is often left to the domain of writing specialists. Academic writing specialists work with tertiary students to help them achieve a level of competence that takes them, ideally, from grasping the technical aspects of academic writing to a more indepth critical approach to this discourse (Baynham 2000). However, these specialists may not always play a substantial role in distance delivery.

Background to the study

OUA offers online courses to thousands of students each year. Its open access policy means that it attracts students with a range of academic backgrounds and vocational experience. OUA was concerned that there seemed to be a tension between student expectations of detailed and efficient tutor feedback and the teaching reality of the tutors to be able to satisfy such expectations given time and discipline specific expertise rather than writing skills development. OUA sought an individualised student-oriented intervention that might resolve or facilitate a resolution of this problem. Smarthinking.com offer an online writing lab (OWL) whereby students could submit an assignment of up to 10 pages for feedback in 24 hours, seven days per week. The flexibility this offered was attractive as was the knowledge that Smarthinking e-structors provided individualised feedback. Further that the e-structors were specifically trained to offer feedback on writing composition and mandated *not* to address issues of assignment content as OUA views this to be the domain of the subject tutor. Figure 1 demonstrates the assignment registration page which asks students to provide details of the sort of writing assistance required from the e-structor.

Figure 1: Assignment registration page

Methodology

The overall aim of this research is to ascertain whether an academic support intervention might contribute to a new model for more effective online tutoring and student services for OUA. The specific aims of the trial are to ascertain to what extent, if at all, does Smarthinking's OWL as an online academic support service contribute to improved: retention into subsequent units; student grades, and, unit completion rates.

Interpretation of terminology should be clarified at this point. Retention is given to indicate student re-enrolment in a unit at OUA within three study periods from the time of participating in the research. Completion indicates that students actually completed the whole unit, whether pass or failing whilst actual grades received constitute a third element of the research focus.

The research approach

Data was collected over three study periods in 2007 from both student and OUA tutors to ascertain perspectives and insights into their respective experiences of the service. Unit tutors and coordinators were invited to participate in the trial each study period. Student perspectives were gathered through formal online evaluation surveys that were sent out in week six of the 13 week study period to all students in participating units. The survey was open to users and non-users of Smarthinking. To address the issue of user-novelty, resulting from using the service, a follow-up survey was also sent out to the same group four weeks after the close of the study period. This period was deemed to be timely so as to capture student comparative reflection on feedback from OUA tutors and the Smarthinking e-structor on assignments (without a time lag that might have meant that the student could not remember the feedback received, was disinterested or non-contactable due to changed contact details). In addition to student feedback, OUA tutors were invited to provide detailed comparative feedback on a random sample of assignments submitted for final assessment and the corresponding marked up draft versions received from e-structors. All surveys were conducted online and were made up of a combination of multiple choice and open ended questions. Further, data gained via informal discussions with students, tutors and coordinators of units also added further richness to the qualitative data collected. Quantitative data was analysed using nonparametric statistical analysis, for both nominal and ordinal data.

Participants in the trial represent a range of cohorts and was on a voluntary basis. Respondents to the survey represent 35 accredited units from a range of disciplines such as management, academic preparation, history and English. Student ages varied from 16 to 68, with 320 females and 107 males in the three study periods combined. There were 20 tutors involved in the trial, each reviewed a varied number of essays. The tutors represented nine units (seven undergraduate and two postgraduate), a diverse range of discipline areas and seven university providers.

