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Engaging first year students in skill development: A three-way collaborative model in action

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Recent discussion about engaging first year students calls for more collaboration in terms of adopting a holistic approach to course delivery. This paper reports on an intervention that explores the impact of collaboratively teaching information literacy and academic skills in the first year Business program at the University of the Sunshine Coast (USC). The intervention has emerged from a three-way collaborative model, involving the Faculty Teacher, the Skills Advisor and the Librarian, which was developed to improve students' skill levels. Blended skills sessions were integrated into lectures and delivered in conjunction with assessment tasks to contextualise the relevant skills being demonstrated. Students' perceptions about their academic and information literacy skills were surveyed before and after the intervention presentation to help raise individual awareness about skill levels, and to measure changes in these perceptions. Survey analysis demonstrated an improvement in perceptions about skills and the skill processes. By illuminating the link between the writing and research process and the course content, the intervention has promoted student and faculty accessibility to the Library and Academic Skills services and fostered better collegial relationships. Findings also support the value of the three-way collaborative model as a framework for facilitating first year engagement with skill development.

Key Words: student engagement, academic skills, research skills, intervention, collaborative instruction, integrated, embedding.

1. Introduction

Recent discussions about the First Year Experience (FYE) advocate that in order to engage students, course delivery needs to be reconceptualised in terms of a holistic approach involving both academics and support staff (Kift & Nelson, 2005; Kift, 2009). Skill development in the use of information literacy and academic skills is seen as an important factor which impacts on the persistence of first year students (Lawrence, 2005; Tinto & Pusser, 2006; Gibson, 2007). In response to the observation that these skills are often provided in an unrelated way, the Librarian and Academic Skills Advisor joined forces to provide a better model of support for

Business faculty students. By promoting a collaborative relationship with faculty, a three-way model was developed.

This paper investigates an intervention that has emerged from this model. It explores the value of collaboratively instructing research and academic skills in four first year Business subjects. The benefits of embedding skills and developing working partnerships between skills support and faculty has been documented (Tinto & Pusser, 2006; Cochrane, 2006; Hattie, Biggs, & Purdie, 1996). However, the shared territory between teaching academic and research skills has received limited attention. Results from a small number of Australian and New Zealand Universities have suggested that embedding collaborative instruction can lead to higher pass marks and greater retention (Hammill, 2007; Bordonaro, 2008; Huerta & McMillan, 2004). Literature also explores the common ground between Skills Advisors and Librarians and presents arguments for merging the provision of support (Mahffy, 2008; Elmborg, 2003; Peacock, 2008; Sheridan, 1995). To date, however, there are limited studies that explore the value and practice of teaching these skills in an integrated manner.

An intervention is defined by Hattie, Biggs, and Purdie (1996) as a supplementary instruction provided by an outside instructor, which departs from the usual teaching of the subject and aims to improve performances to go beyond content learning itself. The type of skills, which interventions generally aim to develop, has been divided into three types in the meta-analysis conducted by Hattie et al.: first, *cognitive* skill interventions aim to improve task related skills often applied through learnt strategies; second, *meta-cognitive* skill interventions aim to improve self-management skills, such as planning and monitoring when and how to use strategies; and third, *affective* skill interventions involve developing non-cognitive aspects important to learning such as motivation. A similar division of skills is reflected in a recent study of embedding skills into first year curriculum to improve graduate capability. Although highly interrelated, Kift (2002) divided such graduate skills into attitudinal, cognitive, communication and relational skills, in which both research and academic skills can be seen threaded throughout.

The intervention at the University of the Sunshine Coast (USC) involved four integrated skills sessions, which were customised by the Skills Advisor and Librarian for the specific assessment tasks of each subject, and co-taught in the Faculty teacher's lectures. Surveys were gathered and interviews conducted to collect evidence about the perceived benefit of embedding collaborative skill instruction into first year course design. As this intervention aimed to foster meta-cognitive skill development, a survey gathered perceptions before and after the intervention. Firstly, the emergence and theoretical basis of the three-way collaborative model that has developed at USC will be discussed, followed by an outline of the stages of the intervention and evaluation of data gathered from the surveys and interviews that followed.

