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Interteaching: Dissemination and Evaluation across three RMIT Colleges

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Strategic objectives addressed: Transforming the student experience

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1   Executive summary

Based on the success of Interteaching within Developmental Psychology in the School of Health Sciences in 2010 and 2011, the aim of this project was to disseminate and evaluate Interteaching across the three Colleges at RMIT University.

Interteaching is an innovative teaching model designed to support student engagement and greater depth of learning. It includes guided independent learning, student-paced small group tutorial discussion, and brief lectures that are developed in response to student feedback. A distinctive feature of the model is that tutorials precede lectures as a way of consolidating the concepts that students need most direction on (Boyce & Hineline 2002).

The dissemination project began in semester 1, 2012 with a consultation process to adapt the model, evaluation methods, and teaching resources to fit with the needs of each course involved in the project. This involved consultation between the project leader and team members who coordinated courses in each College. To support coordinators, lecturers, and sessional staff, a dissemination model was designed, implemented, and evaluated. Student outcomes were also evaluated. The dissemination project was a success, with the Interteaching model implemented and evaluated in in 5 courses across SEH, DSC, and Business in semester 2, 2012. The Interteaching model was positively received by students in 4 of the 5 courses and improvements were also observed in student engagement, self-efficacy, and learning. Overall, outcomes from the evaluation were very positive and support further dissemination of the Interteaching model across RMIT. Important interdisciplinary linkages emerged as a result of the project, increasing the likelihood of sustaining the model in future. Further dissemination of the teaching model is planned for 2013, and results of the evaluation will be presented at conferences and published in peer-reviewed journals.

2   Outcomes

- Dissemination of the Interteaching model within five disciplines across the three Colleges at RMIT University in 2012.
- Development of sustainable tools for learning within the target courses involved in the project, including 'podules' (online podcast modules) of content typically delivered during face-to-face lectures.
- Report on the adaptation, implementation, and evaluation of a teaching model that can be used to enhance the teaching of large classes across the university.
- Increases in student satisfaction, engagement, and learning in courses involved in the project.
- Increased understanding of the needs of students based on feedback, which is likely to result in continued improvements across courses in future.
- An evaluative research study, with sufficient data to be developed into at least one research paper and submitted to a peer-reviewed L&T journal in 2013.
- Plans to present the findings at the *Accounting and Finance Association of Australia and New Zealand (AFAANZ) Conference* in April, 2013
- Plans for further dissemination of the Interteaching model to the Accounting Department, RMIT University Vietnam campus in 2013.

3 Project outcomes and impacts

The Interteaching model is an innovative new approach to learning and teaching designed to support student engagement and greater depth of learning. Interteaching includes guided independent learning, student-paced small group tutorial discussion, and brief lectures that are developed in response to student feedback. A distinctive feature of the model is that tutorials precede lectures as a way of determining which concepts students need most direction on (Boyce & Hineline 2002). Support for Interteaching as an effective L&T model comes from both descriptive and experimental studies (Saville, Zinn & Elliott 2005; Saville et al 2006).

In 2010, the Interteaching model was successfully implemented and evaluated within Developmental Psychology in the School of Health Sciences, SEH. This was the first time this model was implemented and evaluated at RMIT. The efficacy of the approach was very positive, with significant improvements in student satisfaction, engagement with learning, and academic outcomes. Building on the student-driven nature of the Interteaching model, the model was adapted in 2011 to incorporate a series of online podcast modules (*podules)* to replace face-to-face lectures in Developmental Psychology. This served two purposes: (a) to increase flexibility of access to materials, and (b) to create renewable resources. This adapted model was successfully implemented and well-received by students.

The success of the Interteaching model within Developmental Psychology in 2010 and 2011 provided a strong case for further dissemination of the teaching model within RMIT in 2012. To determine whether the model could be successfully adapted to suit the diverse range of courses and student cohorts at RMIT, LTIF funding was sought to implement and evaluate the Interteaching model within six Schools representing each of the three RMIT Colleges. Due to unexpected changes in staffing and teaching commitments, the final team members and target courses included in the project changed from those originally proposed. Importantly, the project was successful in implementing and evaluating the Interteaching model in 5 courses across SEH, DSC, and Business. It was expected that the implementation of the Interteaching model within these other programs would lead to increased student engagement, satisfaction, and learning outcomes. The project also aimed to evaluate the dissemination process.

The project began in semester 1, 2012 with a consultation process to adapt the model, evaluation methods, and teaching resources to fit with the needs of each program involved in the project. The Interteaching model was implemented and evaluated in each course in semester 2, 2012. The project was conceptualised as being comprised of 5 phases: training, adaptation, implementation, evaluation, and further dissemination. The first four phases are described in this section. The dissemination strategies and outputs are described in section 4.

3.1 Training

Early in semester 1, the project leader developed a training model in consultation with the project team members. This included the provision of training for all project team members and other teaching staff early in semester 1. This training focused on the L&T methods central to the Interteaching model, and was designed to prepare teaching staff for the Adaptation and Implementation phases of the project. Prior to semester 2, sessional staff were offered further training to prepare them for the Implementation phase. In addition, to support teaching staff during the Adaptation and Implementation phases of the model, an online community of practice was established using Blackboard. The most challenging aspects of the training phase was organising meetings and training sessions with staff from a range of disciplines across two campuses. Despite these challenges, the training was successfully implemented.

3.2 Adaptation

Early in semester 1, the project team established a process for adapting the Interteaching model to meet the needs of each program. This involved consultation between the project leader and team members who coordinate the selected courses in each program. The specific adaptations to the model varied across programs, and were dependent on the L&T methods usually applied in the specific course, the course structure, and needs of the student cohort. This consultative process resulted in a set of sustainable learning, assessment, and evaluation tools to suit each program's needs. Informal discussion with team members suggests that the adaptations made were appropriate and ideas for further refinement have already been proposed for 2013. Opportunities will be offered in 2013 to discuss further refinements of the model in the courses targeted in the 2012 project, and application to other courses as appropriate. It is expected that all courses will continue with the Interteaching model with improvements based on staff experiences and students feedback received in 2012.

3.3 Implementation

In semester 2, all project team members delivered their course with the proposed adaptations. Team members and other teaching staff continued to receive support during the implementation phase. Support was provided throughout the semester through a range of media. This included provision of resources via Blackboard and ongoing encouragement and advice through meetings, phone calls, and emails as needed. To develop a deeper understanding of the adaptations made in each course and to provide peer feedback to teaching staff, the project leader requested permission to observe one class from each course. All participants accepted this opportunity and observation was followed by feedback, encouragement, and advice as needed. Informal feedback from team members suggests that the feedback and encouragement was helpful. The success of the implementation was evaluated using the methods described in section 3.4.

3.4 Evaluation Results

3.4.1 Evaluation framework and research design

A combination of survey and focus-group methods were planned to collect quantitative and qualitative data from students and teachers across the 5 courses.

A single-group pre-post (non-experimental) design was used to evaluate the impact of the Interteaching model on student engagement with learning, academic self-efficacy, and student learning style preferences. Repeated measures t-test analyses were used to assess change from pre- to post-test (i.e., from the beginning to the end of semester). Additional participant satisfaction data was collected at the end of semester. It was expected that the Interteaching model would result in increases in student engagement, satisfaction, academic self-efficacy, and a deeper rather than a surface approach to learning.

The research evaluation was approved by the RMIT Science Engineering and Health (SEH) College Human Ethics Advisory Network (CHEAN).

3.4.2 Participants

Participant information is displayed in Table 1 presented separately for each course included in the evaluation. While there is some variation across discipline areas, the majority of participating students were female, aged between 18-30 years, and Australian born. Many students reported that they spoke a language other than English at home.

Table 1. Participant demographic information presented separately for each course sample included the evaluation.