Findings and discussion on student and tutor experiences of the OWL

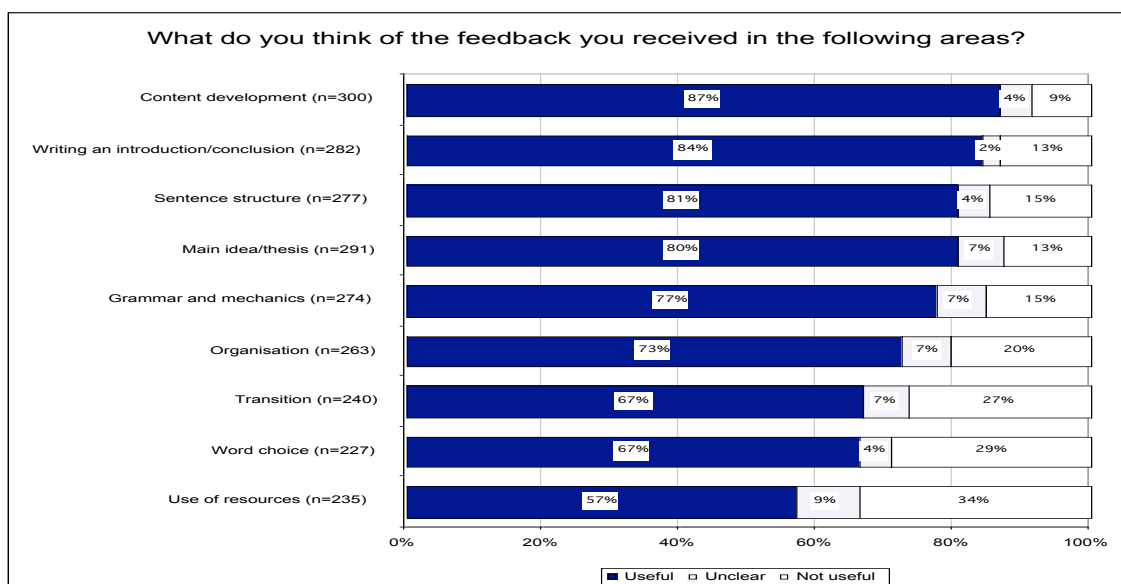
From pre-trial qualitative data collected from tutors and students it was clear that academic writing proved to be complex and problematic yet essential to proving that students were able to partake in the discipline's academic discourse. Tutors reported that student difficulties centred on forming and structuring an argument, referencing, writing to a text-type and grammar. As explained, when students submit an assignment to a OWL e-structor they are asked to indicate certain areas of assistance they required. Students were surveyed on their perceptions of the feedback received on these areas as shown in Figure 2.

Combining the data, results clearly indicate that the bulk of students who used the SMT service found it to be useful with regard to a range of writing components particularly at a level which facilitated the development of content within the parameters of the text structure. This was further supported by comments from both tutors and students:

I found the comments positive and helpful, would consider using again. I was a little sceptical about the idea at first. (Student comment)

Extremely useful - they provided great ideas, and asked questions which made me think about what i had written and how i could improve it. (Student comment)

The e-structor commented on the introduction and suggested that the student needs to express the thesis differently. I believe that the suggestions concerning the introduction were valid. (Tutor comment)



(Note: N/A responses were removed from the total N, where it was assumed that a student selected N/A where the e-structor was not instructed to comment on that aspect of that submission).

Figure 2: Student perceptions of feedback received on different writing aspects

The e-structor commented on discussing the quotes used in a paragraph. I agree with this point. The e-structor also commented on referencing within the paper, this was good. (Tutor comment)

Students were asked to indicate how much of the feedback they used in guiding them in drafting their next version (see Figure 3). When combining the data over the three study periods, it seems that most students used at least 60% of e-structor feedback with 120 students using between 80-100%.

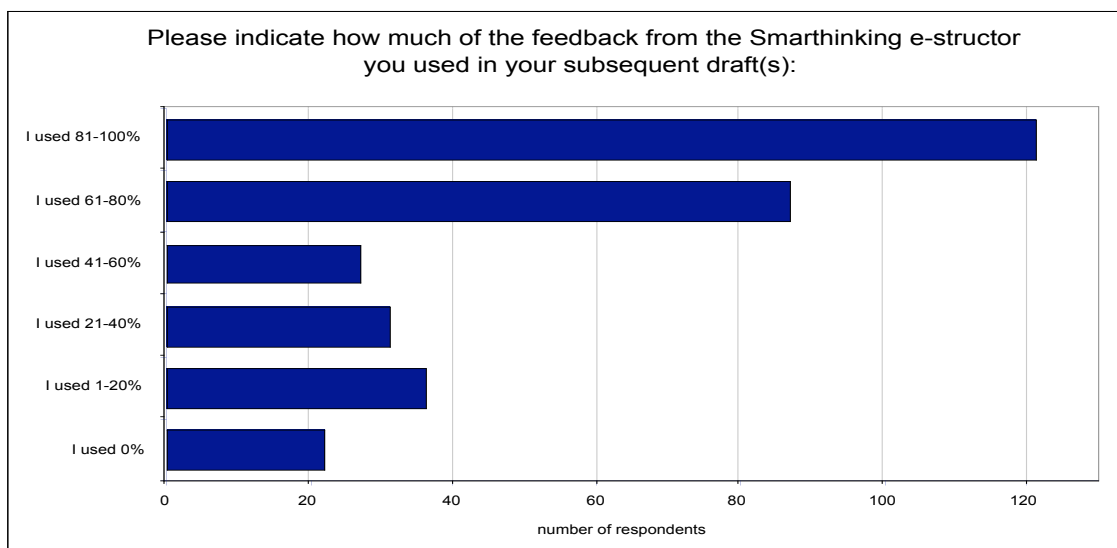
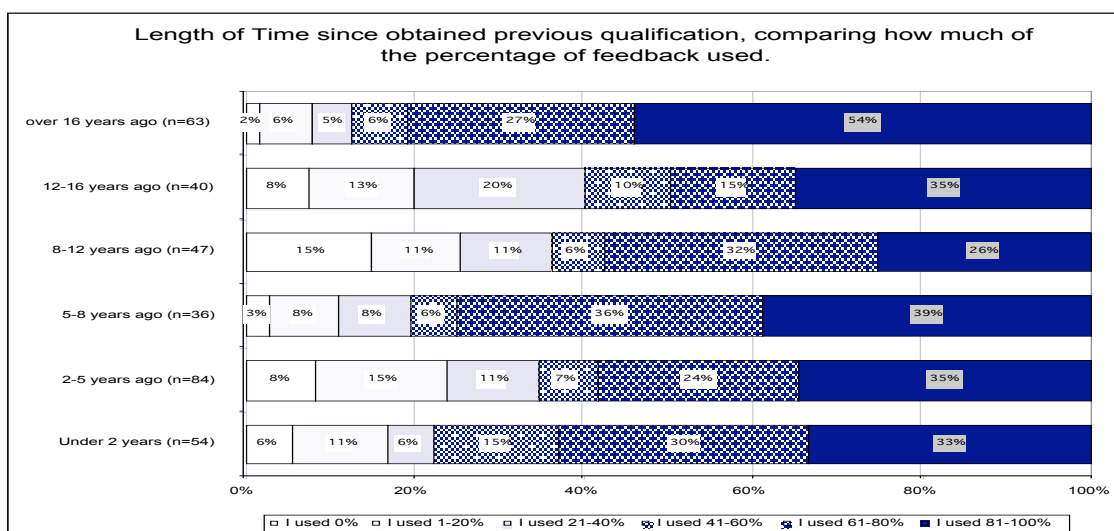