2. Emergence of a three-way collaborative model

There are different approaches to the role of support skills and collaboration with faculty. These partnerships often involve tensions and can change in nature and role due to external and internal factors (Hicks, 2005). Jones, Bonanno, and Scouller (2001) argue that reflection on role and the partnerships created through collaboration between Faculty Teacher, student and Skills Teacher is integral to the understanding of best practice. It was reflection on the provision of service and the role played by the Librarian and Skills Advisor at USC which led to the visualising of an improved model of involvement with the faculty.

Much literature and discussion has explored the manner of collaboration between Skills Teachers and Faculty Teachers. A useful taxonomy has emerged from this literature of the three levels of cooperation Skills Teachers experience with Faculty Teachers (Dudley-Evans, 2001). The first level is cooperation, where the Skills Teacher seeks information from the faculty about the course content and assessment tasks. The second level is collaboration, where the Skills Teacher and Faculty Teacher work together to devise support classes which run concurrently with the course. The third level is team teaching, where the Skills and Faculty Teachers co-teach

in the same space. These different collaborative approaches may be viewed as sitting on a relationship continuum. Historically at USC, the provision of support by the Librarian and Skills Advisor had been mostly at the co-operation and collaboration level, where skill support would be offered in add-on adjunct classes that often only the more enthusiastic students would choose to attend. The value of providing skill instruction as an intervention, as opposed to providing it as an add-on or a generic all-purpose study skill, is supported by recent literature, as it can be immediately applied to the specific course (Tinto & Pusser, 2006). In addition, Wingate (2006) asserts a need to eliminate separate study skills sessions as these were argued to be an ineffective way to enhance student learning. To move away from these generic skills sessions and in an effort to foster a move towards the third level of faculty co-operation, that of team teaching, a three-way collaborative model was developed to include elements of team teaching. This shift towards a co-productive relationship by both Skills and Faculty Teachers is advocated in a paper by Lee, Baynham, Beck, Gordon, and San Miguel (1995). Through initial three-way collaborative meetings between the Faculty Teacher, the Skills Advisor and Librarian, a common desire was identified to find better ways to promote students' meta-cognitive skill development, to improve their self-management skills and accessibility to skill support services.

The intervention discussed in this paper is the result of the Librarian and Skills Advisor visualising a three-way collaborative model. This model represents the collaborative and instructional role and relationship between the Skills Advisor, the Librarian and the Faculty Teacher, as shown in Figure 1. The block arrows represent the two-way connection and communication that each participant has with the other. Each participant's involvement is represented by a colour: red for the Faculty Teacher, blue for the Skills Advisor and yellow for the Librarian. These communications involve discussions, planning and the referral of students, who are advised to access other participants in the model. The block arrows also represent the results of these interactions, such as support sessions, consultation advice, and the sharing of information and feedback. The student is central in this model, as the communications, results and involvements by participants are instigated by a desire to support and engage them. Therefore, the student, as represented by the central triangular section, overlaps with the block arrows.