Course name	No. students enrolled	N (pre)	N (post)	Complete sets of pre-post data	F; M	Age range (years)	% Aust. born	% LOTE
Ethics in Professional Accountancy	35	18	12	9	10; 8	21 - 23	77.8	66.7
The BIS Professional	23	11	17	6	1; 10	20 - 27	81.8	36.4
Human Physiology 2	400	71	54	19	37; 34	18 - 49	62.0	49.3
Research Methods for Medical Radiations	137	91	64	55	56; 34	18 - 47	70.3	51.6
Promoting Health Education	170	75	83	50	64; 11	20 - 39	89.3	18.7

Notes: F; M = no. of female and male participants in the pre-test sample; LOTE = Language other than English spoken at home.

At the end of semester, an additional 91 participants volunteered to complete the post-survey. As these students did not complete the pre-survey, and demographic information was collected on the pre-survey only, demographic information for these additional participants is not available. Further, they are not represented in those analyses investigating change across the semester. As these students did provide information at the end of semester regarding their engagement with Interteaching, whether they believed they learned more with Interteaching, and their satisfaction with Interteaching, the data from these additional participants is included in this report.

3.4.3 Measures

All survey measures (except the satisfaction survey) were completed at the beginning of semester 2 (pre-test). All measures except the demographic survey were completed by students at the end of semester 2 (post-test).

Demographic data

To determine the representativeness of the sample, a range of demographic information was collected from participants, including age, gender, degree enrolled in, country of birth, and use of a language other than English.

Student identification numbers were collected from participants so that pre and post data could be matched for data analysis. All participants were provided with a research code. This research code was matched with student numbers in a password-protected data file and accessed only to de-identify survey data by replacing the student number with the appropriate research code.

Student Engagement

A five-item survey was designed by the researchers to assess participants' engagement in their own learning. These items ask participants to report how often they have engaged in a range of learning experiences including, reading, assignment work, preparing for class, working with other students outside class time, and class discussion. This is a general measure of engagement with learning, and was not specific to the course in which Interteaching was implemented. Participants respond on a 5-point scale ranging from "not at all" to "very often". At post-test, students also reported on how engaged they were during tutorials (i.e., enjoyment, level of interest, interaction)

when using the Interteaching model compared to the standard model. This attitude item was rated on a 5-point Likert scale.

Learning Outcomes

One item was included in the student survey to evaluate students' perceptions of their academic progress. This items asks: "How are you progressing with your studies in comparison with what you anticipated?" and participants respond on a three point scale where 1 indicates "better", 2 indicates "about the same" and 3 indicates "not as well". In addition, another item was included at post-test to assess whether students believed they learned more or less using the Interteaching model compared to the standard teaching model. This attitude item was rated on a 5-point Likert scale.

Academic Self-efficacy

The Academic Behavioural Confidence scale (ABCS) (Sander & Sanders, 2006) was designed as a specific measure of academic self-efficacy. It was used in the current study to evaluate change in participants' confidence for managing academic tasks. The scale is comprised of 24 items and is rated on a 5-point scale ranging from "very confident" to "not at all confident". Factor analysis suggests that the ABCS measures six factors: confidence in the areas of studying, understanding, verbalising, clarifying, attendance, and grades. The scale has adequate psychometric properties and a total ABCS score has been used to distinguish between different student groups (Sander & Sanders, 2006).

Learning Style Preferences

The Study Process Questionnaire Revised (R-SPQ-2F (Biggs, 2001) was used to measure student learning style preferences. The scale measures two main learning approaches, deep learning and surface learning. Each of these scales has a motive and a strategy subscales, making a total of 4 subscales: deep motive, deep strategy, surface motive, and surface strategy. A deep motive approach is one where a student finds the learning content intrinsically motivating; a deep strategy approach is one that maximises long-term learning; a surface motive approach is one aimed at learning just enough to avoid failing; and a surface approach involves rote-learning information that will be examined.

Student Satisfaction

At post-test, students completed a survey that was specifically designed to gather information about students' attitudes towards the Interteaching model. Students rated on a 5-point Likert scale their preference for the Interteaching model.

Student Feedback on the Advantages and Challenges of Learning Using the Interteaching Model and Suggestions for Improvement

At the end of semester, students were asked to report on the advantages and challenges of learning using the Interteaching model. They were also asked to offer suggestions for improvement in future iterations of the teaching model. An open-ended response format was used to collect this information.

3.4.4 Results and Discussion

In this section, the results are presented separately for each course in tabular and graphical form, and the trends in the outcomes across courses are summarised in the text. As results varied across courses, this was considered a more appropriate way to present the data. Pre-post changes in self-reported student engagement, learning outcomes, academic self-efficacy and preferred learning style were analysed using repeated measures *t*-tests. The results from these

analyses are summarised in Tables 2 through 6. Students reports of their engagement with Interteaching, whether they believed they learned more with Interteaching, and their satisfaction with Interteaching compared to the standard model of teaching are presented in Figures 1 through 15.

Student engagement

Table 2 summarises changes in student's perceptions of their general engagement with learning between the beginning and end of semester. Where changes in engagement with learning were observed, these changes were improvements. Improvements in engagement with learning were observed in two of the courses.

Table 2. Pre-post change in student engagement presented separately for each course included in the evaluation.

Course name	Change	Size of effect and statistical sig.
Ethics in Professional Accountancy	Increase	Large*
The BIS Professional	No change	-
Human Physiology 2	No change	-
Research Methods for Medical Radiations	No change	-
Promoting Health Education	Increase	Moderate*

Notes: * = statistical significance ($p > .05$); Effect size = Cohen's d

Figures 1 through 5 display the results individually for each course for the post-survey item asking students how engaged they were with the Interteaching model compared to the standard model. Overall, the results suggest that the teaching model was successful in increasing students' engagement with learning. In four out of the five courses, the majority of students (ranging from 62.5 to 80.6% across the 4 courses) reported that they were "somewhat more engaged" or "much more engaged" with Interteaching compared to the standard model. Importantly, despite the less favourable results for the *Human Physiology 2* course, a large number of students (40.4%) reported being "much more" or "somewhat more" engaged with the Interteaching model compared to the traditional model.

Examination of students qualitative statements reported on the post-test survey also indicated greater engagement with learning. Student-reported advantages of the Interteaching model over the standard model included:

> *Greater student participation, so it is more interesting and engaging for students.*

> *Keeps me much more engaged and looking forward to class.*

> *Keeps me motivated and more focussed.*

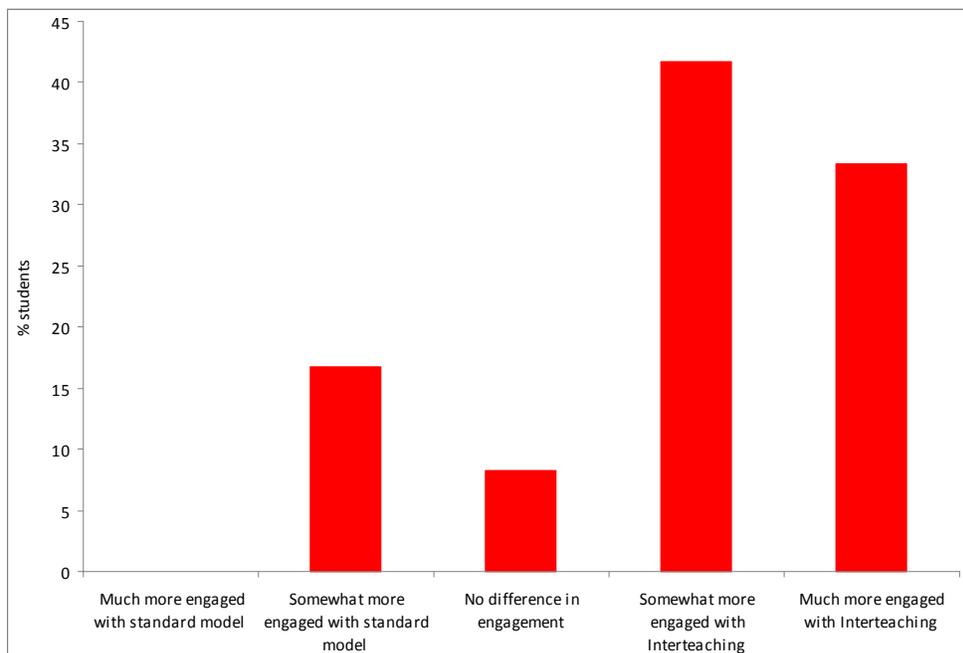> *More engagement with class members and more interactive learning.*