Figure 3: Student perceptions of usage rate of e-structor feedback on subsequent drafts

The high rate of student usage of e-structor feedback may indicate a sense of trust in guidance received. Moreover, it provides an indication that learners may have felt the comments were congruent with aspects of writing composition lacking in their own skillset. Further review of the results indicates that there was a correlation between the use of e-structor feedback and the length of time since students had studied (see Figure 4).



Note: Kendall's Tau significant, $p=0.044$

Figure 4: Study gap

It would seem from the findings that whilst a considerable number of students made use of e-structor feedback, students who experienced a study gap of between 5-8 years and over 16 years between their current and previous studies were most likely to make most use of e-structor comments on their drafts overall (75% (n=27) of those with a 5-8 year study gap using more than 60% of feedback and 81% (n=51) of those with over a 16 year study gap using more than 60% of feedback). There could be a number of explanations for this ranging from experiential background that facilitates a review of feedback, time constraints of users of a particular age-group who may have found they relied more heavily on e-structor guidance that may be time pressured, academic preparation resulting from different academic systems over the years, lack of confidence for instance in the group who studied over 16 years ago etc. At the time of this research a deeper investigation into possible reasons was outside the scope of this study however, it remains an interesting research question for further analysis.

Improvement in writing competence

Data was investigated to understand whether there was any discernible improvement in the area of academic writing competence. General student responses are indicated in Figure 5.

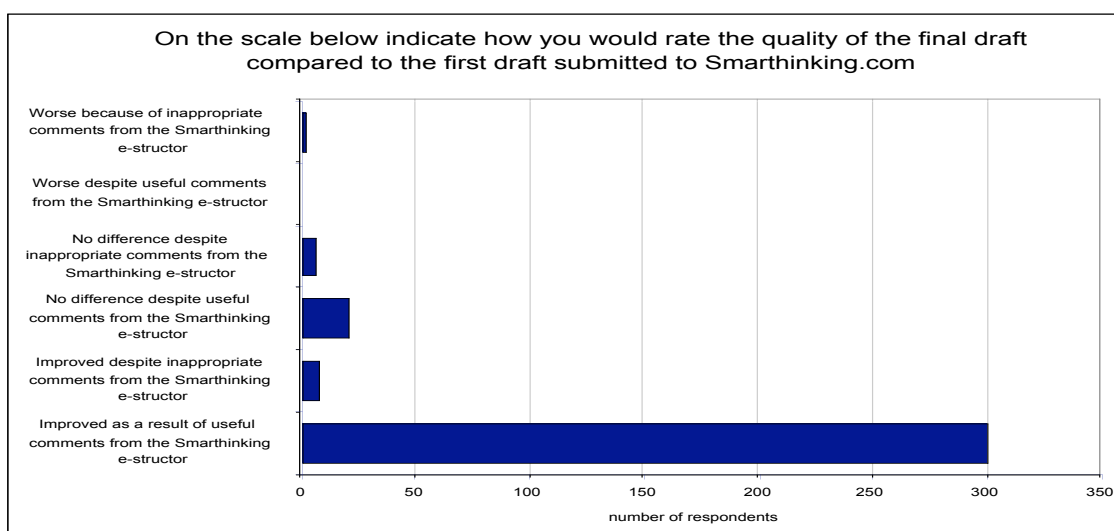


Figure 5: Rating the quality of the final draft compared to the first draft.