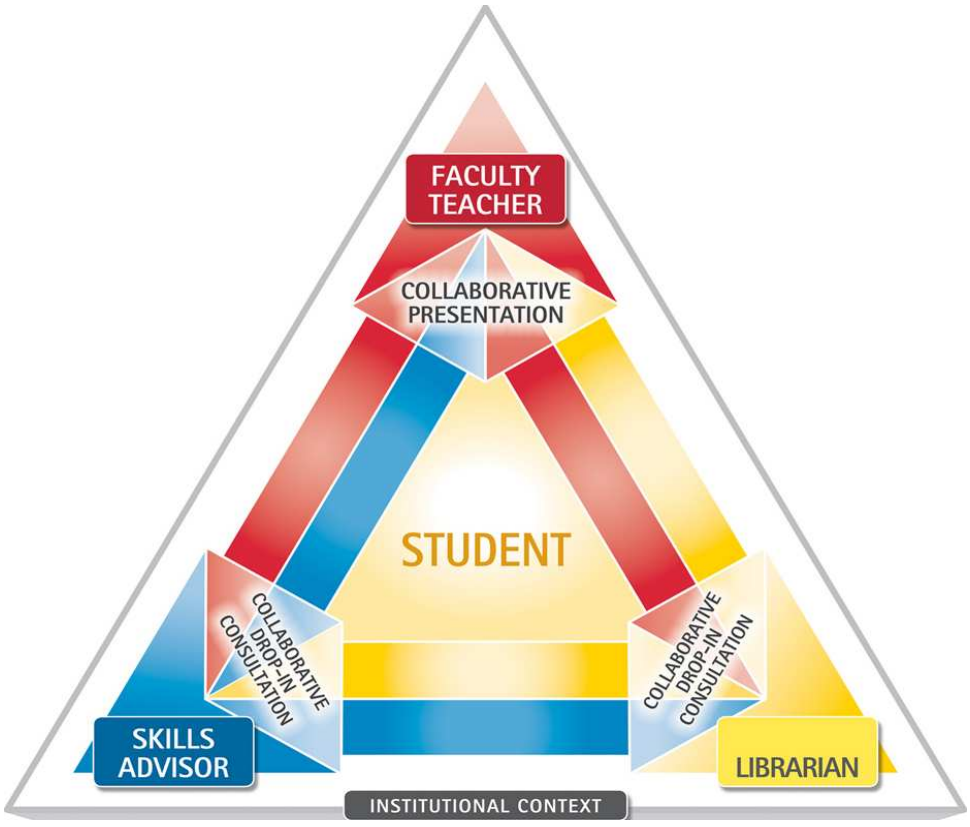


Figure 1. The three-way collaborative model.

This paper explores an intervention, which incorporates a collaborative presentation delivered in the lecture and is shown in Figure 1 as the result of all three participants coming together in one place. Another place where the three participants come together in a collaborative manner is to provide a drop-in consultation service to students within a meeting room provided by the faculty. This service has been established as an opportunity for students to gain one-on-one advice on assessment tasks in a space where both the Skills Advisor and Librarian (and at times the Faculty Teacher) would be available. All participants have encouraged students to access this collaborative drop-in consultation service as a follow on from the lecture presentation.

3. The connection between information literacy and academic literacy

Before discussing the nature of the skills intervention, it is important to explore some of the key participants in the model and the theoretical basis for linking them in this collaborative model. The three-way model is founded on an overlapping of aims in the provision of information literacy (research) and academic literacy (academic skill support). Both academic literacy and information literacy have a specific discourse and are guided by teaching and learning strategies developed over time in evidence-based practice. Each exists within a specific professional field, which is bound by specific qualifications and expertise in that discourse (Peacock, 2008). Even though the discourses for both these skills notionally overlap, a curious disconnection between Librarians and Skills Advisors has been evident. Both these support areas usually sit outside the academy and are disassociated from each other in terms of content, development, delivery and student engagement (Elmborg, 2003; Peacock, 2008). Fister (1992) refers to this as an invisible intellectual wall between those who teach students to write and those who teach students to research. By exploring the way these different skill areas are defined by theory and understanding what they have in common, the potential there is for collaboration can be demonstrated.

Information literacy has been defined by Bundy (2004) as knowledge and behaviour which is supported by fluency with information technology, sound investigation methods, and critical discernment and reasoning skills. The nineties saw the creation of models, such as Kuhlthau's (2004) information search process and the seven pillars model (SCONUL), which organised information literacy into a developmental process: recognising an information need, determining ways of addressing the gap, constructing search strategies, locating and accessing information, comparing and evaluating it, organising, applying and communicating it, synthesising and creating a new product based on it (Gibson, 2007). Gibson raises the importance of collaboration among academic professionals to promote information fluency due to the unpredictable nature of the technology environment which students are expected to research in. Recent literature advocates the importance of looking beyond the "skills inoculation" model of instruction to a more robust "viral" model of information literacy which encourages life-long learning beyond university study (Elmborg, 2003; Peacock, 2008; Hughes, Bruce, & Edwards, 2007).