Figure 1. Student responses on the post-survey item asking how engaged they were with the Interteaching model compared to the standard model (*Ethics in Professional Accountancy*).
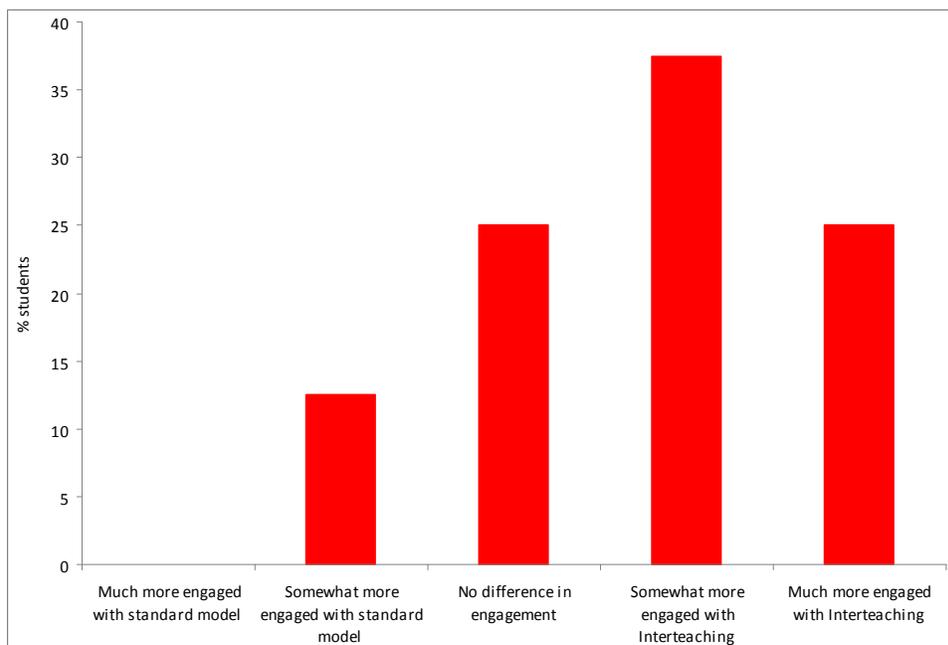

Figure 2. Student responses on the post-survey item asking how engaged they were with the Interteaching model compared to the standard model (*The BIS Professional).*
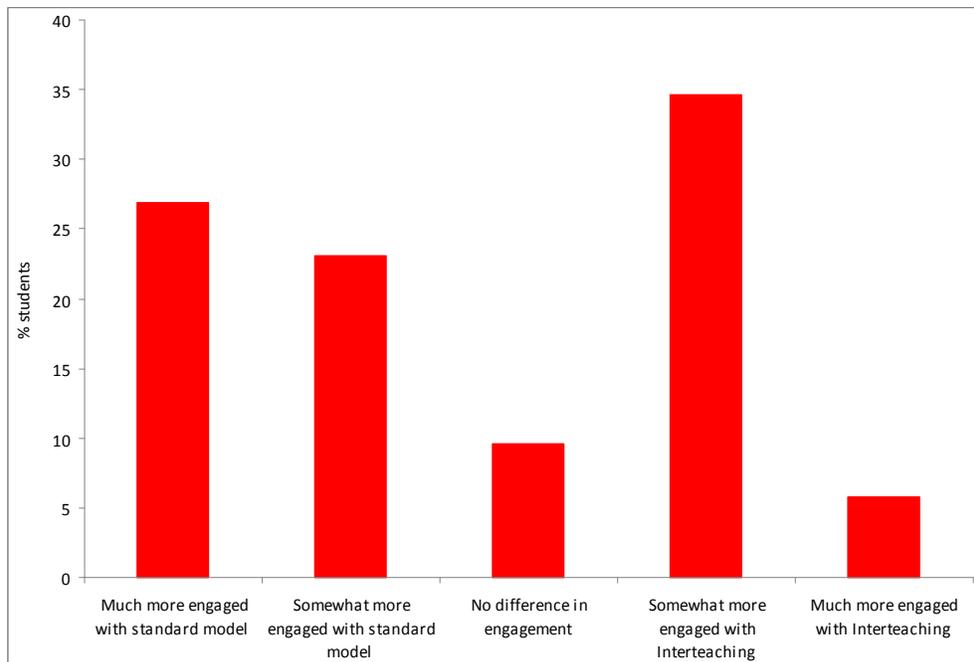
Figure 3. Student responses on the post-survey item asking how engaged they were with the Interteaching model compared to the standard model (*Human Physiology 2*).
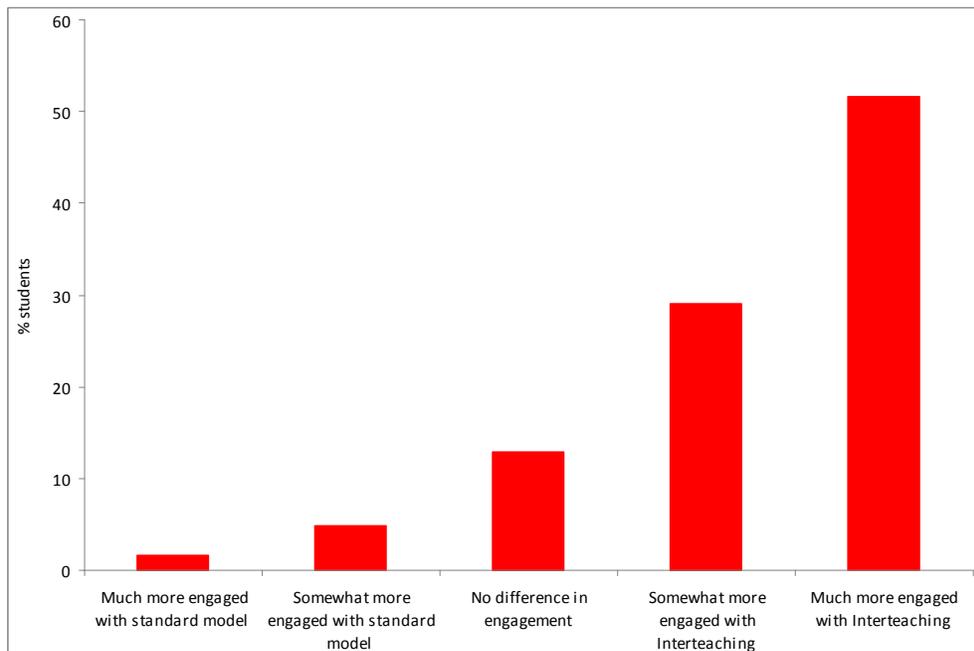

