Maintaining student engagement in a multidisciplinary allied health communication skills course

Zoe J. Hazelwood
School of Psychology and Counselling, Queensland University of Technology

Abstract

Effective communication is an important graduate capability for allied health students but there are few opportunities for students to engage with these skills in a dedicated manner at an undergraduate level. This paper reported on the use of active learning and relevance-building strategies to maintain student engagement in a multidisciplinary allied health communication skills course at an Australian university. Students (N = 736) completed an engagement survey during the first and final lecture. While most degree programs reported no difference in engagement across semester, nursing/paramedic students reported a significant decrease in student engagement. A perceived lack of disciplinary relevance may account for student disengagement in this group, illustrating the challenge of delivering an authentic learning experience whilst engaging students from diverse degree programs.

Introduction

Communication skills are an important graduate capability across a multitude of disciplines (Lindsay, 2014), particularly for the allied health professions. Health graduates will need to engage with colleagues and clients to deliver information in a sensitive manner, providing timely feedback where necessary, while working in multidisciplinary teams across a variety of contexts, communicating large volumes of information in short periods of time. A quick glance at the professional standards and expectations of graduates skilled in such fields as psychology (see Australian Psychology Accreditation Council, 2014), nursing (Nursing and Midwifery Board of Australia, 2013), dietetics (Dietitians Association of Australia, 2010), optometry (Optometry Council of Australia and New Zealand, 2006), paramedicine (Paramedics Australasia, 2011) or podiatry (Australian and New Zealand Podiatry Accreditation Council, 2009) attest to the importance of well-developed communication skills for graduates of these disciplines.

Helping students become effective communicators is not an easy task, a challenge that is probably reflected by the fact that very few universities offer dedicated communication skills courses to allied health students at the undergraduate level. These important skills tend to be packaged into other courses where the learning objectives may include ‘develop your written communication skills’ or ‘demonstrate your oral communication skills’. Or they may be a skillset that is developed at a postgraduate level that students access only when they elect to undertake advanced training (e.g., Aspegren, 1999). Yet we know from teaching and learning theorists in the area of skill acquisition (Dreyfus & Dreyfus, 1980; Langan-Fox, Grant, & Anglim, 2007) that facilitating the development of skill expertise requires a developmental trajectory best introduced when students commence tertiary study. The earlier we introduce engaging and relevant opportunities to foster communication skills development for
undergraduate students, the more likely those students are to become accomplished interpersonal communicators by the time they graduate.

This paper presents the results of a research project aimed at exploring student engagement in a multidisciplinary, first-year communication skills unit at a major Australian university. We predict that a lack of engagement was the result of students’ having difficulty identifying the professional relevance of the unit to their studies. The project acts as a worthwhile case study of the challenges that face educators who wish to introduce dedicated communication skills courses into their programs at an undergraduate level, when the importance of providing early introduction to this skillset is inarguably vital.

**The context of large, first-year multidisciplinary classrooms**

Successfully facilitating the development of a graduate attribute such as communication skills at a first-year level requires consideration of the challenges currently facing the higher education sector. As participation in this sector continues to increase, there is a growing emphasis for first-year foundation units to offer generic theories and skills, broadly applicable to students from a collection of related disciplines (Johnson & Chipperfield, 2008). The lack of professional identity that a large number of first-year students understandably experience (Lamote & Engels, 2010), together with a strong desire for wanting to ‘belong’ and identify with a profession (Yorke & Longden, 2004), can result in a context where students have limited understanding of why they are studying certain unit content, and therefore find it difficult to see the relevance of the content to their future studies or work role. These students are at risk of disengaging from learning as they struggle to perceive the relevance to their discipline, or feel their individual needs and interests are inadequately attended to (Johnson & Chipperfield, 2008; Sheard, Carbone, & Hurst, 2010).