Academic literacy involves knowledge, concepts and skills that address study effectiveness and academic achievement. Academic literacy is generally considered to be a learning process that focuses on language as a key building block of knowledge and writing as a way of learning, expressing and thinking (Peacock, 2008; Jones et al., 2001). Like information literacy, academic literacy is a process-to-product model with a genesis in constructivist learning theory (Kift & Nelson, 2005). Such process stages generally include: brainstorming, planning, outlining, organising, synthesising, citing, revising and proofreading (Bordonaro, 2008). While academic literacy places an emphasis on constructing content in the written form, information literacy puts emphasis on finding and using information effectively. Both skill areas have a recursive element, where process stages may need revisiting, and both rely on the use of critical thinking to apply mechanical skills successfully (Bordonaro). Most importantly, both information literacy and academic literacy emphasise the means to an end, not just the end itself, and it is in this focus on process that a clear connection between the teaching of research skills and academic skills has been founded.

4. A process to product focus

In a paper about blending academic skills and research skills in terms of service provision at QUT, Peacock (2008) argues that there is good reason to link these groups, as both focus on product and process and share aspirations that address academic efficiencies, retention and success. Elmborg (2003) makes comment that both these professional groups tend to work with anomalous status in institutions that underestimate the practical concerns of writing and researching for undergraduate students. Bundy (2004) suggest that there is need to reinvigorate the discussion about the writing process and how the search for information is shaped by that process. Equally, questioning what it means to be a writer has moved the emphasis away from the mechanics of writing toward the facilitation of an unfolding process (Bean, 2001). In a case study of first year legal education students, Kift (2002) demonstrates that attitudinal, cognitive, communication and relational skills are all interconnected and she argues that it is important to make explicit the incremental path of skill development. It would then seem logical that a merging of teaching research and academic skills should occur in the teaching arena; thus, students gain exposure to these skills as interconnected processes crucial in the production of a quality assessment task.

5. Engaging first year students

Central in the three-way collaborative model are students and an aim to engage them in both research and academic skill development in conjunction with their content learning. There has been much discussion about the impact of the first year experience on student persistence and mastery of university study. The theory around student engagement has influenced the planning and evaluation of this intervention. The development and application of the three-way collaborative model has been influenced by recent literature advocating a holistic approach (Kift, 2009; Carini, 2006; Lawrence, 2005). First year experience theory argues that in order to engage students, course delivery needs to be approached as a integral component of a model of institutional action which brings together faculty, academic, administrative and support programs (Tinto & Pusser, 2006; Kift, 2009). In order to engage students, it is important to understand them. First year students have special learning needs due to the social and academic transition they are experiencing. All students are on a journey, starting from different points, to becoming self-managed learners (Kift & Nelson, 2005). The diversity and complexity of students' profiles is pointed out by Kelly (2003), who nominates different levels of student learning skills and attitudes as variations in: academic language skills; study skills; confidence to participate; English language skills and numeracy; motivation to study; and prior knowledge and skills in a discipline. Lawrence (2005) suggests that a response to this has been the so-called "deficit" approach, where the focus has been on fixing problems generated by diversity. She challenges this approach and aims to generate new ways of thinking about the first year experience by proposing a framework for student engagement and mastery. This framework visualises first year transition as a process of negotiation of discourses and literacies and perseverance on the journey to mastery (Lawrence, 2005). The focus is to move away from remedial assistance, and "fixing" those in need, as in the deficit approach, to one of facilitating all students' familiarity with the engagement process (Skillen, 2006). Based on this approach, it is important to expose all students to literacy support, regardless of what point they are at in terms of their skill development and this can be promoted through a skills intervention.