Figure 4. Student responses on the post-survey item asking how engaged they were with the Interteaching model compared to the standard model (*Research Methods for Medical Radiations*).
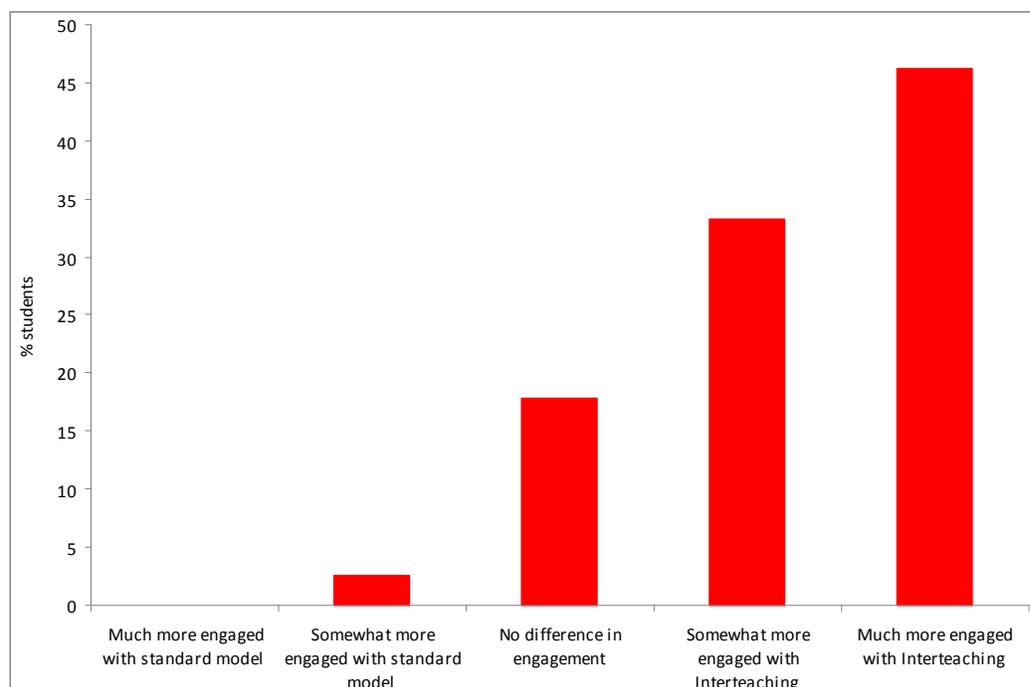
Figure 5. Student responses on the post-survey item asking how engaged they were with the Interteaching model compared to the standard model (*Promoting Health Education).*

These results suggest that the majority of students experienced Interteaching as more engaging compared to the standard teaching model usually used to deliver their courses. Further, in the *Ethics in Professional Accounting* and *Promoting Health Education* samples only, students reported greater engagement with a range of learning experiences (e.g., reading, assignment work, preparing for class, working with other students outside class time, and class discussion). While this measure is not specific to the course in which Interteaching is taught, Interteaching focuses on motivating students to increase their engagement in these activities, so it is possible that these changes are due, at least in part, to implementation of the Interteaching model. It is unclear why this change was not observed in the other student groups. It may be that students' overall engagement did not increase in the other groups, but rather their engagement shifted from other courses towards the Interteaching course to meet the workload demands. This would need to be examined in future projects.

Learning outcomes

Table 3 summaries change in student's perceptions of their academic progress between the beginning and end of semester. In four of the five courses, moderate to large improvements in students' perceptions of their academic progress were observed.

Table 3. Pre-post change in academic progress presented separately for each course included in the evaluation.

Course name	Change	Size of effect and statistical sig.
Ethics in Professional Accountancy	Increase	Large*
The BIS Professional	Increase	Large*
Human Physiology 2	No change	-
Research Methods for Medical Radiations	Increase	Moderate*
Promoting Health Education	Increase	Moderate*

Notes: * = statistical significance ($p > .05$); Effect size = Cohen's d

Figures 6 through 10 display the results for student perceptions of whether they learned more with Interteaching compared to the standard model of teaching. Overall, the results suggest that students' believed that they learned more while studying using the Interteaching model. In three out of the five courses where Interteaching was implemented, the majority of students (56.3%; 69.4%; 75.6%) reported that they were "somewhat more engaged" or "much more engaged" with Interteaching compared to the standard model. Despite less favourable results for the *Ethics in Professional Accountancy* course, a large proportion of students (40.4%) reported that they learn "much more" or "somewhat more" with the Interteaching model. Student perceptions in the *Human Physiology* course were quite different, with the majority of students (71.7%) reporting that they learn "much more" or "somewhat more" with the traditional model compared to the Interteaching.
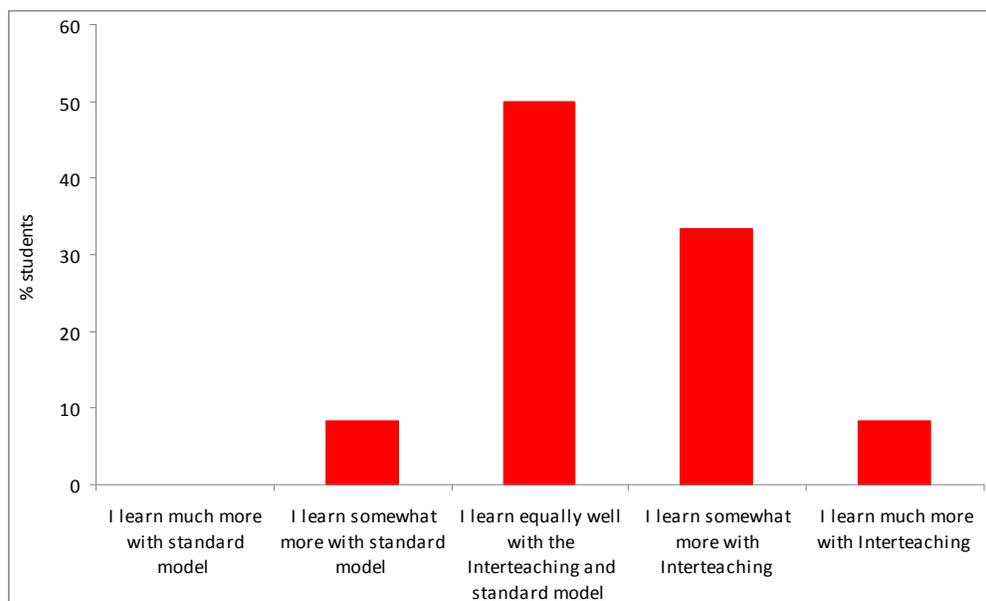

Figure 6. Student responses on the post-survey item asking whether they believed they learned more with the Interteaching model compared to the standard model (*Ethics in Professional Accountancy*).
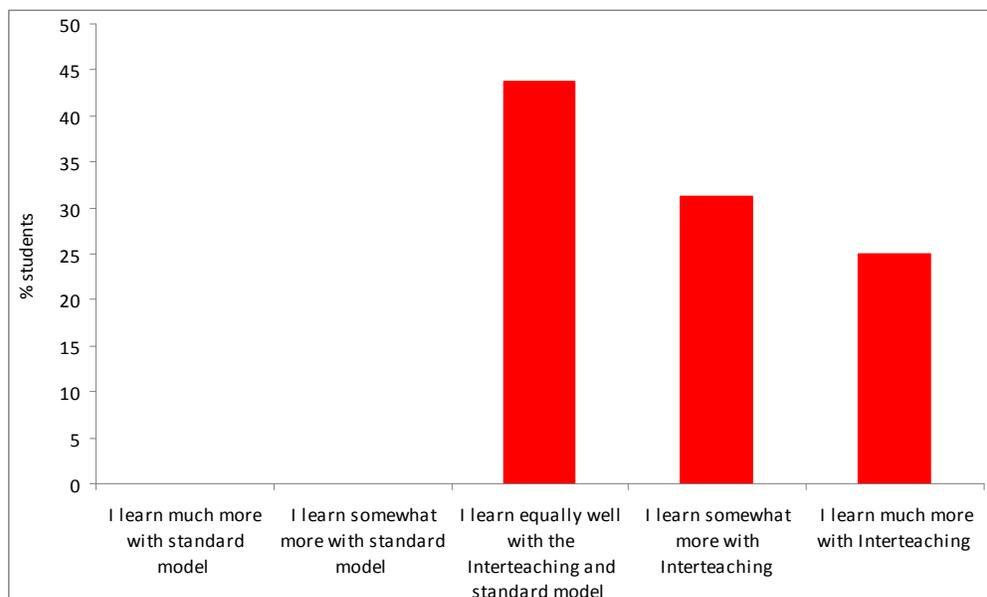
Figure 7. Student responses on the post-survey item asking whether they believed they learned more with the Interteaching model compared to the standard model (*The BIS Professional*).
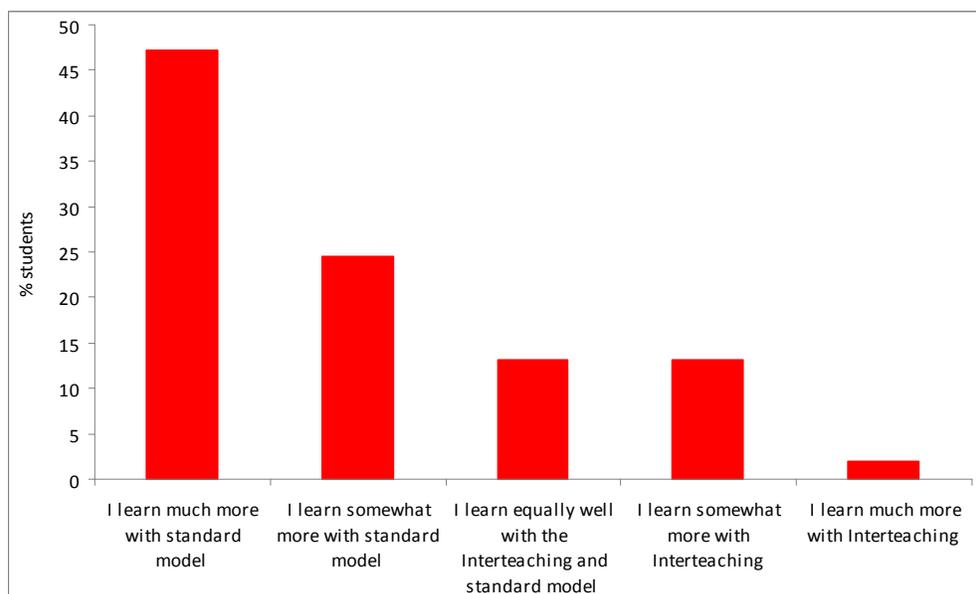