Students comments on how they perceived the value of e-structor feedback in preparing the final versions of their assignments indicated overwhelmingly that they felt that their final version improved after using the online writing lab. To ascertain whether the students responded so positively due to novelty value, the

same question was asked in the student follow-up survey at the completion of two study periods (see Figure 6).

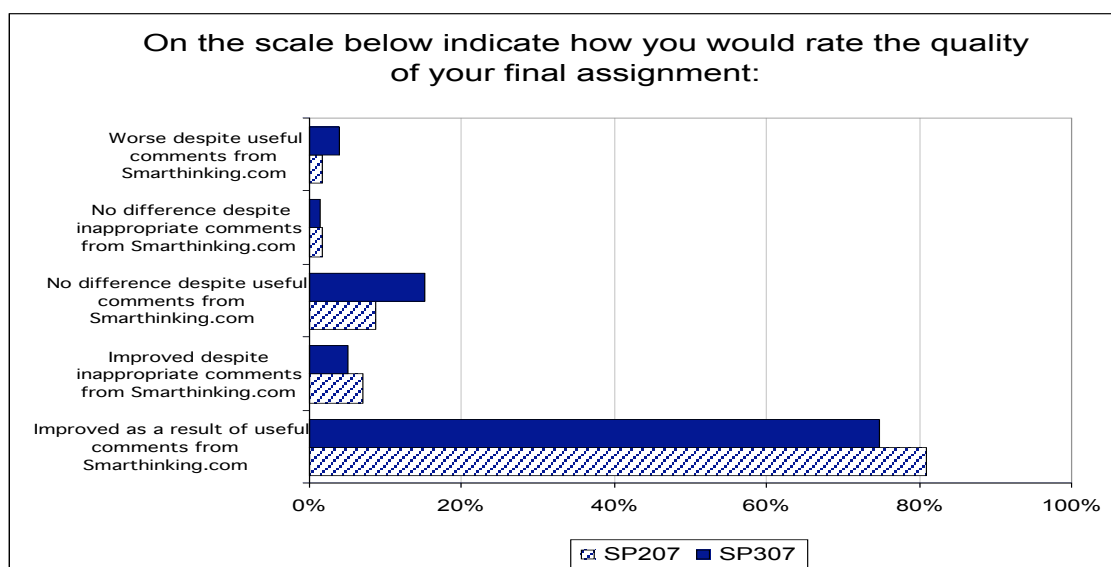


Figure 6: Rating the quality of the final assignment on follow-up student surveys

As can be seen in Figure 6 over 75% (n=137) of students indicated that they felt there was an improvement in the final draft of the assignment in the follow up surveys. This indicates that even after receiving back their assignments from their course tutors, there was a significant sense amongst students that they were enabled to prepare a higher quality assignment through use of the OWL. OUA lecturer comments were also gleaned on this aspect to ascertain their perspective on any possible improvement and their comments are presented in Figure 7.

Tutors were asked to select a random sample of assignments and compare marked up versions with comments from e-structors with final versions submitted for grading. Tutors were then surveyed and in study periods three and four found that students final drafts improved as a result of guidance received from OWL e-structors as seen in Figure 7.