Creating a learning experience responsive to the needs and interests of students from a singular discipline is challenging, yet exponentially more difficult with students from multiple disciplines (Johnson & Chipperfield, 2008). In the multidisciplinary context, it is recognised that related disciplines are often underpinned by skills that are predominantly common rather than unique (Johnson & Chipperfield, 2008). Students may perceive that the generic communication skills they are being exposed to do not possess global applicability, and at the same time become frustrated with the lack of discipline specific content (Coates, 2005; Johnson & Chipperfield, 2008). Integrating multidisciplinary perspectives into course content challenges students to apply their knowledge to scenarios both familiar and novel, drawing on their own perspectives, and the perspectives of their peers (Stebleton, Jensen, & Peter, 2010). To this end, Sergeant, MacLeod and Murray (2011) found of 518 health professionals undertaking communication skills training, 98% indicated collaboration with peers from other health disciplines improved both their learning, and their ability to collaborate with practitioners from other disciplines in their work roles. Thus the role of the educator in this context is to facilitate a meaningful and productive exchange of ideas and experiences between students, increasing the depth and breadth of students’ learning (Bojinova & Oigara, 2011; Zepke & Leach, 2010). Whilst the pedagogical rationale for this practice is sound, convincing students of these merits is an entirely separate matter and disengagement is a very real risk for educators working in this multidisciplinary, first-year context.

**Student engagement**

Student engagement is a robust predictor of academic outcomes and has been subject to various conceptualisations both historically and presently (Coates, 2010; Krause & Coates, 2008; Wolf-
Engagement in multidisciplinary classrooms, refereed paper

Wendel, Ward, & Kinzie, 2009). Early theories defined engagement as concrete behaviours (Wolf-Wendel et al., 2009). Students who were engaged were thought to be invested in their studies, as measured by hours spent on campus, studying, or working on assessment (Sheard et al., 2010; Wolf-Wendel et al., 2009). But conceptualising student engagement solely in terms of activity, commitment or investment does not address the role that educational institutions play in providing teaching and learning experiences that promote quality learning or engagement with the learning process (Bovill, Bulley, & Morss, 2011; Gill, 2011; Zepke & Leach, 2010). Contemporary conceptualisations of engagement therefore identify the importance of a supportive teaching environment, active learning experiences that are responsive to students’ needs and interests, and the use of assessment that is authentic and challenging, to promote deeper content mastery, and personal and professional growth (Coates, 2010; Gasiewski, Eagan, Garcia, Hurtado, & Chang, 2012; Gill, 2011). Thus student engagement can be understood as the interaction between students’ efforts to engage with their learning environment, and their learning environment engaging with them (Coates, 2010; Zepke & Leach, 2010). Disengaged students are less likely to experience academic success, course satisfaction, or persist with their studies; by contrast, students who are engaged are more likely to invest themselves in their course, to explore and master content, and persist with their studies to completion (Hu & Kuh, 2002; Hu & McCormick, 2012). While the onus of educational outcomes ultimately lies with the individual student, educators must provide a learning environment that facilitates student engagement (Sheard et al., 2010).

Providing opportunities for active learning to take place is one way to maximise engagement (Bovill et al., 2011; Coates, 2010). The capacity to implement the full range of high quality active learning processes can be challenging in a large, first-year multidisciplinary context, but not impossible. Active learning principles have been integrated into traditional lectures with substantial success (Gasiewski et al., 2012; Gill, 2011; Johnson & Chipperfield, 2008; Koropeckyj-Cox, Cain, & Coran, 2005). Beyond delivering content, a lecturer can encourage students to ask questions, facilitate group discussions and exercises, and provide and receive feedback regarding students’ progression and performance on assessment, amongst other effective practices (Bojinova & Oigara, 2011; Gasiewski et al., 2012; Zepke & Leach, 2010). Even exercises that would otherwise appear impractical in this context such as role play, debate and discussion can be facilitated using the fishbowl format, employing the lecturer as a focal point of interaction for students (Kennedy, 2007). In this manner, teacher-learner interaction extends beyond a means of mass dissemination of content and expertise, while both teacher-learner and learner-learner interactions provide fertile ground for students to engage with the content, their peers, and educators (Bojinova & Oigara, 2011).