Figure 8. Student responses on the post-survey item asking whether they believed they learned more with the Interteaching model compared to the standard model (*Human Physiology 2*).
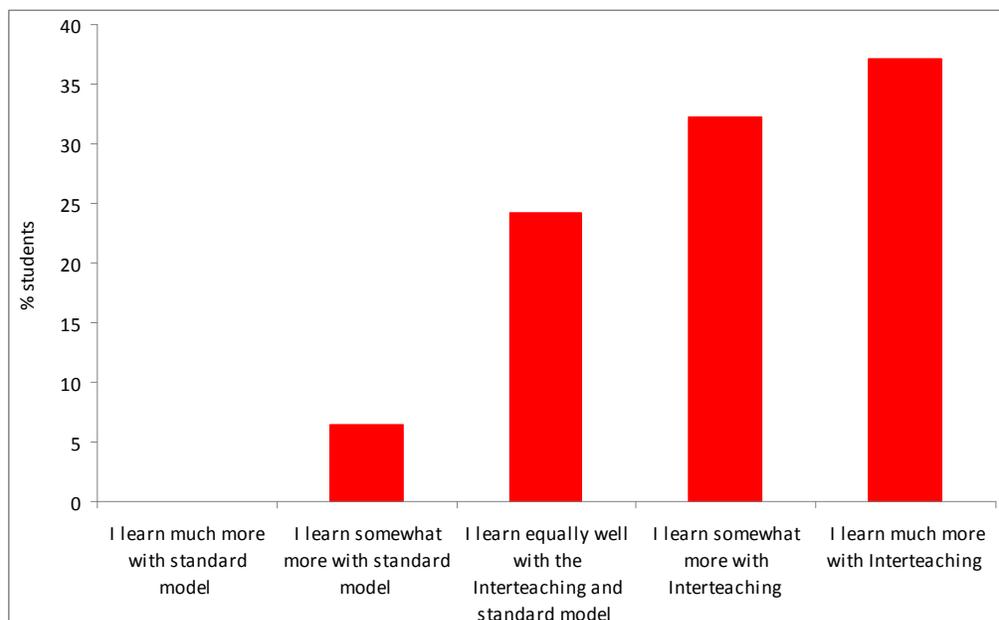
Figure 9. Student responses on the post-survey item asking whether they believed they learned more with the Interteaching model compared to the standard model (*Research Methods for Medical Radiations*).
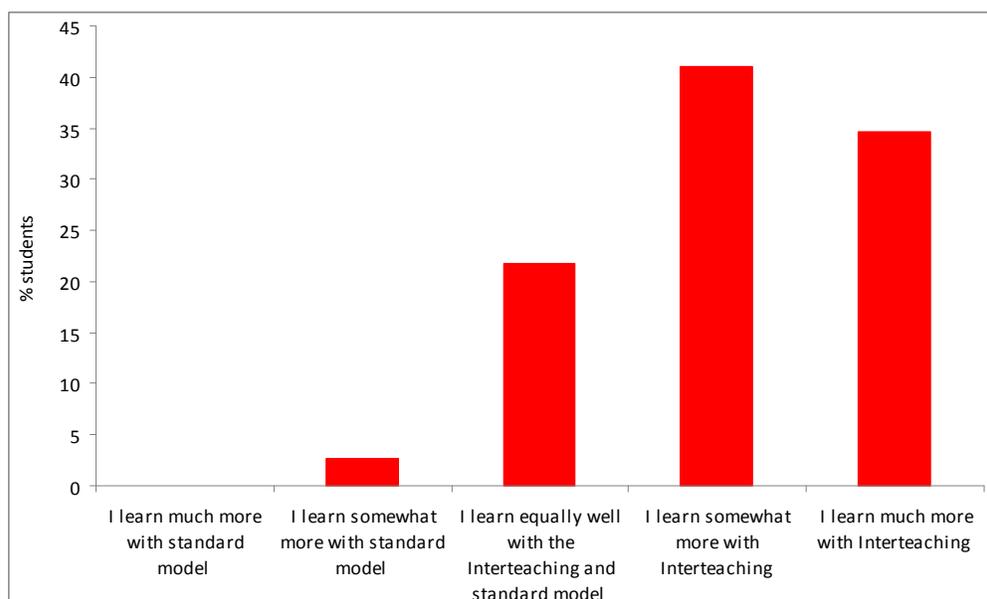

Figure 10. Student responses on the post-survey item asking whether they believed they learned more with the Interteaching model compared to the standard model (*Promoting Health Education*).

Many of the qualitative statements made by students on the post-test survey suggest better learning outcomes with Interteaching. In particular, students were able to identify (a) that the increased emphasis on self-study and peer discussion resulted in better understanding of content,

and (b) that the emphasis on class discussion lead to development of communication skills. Examples of student comments in these two categories are provided below:

Understanding of knowledge content through self-study and peer discussion:

Having to prepare by myself allowed me to learn the material better.

Learnt from other class mates - their opinions are interesting and help me look at the situation in a different perspective.

Got a chance to learn from fellow students.

Learnt a lot more than if I was just listening to lecturer; actively involved.

Development of communication skills:

Improves presentation skills, communication skills.

Allows thorough discussion and analysis, building communication skills.

Gained experience in working in groups.

These results suggest that many students rated their academic progress more positively toward the end of the semester compared to at the beginning of semester. Many students were able to reflect on their learning throughout the semester and believed that the Interteaching model resulted in greater learning. While the absence of a control group in this evaluation limits the conclusions that can be drawn, this is a promising finding that requires further exploration in future.

Academic self-efficacy

Table 4 shows change in student perceptions of academic self-efficacy across semester. For brevity, only statistically significant change is summarised in this table. All other pre-post comparisons were not statistically significant. As there is variation across courses in the changes observed in academic self-efficacy, the overall patterns in student responses are summarised here.

An increase on the verbalising subscale was observed in two courses. This result indicated that students were more confident in academic tasks dependent on verbal communication skills, for example, asking questions in lectures, presenting to a small group, and engaging in profitable debate with peers.