The desire to engage students in understanding and thinking about their personal skill level prompted collaboration by the Librarian, Skills Advisor and Faculty Teacher. An intervention was jointly planned for each first year Business course after discussions were held between the three participants. During planning with faculty, it was confirmed that a blended skills presentation should be delivered in the lecture to all students, rather than offered as an add-on class which students could choose to attend. As demonstrated in the three-way collaborative model (Figure 1), the intervention was designed by the three participants and involved the following stages:

1. A meeting of all three participants, Faculty Teacher, Librarian and Skills Advisor, was held to plan the intervention and talk about the timing, specific content and skills relevant

to the subject that would need to be incorporated into an intervention aimed at preparing students for the assessment task.

2. In the first few weeks of semester, the Skills Advisor and Librarian visited the faculty lecture to promote support services and the collaborative drop-in consultation service available to students throughout semester.
3. The Librarian and Skills Advisor collaboratively developed an integrated presentation to demonstrate the research and writing skills process relevant to each subject's assessment task.
4. Surveys were developed to evaluate students' skill perceptions and response to the presentation.
5. In each subject, an intervention presentation was co-taught by both the Librarian and Skills Advisor and embedded in the lecture delivered by the Faculty Teacher.
6. Interviews were held with each subject's Faculty Teacher after the end of Semester to gain feedback on the intervention and discuss the impact of the three-way collaboration.

6. Planning the intervention

The intervention was designed so that the Librarian and the Skills Advisor co-taught the presentation, which was embedded in the lecture delivered by the Faculty Teacher. The presentation for each subject was carefully timed to correspond with due dates for the students' written assessment task in each subject. The skills intervention aimed to raise awareness about the related nature of the two skill areas, highlighting the importance of approaching research as part of the writing process, as opposed to separate from it. The intervention presentation also aimed to facilitate self-regulated learning and self-evaluation, which are important for producing a quality assessment task (Scouller, Bonanno, Smith, & Krass, 2008). Reflection has been linked to self regulated learning where the learner controls their own learning experiences (Lawrence, 2005). However, self-regulated learning involves more than meta-cognitive knowledge, it involves students' belief in their own capabilities, also referred to as self-efficacy (Tipton & Bender, 2006; Purdie, Hattie, & Douglas, 1996). In addition, the feelings of uncertainty and confusion, which accompany the writing and research process, are raised by Kuhlthau (2004). Therefore, it was considered important to give the students opportunity to reflect on their skill level and sense of anxiety associated with completing the task. Thus, a survey was designed to both evaluate the presentation and help facilitate reflection before and after the intervention, promoting meta-cognitive skill development.

7. Presenting the skills process as a collaborative instruction

After consulting with each Faculty Teacher, the Librarian and the Skills Advisor developed a presentation for each subject, highlighting important aspects of the research and writing process that students would need to apply to produce the assigned written assessment task. As one aim of the intervention was to raise awareness about the interconnected relationship between the two skill areas, the presentation was structured around the blending of both processes. To help emphasise the connected link between the skill areas in the presentation, both the Librarian and the Skills Advisor would instruct on the different skill applications relevant to each slide, and in some cases to the same slide. A process was developed, adapted and integrated with the specific assessment task for each subject. For example, while the Economics subject used an essay with headings and graphs and focused on finding recent newspaper articles for research, the Management subject used a formal report structure and focused on using peer-reviewed journal articles for research. The database suggestions and sample of a paragraph from the written structure were different for these subjects, but both were presented within a similar research and writing process. The presentations generally demonstrated the following blend of research and writing process information and stages:

- Showing an overview diagram representing the skills process for producing the task;
- Getting started by interpreting the instructions and criteria, brainstorming and doing some preliminary research;

- Planning and outlining some initial ideas and findings and developing a research approach;
- Gathering information, accessing relevant databases, performing searches and evaluating sources, such as Web sites, to take notes;
- Organising information, evaluating its relevancy and deciding if more research is needed to fill in any remaining information gaps;
- Writing and structuring a paragraph and demonstrating the citing of sources in a sample;
- Developing a draft into the required format, such as an essay or report;
- Proofreading and checking the task against the criteria, applying the appropriate referencing style and editing for appropriate academic style.