A case study for maintaining engagement

Given the difficulties inherent in engaging students to develop their interpersonal communication skills in a first-year, multidisciplinary context and the very real need for students across the higher education sector to possess these skills as an important generic graduate attribute, the dearth of published teaching and learning evidence illustrating successful techniques for maintaining student engagement is alarming but not surprising. In an effort to address this gap in the literature, the present study details the efforts of teaching staff at an Australian university to maintain student engagement in a multidisciplinary, first-year communication skills course. Interpersonal Processes and Skills is a foundation unit for students studying a range of allied health professions, with a cohort typically approaching 1800 students across the year. In the course of the semester, students learn the importance of communication in healthcare, the contexts in which this communication often occurs, and the challenges students may face maintaining effective communication practices in an allied health
context. Students are provided with opportunities to practice specific communication skills in class and in their assessment. Historically, students commence the course with substantial optimism and enthusiasm, particularly amongst psychology students. However other student cohorts, for example those studying nursing, paramedics and the clinical sciences, typically report greater dissatisfaction with the course, citing a lack of relevance to their particular discipline. Having identified student disengagement as an area of concern, the teaching staff reframed this as an opportunity to improve student engagement by establishing new active learning experiences.

Aims and hypotheses

The aim of the case study presented here was to explore the effectiveness of various active learning, lecture-based activities on maintaining levels of student engagement from the first lecture to the last lecture of the semester. Knowing that first-year students can transition from high school with unrealistic expectations and be full of enthusiasm and excitement about what they are going to learn (see Brinkworth, McCann, Matthews, & Nordström, 2009), it was hypothesised that engagement in this interpersonal communication skills course would be equally high across all disciplines at the start of the semester. If the practices employed to maintain engagement were equally beneficial across disciplines, we would predict there would be no significant differences in student engagement between degree programs at the end of semester, and that there would be no significant difference across time points in levels of engagement with the new activities introduced into the unit.

Method

Participants

The participants were 736 students studying a first-year interpersonal communication skills unit at a major Australian university; 578 completed the first survey, and 158 completed the second survey. The mean age of participants was 20.14 (SD = 5.23) of which 499 were female, 231 were male, and six did not specify. Thirty-nine responses were excluded as the participants did not indicate their degree program, or had enrolled in the course as an elective.

Materials and procedure

Utilising the findings of active learning research as a means for improving engagement, we undertook to make a number of changes to the way we delivered lecture material as a key way of improving engagement. The lectures were modified to include more multidisciplinary case scenarios with students encouraged to view these scenarios from their own perspective, those of their peers, and to compare, contrast, and where possible, combine these perspectives. Teaching staff supported these activities through the use of fishbowl role playing exercises, small group discussions, and question and answer sessions. Media was frequently incorporated, including an introductory video developed specifically for the course, featuring former students now working in the fields of psychology, paramedics, nursing, pharmacy and human movement. The video aimed to improve student engagement by enhancing the relevance of content to students from all disciplines, by demonstrating the importance of effective communication skills. The video was used in a think-pair-share manner during lectures, where students were encouraged to collaborate with their peers to discuss the issues raised in the video from the perspective of each discipline (Karge, Phillips, Jessee, & McCabe, 2011).
Student engagement was assessed using a 10-item questionnaire designed specifically for this study to target elements of teaching and learning practice found in the past to have contributed to student engagement. Thus we operationalised this construct using variables such as students’ capacity to see real-world significance, their interest and investment in the lecture topics, and their ability to link the learning opportunities presented to them to the real world. The measure asked students about their perceptions of the relevance of the material presented in the lecture, the extent to which they found the material engaging and interesting both personally and professionally, their view of the assessment as utilising ‘real world’ skills, and the applicability of the unit content beyond the classroom. Students recorded their responses on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Example items include ‘The content that was covered in this unit was relevant for my current/future work role’ and ‘I am not certain how this unit will ‘fit’ with the rest of my studies or my future/current work role’. The internal consistency of items was found to be good (Cronbach’s α = .86). The questionnaire was administered to students attending the first lecture, and then repeated in the final lecture of the semester. Both questionnaires were identical, with minor syntactical alterations on account of tense. Lecture attendance late in the semester is highly variable on account of students’ competing priorities. As it was impossible to ensure students attending the first lecture would be present at the final lecture, repeated measures tests were not employed.

Results

Table 1 details the mean, standard deviation and confidence intervals for student engagement as a function of degree program and point of survey. Fewer participants responded to the final lecture survey for all degree programs and, with the exception of students studying psychology and other allied health, student engagement scores were lower for the final lecture survey.