An increase on the grades subscale was observed in two courses. This result indicates that students' confidence in assessed academic tasks increased over the semester, for example, passing assessments at the first attempt, producing coursework at the required standard, attaining good grades, and producing their best work in coursework assignments and examinations. For two groups there was a decrease on this subscale. Informal feedback suggests that some students in at least one of these groups were very concerned about their academic progress due to a misconception regarding the amount of preparation and knowledge acquisition required each week. It is possible that the observed decrease in students' confidence was a result of this misconception, and there are plans to address this misconception in future iterations of the teaching model.

Table 4. Pre-post change in academic self-efficacy presented separately for each course included in the evaluation.

Course name	Change+	Size of effect and statistical sig.
Ethics in Professional Accountancy	Decrease grades subscale Decrease attendance	Moderate* Large*
The BIS Professional	Increase grades subscale Increase total academic self-efficacy	Large* Large*
Human Physiology 2	Decrease grades subscale	Large*
Research Methods for Medical Radiations	Increase verbalising subscale Increase grades subscale Increase total academic self-efficacy	Small* Small* Small*
Promoting Health Education	Increase verbalising subscale Increase studying subscale Increase total academic self-efficacy	Small* Moderate* Moderate*

Notes: * = statistical significance ($p > .05$); Effect size = Cohen's d; + = only statistically significant change is summarised in this table.

An increase on the studying subscale was also observed in one course, indicating that students in this group were more confident in their ability to study effectively, including planning appropriate revision schedules, remaining motivated throughout, managing workloads to meet deadlines and studying effectively on own.

A decrease on the attendance subscale of the academic self-efficacy measure was observed in one course. This result indicated that students' confidence in their ability to attend taught lessons and tutorials and to be on time for lectures decreased over the semester. This may be due to increased pressure on students to attend classes to pass tutorial-based assessments. Given that Interteaching focuses on increasing student attendance and engagement with learning, this result is not unexpected. It may be that students' developed a realistic perception of teachers' expectations regarding preparation and class attendance. In which case, this could be considered a desired outcome. In future implementation of Interteaching, it is important to ensure that students meet workload expectations while at the same time ensuring that they feel confident to meet these expectations.

Student learning style preferences

Table 5 shows change in student learning style preferences across the semester. Overall, the results indicate that the Interteaching model did not result in change to students' preferred learning style across the semester. The only statistically significant change was a decrease in students' preference for a deep strategy learning style (e.g., one that maximises long-term learning) in the *Human Physiology 2* student group. This change is in the unexpected direction, as the Interteaching model aims to foster a deep approach to learning. As already discussed, students in this group were concerned about their academic progress due to a misconception regarding the amount of preparation and knowledge acquisition required each week. This may be have resulted in students feeling overwhelmed by their workload and therefore using surface strategies (e.g., rote learning).

Table 5. Pre-post change in preferred learning style presented separately for each course included in the evaluation.

Course name	Change+	Size of effect and statistical sig.
Ethics in Professional Accountancy	No change	-
The BIS Professional	No change	-
Human Physiology 2	Decrease deep strategy	Large*
Research Methods for Medical Radiations	No change	-
Promoting Health Education	No change	-

Notes: * = statistical significance (*p* > .05); Effect size = Cohen's *d; +* = only statistically significant change is summarised in this table.

Of interest, students qualitative statements reported on the post-test survey suggest that at least some students noticed that they took a deeper approach to their learning when studying under the Interteaching model. For example:

> *You actually had to research, learn and understand what you need to know rather than just copying a lecturer's slides*
>
> *Required me to understand the material.*
>
> *It allows better and deeper understanding of the subject.*

Student satisfaction

Figures 11 through 15 display the results for students' reports of their satisfaction with the Interteaching model compared to the standard teaching model. Overall, the results suggest that students' preferred the Interteaching model. In four of the five courses, the majority of students (ranging from 50.0 to 75.8%) reported that they "somewhat preferred" or "strongly preferred" Interteaching compared to the standard model. Student perceptions in the *Human Physiology* course were quite different, with the majority of students (83.1%) reporting a preference for the traditional model over Interteaching.
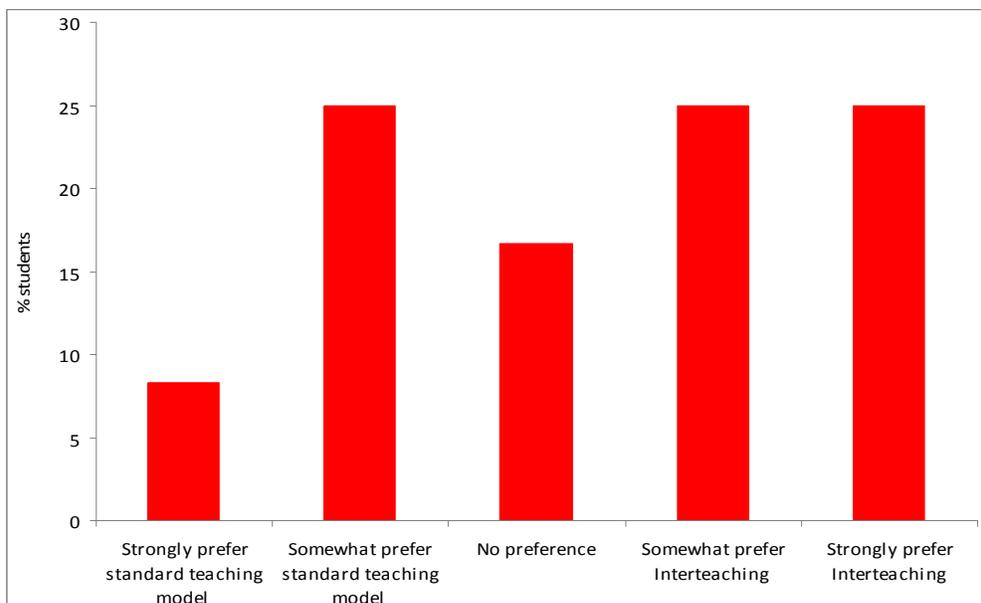
Figure 11. Students' teaching model preferences reported on the post survey (*Ethics in Professional Accountancy*).
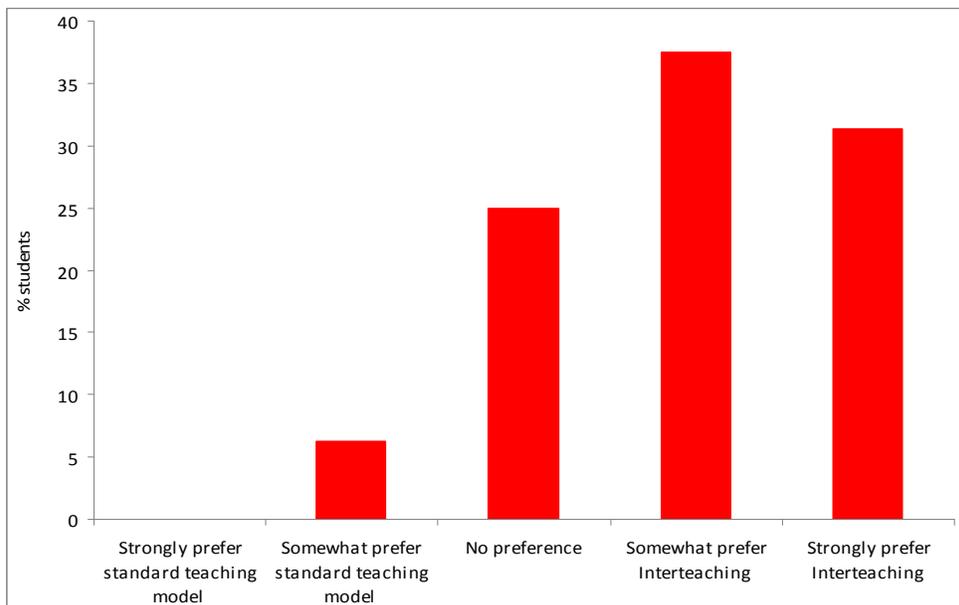