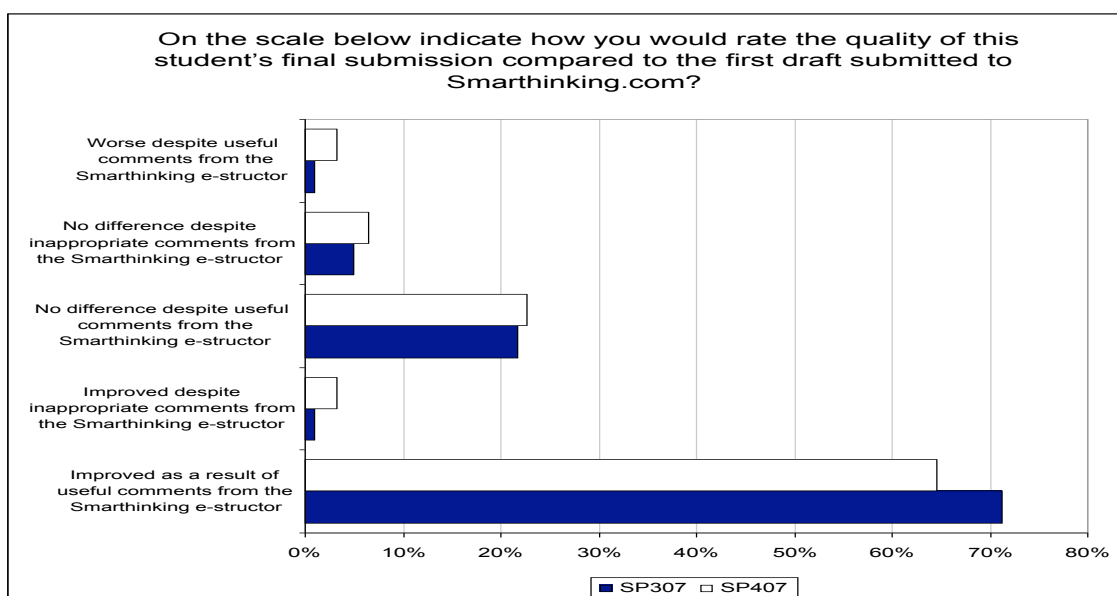


Figure 7: Tutor perceptions of the quality of the final submission

At least 65% of tutors indicated they felt there was an improvement in assignment quality. This finding supports that of student perceptions on the same aspect. Whilst the data should be treated cautiously given

the number of tutor participants representing a small sample of units, it provides some indication of an improvement. Also, some of the accredited units were focussed on academic preparation skills and tutors were skilled in writing to be able to interpret the interplay between e-structor feedback and student drafting well, as expressed below:

The Smarthinking e-structor's contribution did match the assessment criteria that I use.

e-structor points out where transitions do not work and where the thread of the thesis is lost.

The smarthinking tutor suggested that the student have a clearer structure and avoid going back and forth with ideas because it made her argument confusing. The student did make the necessary changes.

Quantitative data from student surveys indicate that overall satisfaction amongst students was high (Figure 8)

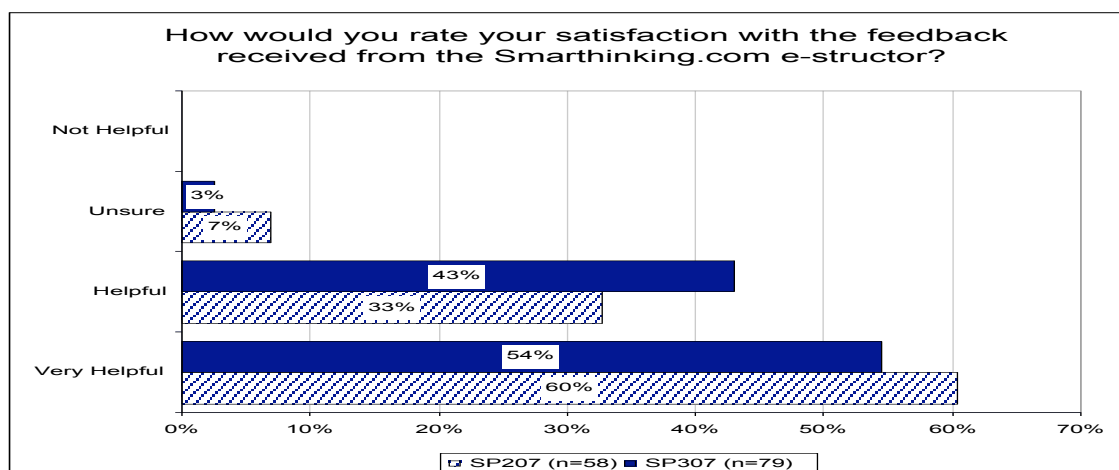


Figure 8: Student satisfaction rating with e-structor feedback

As seen in Figure 8, students rated their satisfaction with using the online writing service as either helpful or very helpful with at least 93% of students providing positive responses in both study periods with no respondents indicating the feedback was unhelpful in either study period surveyed. This finding is consistent with previous findings on general improvement of perceptions of feedback and quantity of feedback used.

Students were asked to reflect on their learning experiences to ascertain if they felt it enabled to progress successfully through their studies. In particular, students were asked if they felt there was transferability between the knowledge received from e-structor guidance and the development of their general writing skills (Figure 9).