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>First Lecture</th>
<th></th>
<th></th>
<th>Final Lecture</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>M (SD)</td>
<td>95% CI</td>
<td>(n)</td>
<td>M (SD)</td>
<td>95% CI</td>
</tr>
<tr>
<td>Psychology</td>
<td>62</td>
<td>4.11 (.71)</td>
<td>[3.93, 4.3]</td>
<td>36</td>
<td>4.29 (.66)</td>
<td>[4.07, 4.52]</td>
</tr>
<tr>
<td>Psychology/Other</td>
<td>163</td>
<td>4.07 (.61)</td>
<td>[3.98, 4.17]</td>
<td>48</td>
<td>3.93 (.50)</td>
<td>[3.78, 4.07]</td>
</tr>
<tr>
<td>Nursing/Paramedic</td>
<td>117</td>
<td>4.12 (.54)</td>
<td>[4.03, 4.22]</td>
<td>29</td>
<td>3.28 (.83)</td>
<td>[2.96, 3.6]</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>54</td>
<td>3.87 (.64)</td>
<td>[3.69, 4.04]</td>
<td>11</td>
<td>3.82 (.61)</td>
<td>[3.41, 4.23]</td>
</tr>
<tr>
<td>Exercise Physiology</td>
<td>110</td>
<td>3.85 (.69)</td>
<td>[3.72, 3.98]</td>
<td>11</td>
<td>3.77 (.65)</td>
<td>[3.33, 4.21]</td>
</tr>
<tr>
<td>Other Allied Health</td>
<td>37</td>
<td>3.83 (.64)</td>
<td>[3.62, 4.05]</td>
<td>19</td>
<td>3.89 (.60)</td>
<td>[3.60, 4.17]</td>
</tr>
</tbody>
</table>

Table 1. Mean student engagement as a function of degree program and point of survey

A two way independent groups ANOVA was conducted for student engagement, with Levene’s Test, F (11, 685) = .377, p = .45 revealing no breach of the assumption of homogeneity. A significant main effect of degree program with a small effect size was found, F (11, 685) = 6.95, p < .001, η² = .048. A significant main effect for point of survey with a very small effect size was also found, F (11, 685) = 4.97, p < .001, η² = .007. A significant interaction with a small effect size was found between degree program and point of survey, F (11, 685) = 7.19, p < .001, η² = .05. Power was very high (power > .9). Figure 1 details student engagement as a function of the interaction between degree program and point of survey.
Analysis of simple main effects for degree program indicated significant differences in student engagement, at the first lecture, $F (5, 685) = 3.95, p < .05, \eta_p^2 = .028$. Students studying psychology, psychology/other and nursing/paramedic reported significantly higher student engagement than students studying pharmacy, exercise physiology and other allied health. Significant differences were also found between degree programs in the final lecture, $F (5, 685) = 8.64, p < .001, \eta_p^2 = .06$, with psychology students reporting significantly higher student engagement than all other degree programs. By contrast, nursing/paramedic students reported the highest student engagement at first lecture, yet their engagement was significantly lower than all other degree programs at final lecture. Variance between all other degree programs at the final lecture was non-significant.

Analysis of simple main effects for point of survey (with Bonferroni adjustment) indicated that for students studying nursing/paramedic degrees, student engagement was significantly lower when measured at the final lecture, $F (1, 685) = 42.11, p = <.001, \eta_p^2 = .058$. While psychology and other allied health students reported an increase in student engagement, the difference was not significant. Therefore, while student engagement for nursing/paramedic students decreased over the course of the semester, student engagement remained stable for all other degree programs.

Discussion

This study aimed to explore the extent to which student engagement could be maintained in a unit that was designed to foster communication skills across an undergraduate cohort of future allied health professionals. We predicted that engagement would be high across all cohorts to begin with and by introducing strategies that have been found in the past to contribute to student engagement we could ameliorate the deterioration of engagement across the semester. This hypothesis was generally supported; students studying psychology, psychology/other, exercise physiology, pharmacy and other allied health disciplines were equally as engaged at the end of
the semester as they were at the beginning. While no other significant differences were found between degree programs at final survey, students studying psychology reported the highest level of student engagement. While this is a welcome result, it is also perplexing; the redesign of teaching and learning practices was tailored specifically to improve engagement with the communication skills being taught for all students but there were some cohorts of students for whom this approach did not work. This is particularly concerning in the context of results for nursing/paramedics students; despite commencing the semester with the highest level of engagement, this group reported the lowest level of engagement at final survey by a significant margin. It is possible that lower participation rates in the final survey have influenced results, as students who are less engaged would be less likely to attend the final lecture. As the end of semester is notorious for conflicting priorities, with many students undertaking practical placements, it is impossible to establish the extent of this effect. On available evidence, student engagement was high for all degree programs excluding nursing/paramedics, and remained stable across the semester, suggesting the new teaching and learning practices were effective in maintaining student engagement.