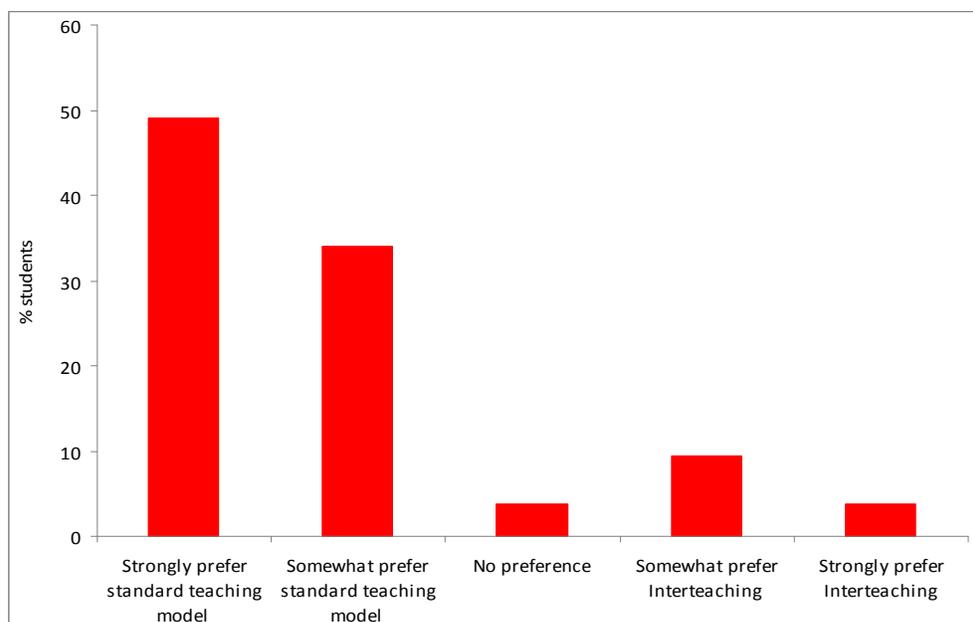Figure 12. Students' teaching model preferences reported on the post survey *(The BIS Professional)*.

Figure 13. Students' teaching model preferences reported on the post survey *(Human Physiology 2)*.
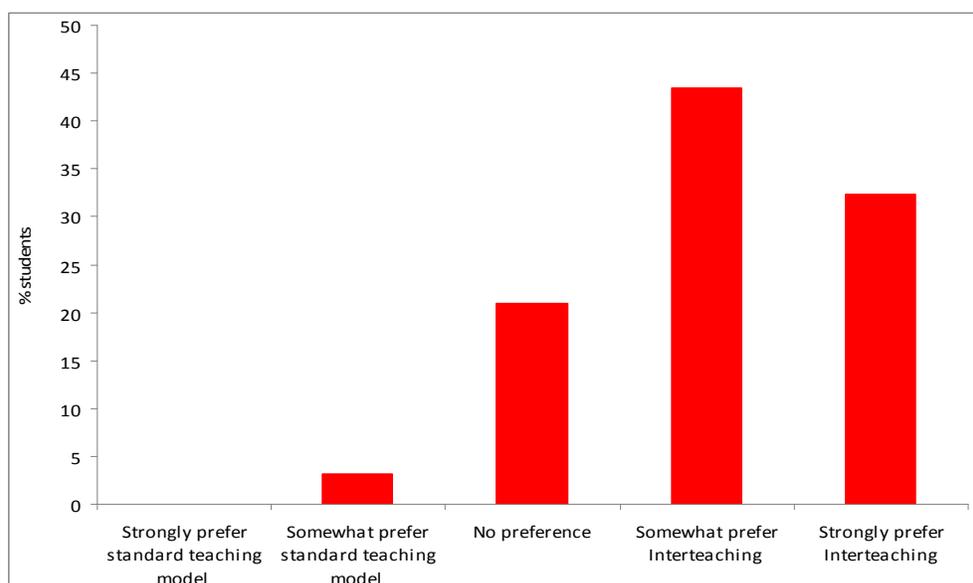

Figure 14. Students' teaching model preferences reported on the post survey (*Research Methods for Medical Radiations*).
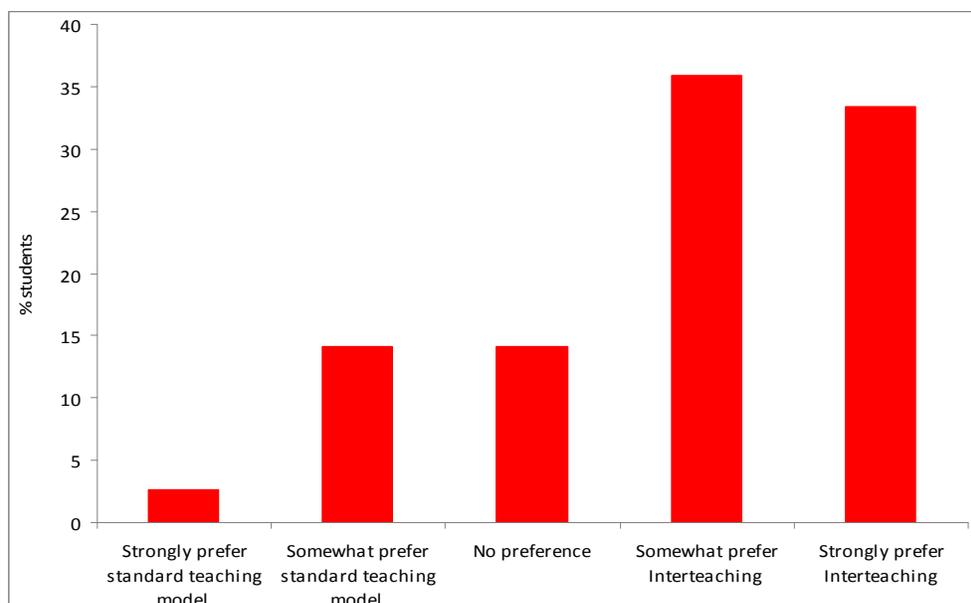
Figure 15. Students' teaching model preferences reported on the post survey (*Promoting Health Education*).

Qualitative statements made by students on the post-test survey highlight their satisfaction with Interteaching. For example:

> *Keeps me much more engaged and looking forward to class; Learn more; Appreciate the effort!!*
>
> *It was very interactive and kept students interested.*
>
> *Very engaging; Felt good coming to the class prepared!*
>
> *I particularly enjoyed the model :)*
>
> *I believe this model should be applied to all subjects in order to enhance all students' learning skills in all subjects.*

While the majority of *Human Physiology 2* students reported that they preferred the standard model to Interteaching, many of the positive comments about Interteaching where from this group of students. For example:

> *I felt as though I prepared for the classes and studied more. It was good to discuss possible answers and help other students and also get help myself.*
>
> *Enjoyed interacting intelligently and purposefully with other students and tutors!*
>
> *You actually had to research, learn and understand what you need to know rather than just copying a lecturer's slides.*
>
> *Working through different concepts and actually understanding stuff.*

Student Perspectives on Advantages, Challenges and Suggestions for Improvement

At the end of semester, students were asked to report on the advantages and challenges of learning using the Interteaching model. They were also asked to offer suggestions for improvement in future iterations of the teaching model.

In addition to comments about improvements in engagement and learning (which are presented in the relevant sections above) a number of additional themes can be identified from students' comments and these are presented below with examples. Students identified more advantages than challenges or suggestions for improvement, and this is reflected in the examples provided below.