8. Survey

A survey was developed to record student self-perception of skills and changes in perception. Students were asked to respond, using a 7 point Likert scale, to statements describing confidence, knowledge and understanding about different skill aspects relevant to approaching and completing the assessment task. The seven descriptive statements were:

Q1. I am confident about how to start this assessment task.

Q2. I understand the process I need to follow in order to produce this assessment task.

Q3. It is clear to me how the act of searching for sources is related to writing the assessment.

Q4. I know how to find sources I want for my assessment task.

Q5. I understand how to use and reference sources in my assessment task.

Q6. I understand what is meant by *writing academically*.

Q7. I know where to go to get help with my research skills and academic skills.

All students were asked to respond to these statements before the intervention presentation occurred and then again after the presentation had been completed. As discussed, the aim in conducting the survey in this manner was to encourage reflection and gain a sense of where students felt they were before the intervention, and to compare this to how their perceptions had changed to the above skill aspects and approaches in response to the intervention. Table 1 shows the range of first year Business subjects in which the survey and intervention was conducted.

Table 1. Faculty of Business subjects surveyed.

Subject	**Week of presentation**	**Assessment due date & format**	**Total surveys**
Business Law & Ethics	Week 4	Due week 8 - Essay	174
Innovation, Creativity & Entrepreneurship	Week 7	Due week 10 - Report	186
Economics	Week 8	Due week 10 - Essay	176
Managing the Organisation	Week 8	Due week 12 - Report	115
Total			651

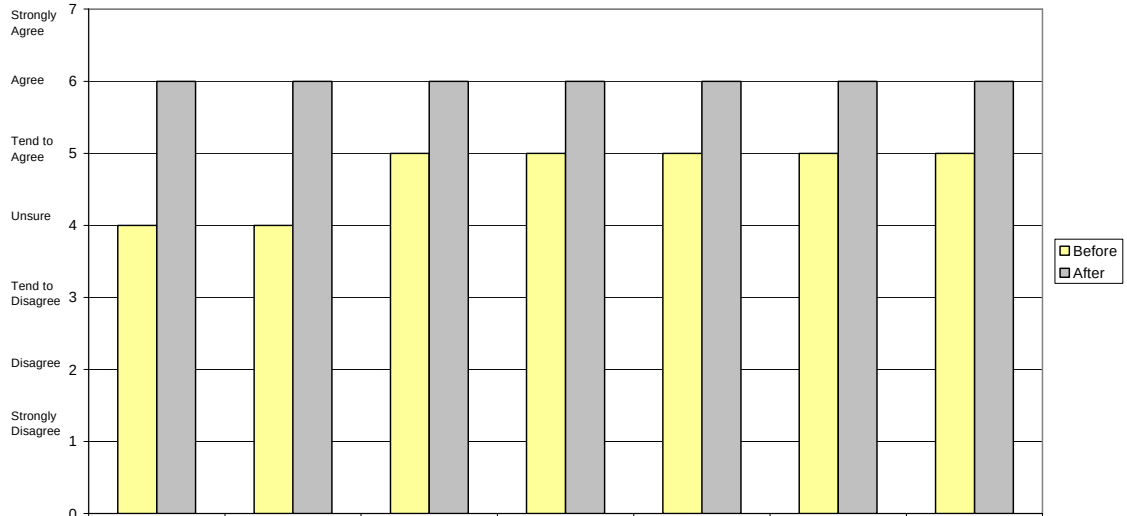
9. Results

9.1. Respondent profile

All students present at the lecture were surveyed and a total of 651 surveys were collected. Female students accounted for 54% of the sample. Most students (73%) were first year students and studying full time (92%). The majority of students were aged 21 years or less (73%) and only 10% of the sample was older than 31 years. International students accounted for 15% of the sample. Half those surveyed were exposed to at least one other skills presentation intervention in one of the other first year Business subjects involved in the intervention.