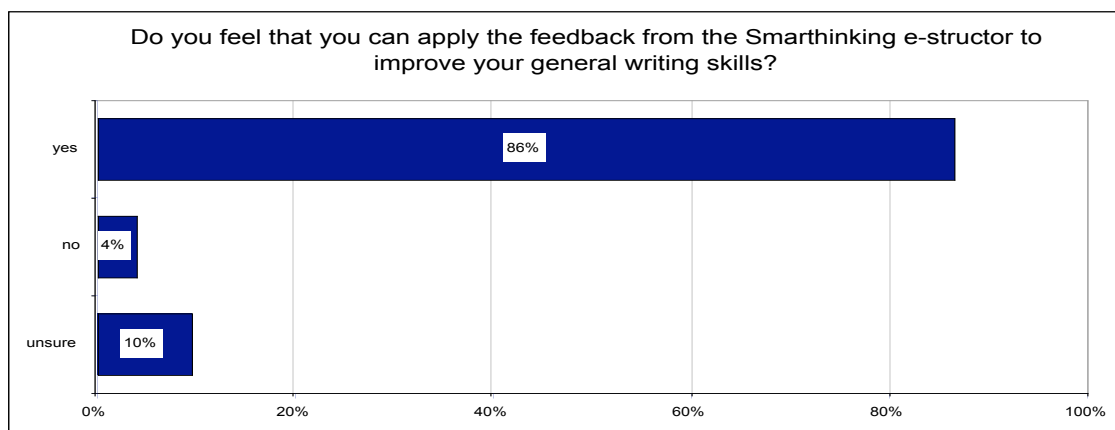
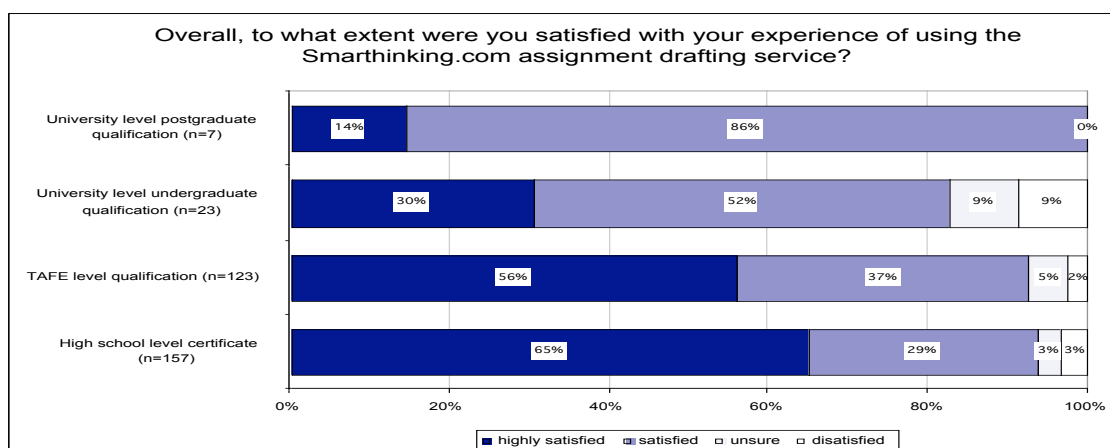


Figure 9: Student perceptions of general writing improvement

Students responded that they felt their writing skills in general improved as a result of feedback gained through using the OWL with 86% (n=281) indicating that this was indeed the case and 10% (n=31) unsure and only 4% (n=13) felt this was not the case. This aspect was investigated again in the student follow-up surveys where students were asked two questions on the development of their academic writing techniques specifically and the development of writing skills in general. On both items at least 80% (n=113) of respondents in the two study periods indicated that improvement in both areas was achieved.

Combined data over the three study periods confirms the relationship between qualification levels and overall satisfaction levels with the online writing lab as indicated in Figure 10 below. Perhaps not surprisingly, students who enter university with lower level qualifications indicate higher satisfaction levels with guidance received on their development of writing skills.



Note: Kendalls tau significant $p=0.007$.

Figure 10: Comparing qualification level with student satisfaction

Students were also asked to reflect on whether they felt they had improved as learners as a result of their OWL experiences. Overwhelmingly over 90% (n=129) of respondents indicated that they felt there was an improvement in themselves as learners as a result of e-structor guidance and this, as the literature indicates, is important to situating themselves in the role of a learner. Given the online distance aspects of the experience, this was deemed to be an important outcome of the study.