Advantages

Flexibility of access:

> *I also liked that you could do it in your own time, when you were in the right frame of mind and at a time that suited me.*

> *I could do it in my own time when I could pay attention.*

> *I enjoyed the concept clips* [podcasts] *as they were short and straight to the point.*

Increased preparation for class:

> *I felt as though I prepared for the classes and studied more.*

> *Myself and classmates already had background knowledge of the ideas when coming to tutes as we had already explored them before class and so it allowed us to go further in tutes.*

> *I felt a lot more prepared for tutes than after a standard lecture. I was able to ask more in-depth questions and participate in classes more.*

Advantages of self-guided study:

> *Self-study is challenging but exciting.*

> *Self-study is the ultimate purpose of study, this encourages us not to be reliant on lecture.*

> *I liked the accountability this encouraged.*

Opportunity for clarification and feedback:

> *Much more personalised; excellent for direct feedback.*

> *Get to see others input and can hear better explanations as unclear things are asked freely without fear of stopping teacher's train of thought.*

> *It was good to discuss possible answers and help other students and also get help myself. It was a change from normal.*

> *I could have things explained to me in a small group by someone on the same level as me if they understood.*

> *If I didn't understand something … I could ask questions and clarify in the tute.*

Challenges

Working in groups

Trying to contribute your own opinion, when other class mates put their opinion across.

Peers in my group were not motivated and could not answer my questions or participate in discussion.

There were a lot of people who came unprepared - Limiting conversations somewhat.

Increased workload throughout semester

Very positive learning experience - took some adjustment to the increased weekly workload as opposed to cramming at the end of semester.

Keeping motivated to complete work during assessment times.

There was a lot of work to be done before class.

Engaging in self-directed study

Self-directed learning can be hard to get into.

Getting out of the habit of doing the work after the tute, and doing it before instead.

Sometimes there was a lot of content and I found I didn't have enough time to get through it.

Increased pressure to contribute in class

Challenges would be asking questions in front of classes as you worry of getting it wrong.

I found it annoying that a mark was given based on my participation. I am not very confident in this subject and therefore my participation [mark] *was low because I didn't ask enough questions.*

Suggestions for Improvement

Disseminate Interteaching more broadly

Implement in all classes.

This should be looked at over a variety of classes. It would keep me more engaged.

Should be thought about for a wide range of courses. Was very helpful and extended my learning.

Reduce workload

Smaller workload

I believe the workload and expectations of the workload is unnecessary.

Staff Perspectives on Challenges and Advantages of the Teaching Model

The project aimed to evaluate the Interteaching model and the dissemination model by collecting information from team members using focus group methodology. The opportunity to participate in a focus group was offered in December, 2012. Despite offering a range of incentives to increase participation, commitment to attendance was low due to conflicting commitments, and some of those who initially confirmed their attendance withdrew. Two days prior to the scheduled focus group, only one team member was able to confirm attendance, resulting in cancellation of the focus group. The project leader is currently seeking feedback from team members about their experiences using a survey method. Despite providing a number of reminders and offering incentives to complete the feedback, to date this information has only been received from two of the five teams. Informal feedback collected from other course teams throughout the semester is consistent with the more formal feedback collected from these 2 teams.

In general, staff feedback suggests that Interteaching was well received by students, resulted in increased student engagement and learning, and teaching using this method was a more rewarding experience for staff. While staff were certainly challenged by the practicalities of implementing an innovative teaching model, they remained positive about addressing challenges in future iterations of Interteaching in their courses. Advantages and challenges identified by staff are presented below.

Advantages identified:

Attendance was constantly high.

The students were more engaged with the course and with each other. In most cases all students were prepared for all or some of the case studies and would contribute to the discussion.

Students were not afraid to ask questions in class.

The quality of assignments was very high.

Exam results were fantastic.

For staff, we were interacting with students who were prepared and therefore knowledgeable about topics.

A significant amount of assessment (40%) was completed during class time. This was both an effective and efficient assessment strategy.

Challenges identified:

The teaching staff were apprehensive about not being seen to be "working or teaching" students and having an easy ride. While this did not turn out to be an issue it still may be a problem with different groups of students.

We allowed students to pick their own groups and these groups, with the exception of one student, did not change. Some of the groups were quiet, some were very vocal and confident and one group appeared to lack motivation. We will consider changing groups on a regular basis for next year.

Our teaching staff are very experienced and quickly adapted to the process. Courses with less experienced staff will need more training and regular meetings.

3.5 Summary

The project was successful in disseminating and evaluating the Interteaching model in 5 courses across SEH, DSC, and Business. Informal feedback from team members suggests that the dissemination strategy worked well. Further feedback will be sought from teams in 2013 to improve the training, adaptation, and implementation phases of the dissemination model as needed. The Interteaching model was positively received by students in 4 of the 5 courses and improvements were also observed in student engagement, self-efficacy, and learning. Interteaching was less well received in the *Human Physiology 2* course, however many students in this course reported being more engaged in Interteaching compared to the standard teaching model, and appeared to understand the advantages of Interteaching. They also offered constructive feedback to assist the course team to improve the teaching model in future. Further, it is likely that students' apprehensions about Interteaching in this course were a result of misconceptions which can easily be addressed by the course team in future. Staff members observed improvements in student engagement and learning outcomes, and reported satisfaction in interacting with students who were prepared to engage actively in class discussion. Overall, outcomes from the evaluation were very positive and support further dissemination of the Interteaching model.

4   Dissemination strategies and outputs

Information provision dissemination
Preliminary results from the 2010 LTIF-funded evaluation of the Interteaching model were presented at an L&T conference in Sydney in July 2010 (Kienhuis, Chester & Wilson, 2010). Results were also presented at the *Schools of Health and Medical Sciences Innovations in L&T Scholarship and Research Day* and at the *RMIT L&T Forum*, both in November 2010. Presentation slides can be downloaded from the *RMIT L&T Forum* webpage. The project team is also able to present at future RMIT conferences and training sessions as appropriate. A paper (Chester, Kienhuis, & Wilson, in press) and a book chapter (Kienhuis & Chester, in press) will also be published in 2013. Sufficient data has also been collected as part of the LTIF 2012 project to submit at least one research paper to a peer-reviewed L&T journal in 2013. Further, Paul Myers plans to present the findings at the *Accounting and Finance Association of Australia and New Zealand (AFAANZ) Conference* in April, 2013.

Engaged dissemination
A process of engaged dissemination began with a workshop at the *2011 RMIT University Learning and Teaching Expo*. At this workshop, the project leader demonstrated the teaching model and presented the results of the LTIF 2010 and 2011 projects. This seminar resulted in several expressions of interest to take part in a University-wide evaluation of Interteaching in 2012. Collaborative relationships were subsequently established across the three Colleges and the LTIF 2012 project proposal was submitted. The project was successful in disseminating the Interteaching model across the three RMIT Colleges in 2012, and wider dissemination is planned for 2013. Paul Myers has accepted an invitation from the Head of the Accounting Department, RMIT University Vietnam campus, to run Interteaching workshops for accounting staff in January 2013. Based on the promising results of the evaluation in *Ethics in Professional Accountancy* in 2012, the RMIT Vietnam Accounting Department are very interested in this teaching approach and are considering implementation of Interteaching in 2013.

5 Evaluation of project outcomes

Project outcomes proposed in the 2012 LTIF application were met. These outcomes are outlined above in the *Project outcomes and impacts* section of this report. The evaluation framework was successful in informing the expansion of the Interteaching model for delivery across various disciplines at RMIT in 2012, and guiding further evaluation. As described above, the project has resulted in a set of learning, assessment, and evaluation resources that can be shared with other disciplines at RMIT, and the results of the evaluation provide support for broader dissemination of the teaching model in future. The evaluation framework has also resulted in collection of data of sufficient quality to be developed into at least one research paper and submitted to a peer-reviewed L&T journal in 2013. The outcomes of this project have implications for future iterations of the teaching model within courses across RMIT University. Overall, the Interteaching project has provided value for money by providing an innovative, cost-effective method for engaging large classes in active, problem-based, student-driven learning.

6 Budget report

The funds approved for this project was $50, 000. The project came in under budget at $39, 196. A financial statement for the project is attached.

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