9.2. Survey results

Statistically significant differences were observed in the pre- and post-test responses to all seven statements ($p<0.001$). As shown in Figure 2, students who were unsure about how to start, or what process to follow to complete the assessment before the intervention presentation, changed to strongly agreeing with feeling confident to start and understanding how to proceed in order to produce their assessment task. When looking at differences between specific groups and responses to the statements, a significant difference was found between males and females in response to their confidence to start (Q1) in the pre-survey ($df = 6$, $\chi^2 = 18.25$, $p < 0.005$). In addition to males feeling more confident to start than females, before the presentation there was also a significant difference in gender response to knowing how to find sources (Q4) and knowing where to get help (Q7) at the beginning of the intervention. Males were also more likely to feel they knew where and how to find sources but females were more certain about where to get help before the presentation. The only other significant difference found when comparing specific groups (eg. Non-English Speaking Background, International, Gender, Age) to statement responses was in the after survey response to understanding what writing academically means. A significant difference was found between females and males ($p<0.05$), where females were more likely than males to agree or strongly agree with this statement after viewing the presentation.



	Q1 Confident to start the task	Q2 Understand the process for the task	Q3 Understand the research - writing relationship	Q4 Know where to find sources	Q5 Know how to reference	Q6 Understand what academic writing means	Q7 Know where to get help
Before	4	4	5	5	5	5	5
After	6	6	6	6	6	6	6

Figure **2.** A comparison of before and after median responses by students to the seven self-perception statements about skill application and understanding. All before and after differences were significant at $p<0.001$, using the Wilcoxon Test.

9.3. Interview feedback with Faculty Teachers

Interviews were conducted with Faculty Teachers at the end of the semester to obtain feedback on how the students responded to the intervention and engaged with the support opportunities offered by the application of the three-way collaborative model. The feedback was predominantly positive, although only one Faculty Teacher reported that attendance at the collaborative presentation had resulted in increased assessment scores for those students. The remaining Faculty Teachers concurred anecdotally that there was a direct correlation between improved grades and student attendance at lectures, tutorials, and access to additional support. In addition, there was a consensus that as a large percentage of students only attend the early lectures in each subject, the collaborative presentations should be more carefully scheduled to achieve maximum exposure. As the individual surveys were anonymous and not coded for identification, it was impossible to measure differences in the scores of the students who attended the collaborative presentation with those who did not. An attempt was made to gather comparable data from previous Student Feedback on Course surveys (SFC), but these were not available for all four subjects and it was noted that assessment tasks for previous cohorts had been changed. Therefore, no measurable analysis of scores from previous student cohorts was gained as part of this intervention feedback. However, one Faculty Teacher did report a 20-30% decrease in failure rates in comparison to previous cohorts, but in addition to the inclusion of the collaborative presentation, a change in Faculty Teacher had led to significant amendments to the subject's requirements, which prejudices the validity of this conclusion.

Interviews also considered the challenges associated with identifying specific barriers and enablers for student skill development. Discussion moved from the role of the intervention presentation, to the attitudinal, educational, practical and social influences that impact student learning at USC. The evolution of the faculty drop-in consultation service as having potential for mitigating some of these barriers was a point of interest. It was noted that the drop-in meeting room offered students a "safe space" and students seemed to form connections with their peers, which helps to promote the establishment of valuable peer learning circles. Increasing student self-confidence through task-based learning and creating comfortable spaces where students are confident to ask for help, were other themes that were raised as underpinning the teaching practice of some of the Faculty Teachers interviewed. In these cases, the intervention presentation and drop-in consultation service were seen to be integral elements in this practice. It was felt by some of the Faculty Teachers that their "advocacy" of the skills support services, through promotion, referral and participation in lectures, has contributed to an atmosphere of mutual trust between the Faculty Teacher, Skill Advisor, Librarian and, most importantly, the students.