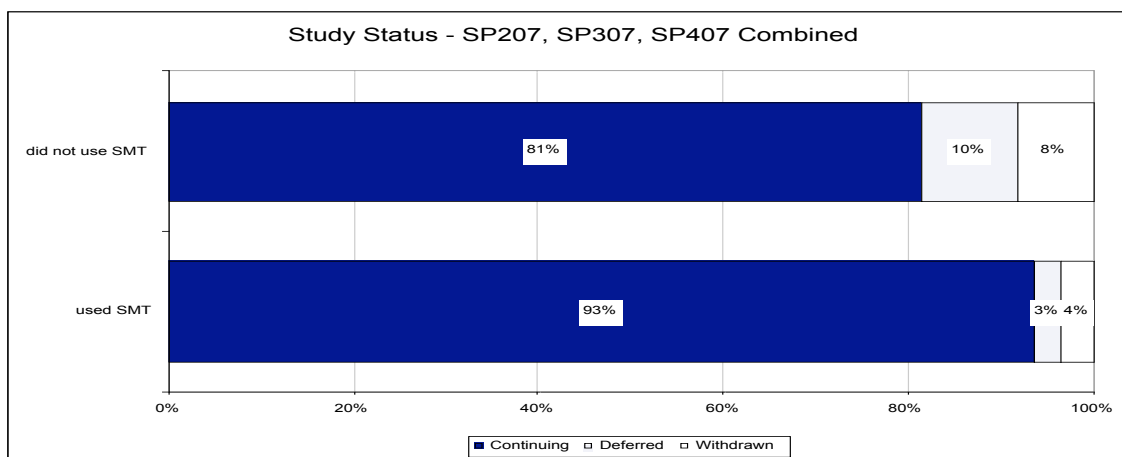
Further investigation into the reasons why students might view the experience of using the OWL in relation to their mainstream learning experiences demonstrated some interesting results. Students felt that the e-structor provided feedback that a tutor did not normally give with 35% (n=27) in Study Period 2 and 31% (n=33) in Study Period 3 indicating that this was the case. Also, that feedback received from the e-structor was consistent with that received from their OUA tutors 44 % (n=34) in Study Period 2 and 46% (n =48) in Study Period 3 However, there was some indication that there was a level of contradiction also. Upon further investigation using mainly qualitative data, it seems that students received some contradictory advice principally on the issue of referencing systems. OUA has now initiated a review of referencing advice provided by e-structors on the Harvard Referencing System which is used commonly in Australian and New Zealand contexts rather than MLA and APA styles which are more popular in the US.

Findings reported thus far provide an understanding of student issues with developing academic writing competence and student and tutor perceptions of usefulness of e-structor guidance in facilitating writing development. Of interest is how this experience enabled them to experience the sort of supportive and satisfactory learning environment that provided the impetus to progress well and continue in their studies. The following section outlines findings specifically on student progress.

Student progress: A look at retention, grades and completion rates

Student progress was defined as consisting of three major elements: retention into another unit in two subsequent study periods, grades achieved and completion rates (defined as completing the course and achieving any grade rather than withdrawing or deferring).

Students were tracked to ascertain any correlation between using the OWL services and retention patterns. Figure 11 presents combined data over the three study periods as available so far in the trial.



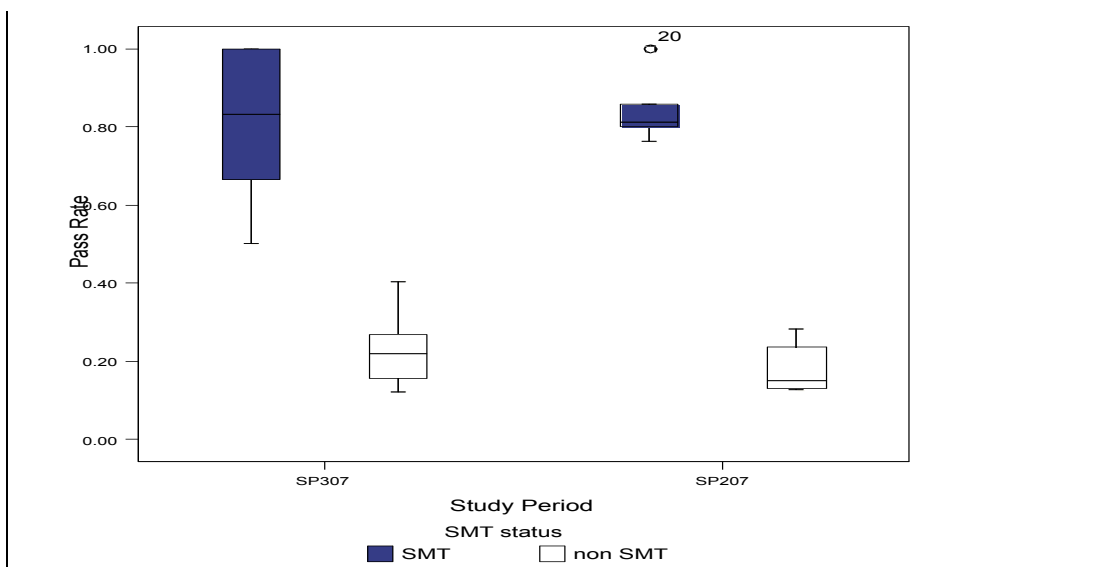
Note: phi significant $p=0.000$

Figure 11: Comparing retention patterns

As can be seen the retention patterns between users and non-users of Smarthinking vary significantly with 93% ($n=959$) of those who used Smarthinking continuing their studies at OUA compared to 81% ($n=7884$) of those who did not use the service. Further deferral rates of 3 % ($n=30$) and withdrawal rates of 4 % ($n=37$) were lower for users as opposed to non-users with deferral rates of 10 % ($n=1005$) and withdrawal rates of 8% ($n=801$).