9.4. Outcomes from interview feedback

A series of changes have been introduced into the four first year Business subjects as a result of the intervention and subsequent discussions. The collaborative presentation slides and additional slides promoting support opportunities will be embedded in each subject's lecture template in an aim to reach students not attending lectures and to demonstrate that the Faculty Teacher is encouraging students to engage with the instruction and support offered by the Librarian and Skills Advisor. The collaborative presentations will be embedded into the lecture schedule earlier in Semester and some Faculty Teachers have expressed a desire for more than one presentation where appropriate. The Skills Advisor and Librarian will explore teaching initiatives that can enhance students' critical thinking and analytical skills, as this was raised as a particular area in need of further attention. The intervention has provided more opportunity for dialogue between Faculty Teachers, Librarians and Skills Advisors and an increased involvement in assessment design and implementation through three-way collaboration is expected in the future. Two of the Faculty Teachers involved in the intervention have started to attend the drop-in consultation service as a direct result of the interview discussions, which has strengthened the three-way collaborative model in terms of demonstrated practice.

10. Discussion

Based on the results from the self-perception survey, it can be said that the intervention presentation helped to raise student awareness of the link between the research and writing process crucial to producing a required assessment task. However, results also indicated that the main impact of the intervention on the students was that it improved students' confidence to start the task and to think about the task as a process. It could also be concluded that the intervention did meet its aims of improving student meta-cognition, as it facilitated students to engage in reflection about their individual skill development. However, interviews with Faculty Teachers indicated that not all students choose to engage in a self-directed journey of skill development. Thus, the limitations of what the intervention presentation was capable of achieving were raised in interviews with the Faculty Teachers. Faculty Teachers suggested that although students' attitudes had improved in their response to the seven skill related statements, this improvement in self-perception did not in all cases transfer to quality assessment tasks. These comments support intervention theory which finds that learning is enhanced by interventions when they not only target meta-cognitive skills, but provide support for that intervention (Hattie et al., 1996). Although the intervention, as seen in the three-way model in action, provided the opportunity for this support in the way of one-on-one consultation opportunities, the final component needed for success seems to be motivation; that is, students need the "will" as well as the "skill" if they are to use the skills they are taught (Pintrich & de Groot, 1990). This means that the raising of students' awareness about their skill level and providing access to enablers for improvement, although critical for developing self-management skills, is also reliant on a students' attitude and willingness to engage in that support or self-directed journey of learning. Survey results also demonstrated some variation in perceptions by gender. In comparison to females, males seem to start with different perceptions about some aspects of their skill level before the presentation occurred. This also supports recent transition pedagogy that places first year students at different starting points and at different stages of skill development. One intention of the intervention was to accept the presence of diverse starting points and perceptions of individual skill levels and to encourage all students to engage with learning about the skilling process as part of their individual journeys. Therefore, the three-way collaborative model promotes a holistic approach to curriculum design, and a move away from the deficit approach, as it is built on an intention to engage all students, as they embark on diverse individual journeys in learning and skill development (Lawrence, 2005; Kift & Nelson, 2005).

In conclusion, the intervention presentation provided a starting point for students to develop better understandings about academic and research skills and offered the opportunity for reflection through the survey. Further research needs to be conducted to ascertain if the impact of the intervention can be linked to improved skill levels in the assessment task, and if such improvement can be predominantly attributed to a specific instruction or support provided to students. Other benefits which have been gained from the intervention have been a fostering of better collegial relationships and the opening of channels for future consultation between Faculty Teachers, Librarians and Skills Advisors. In response to current literature, and based on feedback about the intervention, it can be said that the three-way collaborative model in action provides skill improvement opportunities to motivated first year students.

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