The higher retention rate should be treated cautiously as it might be due to a number of circumstances such as more opportunities for tutor training in online teaching through OUA's Online Student Centered Discussion (OSCD) professional development program; change of staffing, revised curriculum and other such elements that occur as part of normal review and improvement processes both at provider and OUA levels. However, there is enough of a positive tendency indicated to warrant further investigation in a detailed, longitudinal study.

Nonetheless, whilst the findings on retention should be treated cautiously, findings on pass rates indicated a positive correlation also (see Figure 12)

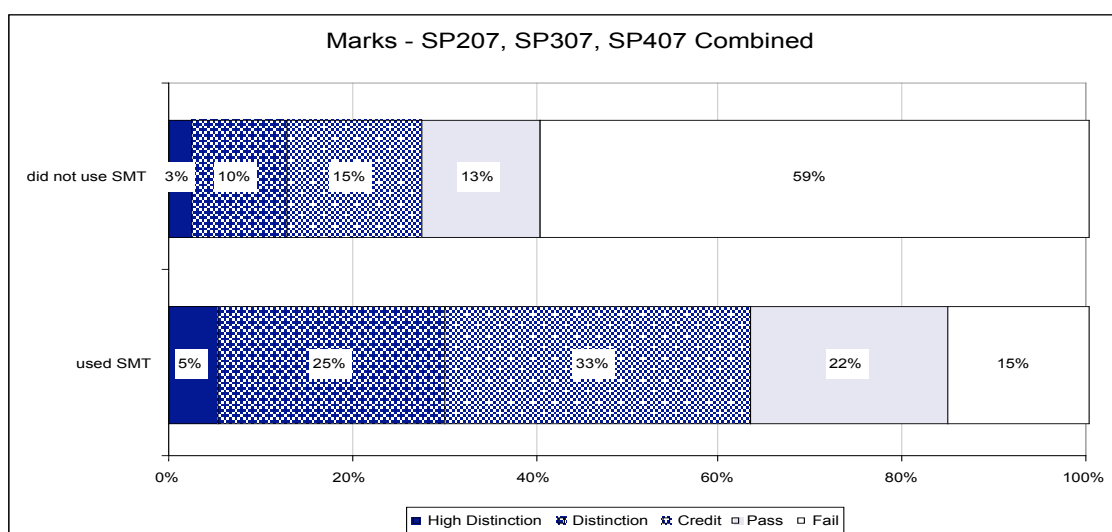


Note: At the time of data analysis complete data for study period 4 was not available

Figure 12: Completion rates per study period

The results of a box plot analysis indicate that the proportion of students who complete their studies is higher amongst users of Smarthinking than non-users. A paired T-test confirms significant difference between SMT users and non-users ($p<0.000$). However, there is no significant difference ($p>0.05$) between study periods. Data suggests SP207 achieved the same pass rate at SP307.

Positive indications regarding student and tutor perceptions of improved drafts and general learning experience through the use of the OWL certainly resulted from survey data as seen earlier. Further analysis was undertaken, specifically, on grades achieved by users compared to non-users to ascertain whether the learning experience was enhanced and outcomes improved. For each study period, the marks of students who used the OWL were significantly higher than for those who did not as indicated in Figure 13.



Note: Kendall's Tau Significant $p=0.000$

Figure 13: Comparing Marks achieved by OWL users compared to non-users

Data was combined over the three study periods and it seems that users achieved higher grades overall than non-users with 30% of users achieving grades of distinction or above as compared to 13% of their non-user peers; 33% achieving a credit score as compared to 15% and 22% compared to 13%. Further less users of the OWL failed their studies during a particular study period than their non-user peers (15% and 59%). Thus, it would seem that students who used the OWL fared better in regards to their grades. Further investigation into the backgrounds of these students and their progress is being continued to better ascertain patterns and to identify if certain cohorts seek out OWL assistance over others.

Conclusion

Certainly, thus far, the findings of the continuing study indicate that students and tutors perceive a value from the guidance received through the Smarthinking OWL. The study set out to investigate student and tutor perceptions of the feedback on student writing to ascertain if it might be a value-added supplementary service to OUA delivery. The OWL seems to provide a level of individualised tutor feedback that students would not have access to otherwise and that it complements the mainstream teaching that occurs in the units. The feedback focuses on areas of writing composition that permit students to develop their understanding of writing process further to enable them to develop as academic writers and learners. The study also aimed to investigate any impact on retention, completion and grades achieved by students who used the OWL compared to peers who didn't. Thus far the findings indicate a positive correlation however, the trial is continuing in 2008 to include the complete range of services offered by Smarthinking and to provide access to longitudinal data upon which to investigate study aims.

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