The multidisciplinary context presents the unique opportunity to explore the perspectives of peers from allied disciplines, as this is rarely possible during content that is highly discipline specific (Sargeant et al., 2011). Multidisciplinary foundation units offer students a wealth of quality learning opportunities, however the challenge for educators lies in translating students’ enthusiasm to a meaningful engagement with the course materials (Sheard et al., 2010). In light of this, the decline of student engagement for nursing/paramedics students is of particular concern. Insight may be offered by examining the results of individual items on the final lecture survey; nursing/paramedics students recorded the lowest scores for questions pertaining to personal and professional relevance. Particularly strong agreement was found for the statement ‘This unit was a unit that I would have preferred not to have to study’. The sentiment implied by these results is perfectly captured by a student who stated “This is a psychology unit. I think that the paramedics’ course should have its own communications course developed. One that is more relevant.” Identification with this perception suggests nursing/paramedics students do not believe the communication skills being taught to them in this unit will be relevant to their personal and professional needs, despite efforts to enhance the multidisciplinary perspective. Similar sentiments pertaining to relevance of the tools designed to improve engagement were also expressed by a student studying exercise physiology at the first lecture: “A majority of students in this class are human movement students so the [engagement] video could have related to them in a sports science theme.” By contrast, this does not appear to represent a broadly held sentiment, as despite recording the greatest decrease in respondents as a proportion, exercise physiology students did not report a significant decrease in student engagement. The challenge of engaging students under the current teaching model appears specific to the nursing/paramedics cohort.

While there is inadequate evidence to precisely determine the present causative factors driving nursing/paramedic student disengagement, the results imply that these students perceive the communication skills required by their discipline to be distinct from other allied health fields. Yet evidence from that industry’s professional accreditation body tends to suggest this is not the case (see Nursing and Midwifery Board of Australia, 2013). Despite efforts to develop a multidisciplinary unit that explores a range of professional perspectives, there is an enduring perception that the content is inherently grounded in psychological principles. Though the scenarios and challenges faced by nursing/paramedics students in their clinical placements may differ in substance from those faced in other areas of allied health, effective communication is grounded in principles that transcend disciplinary boundaries (Sargeant et al., 2011; Sehgal et
Engagement in multidisciplinary classrooms, refereed paper

al., 2008). For example, assertiveness is required as much by a psychologist to establish appropriate boundaries in psychotherapy, as a paramedic requires assertiveness to handle a distressed patient. Active listening is as essential for a pharmacist to ensure they dispense appropriate medication, as for a nurse to ensure their patient understands their treatment plan. Furthermore, as patient care becomes increasingly integrated, allied health practitioners must possess the capacity to work effectively within this context (Sargeant et al., 2011). By considering their role and their discipline within the broader context of allied health, students are more likely to successfully navigate their future working environments as members of a healthcare team (Sehgal et al., 2008). The lessons contained within the multidisciplinary learning environment certainly possess great relevance to effective practice, regardless of discipline; yet convincing some students of this appears to be another matter entirely.

**Limitations and future directions**

The present study represents a preliminary investigation of student engagement in a unit designed to develop an important graduate attribute, interpersonal communication. There are some limitations that must be acknowledged when considering the results of this research. While the use of convenience sampling facilitated the collection of a reasonable sample, it also sacrificed the opportunity to employ repeated measures. In light of the lower participation rate for the final survey, the viability of repeated measures is questionable; however the opportunity to track students’ engagement throughout the course of the semester would provide a more comprehensive representation of the trajectory that student engagement follows. It remains possible that the relative stability of student engagement scores is a function of disengaged students effectively opting out of the final survey, however the results of the nursing/paramedics cohort suggests this is not necessarily the case.

At present, the relative isolation of student engagement to nursing/paramedics students together with the fact they may believe they require a particular type of communication skill not being presented to them in this unit suggests qualitative investigation may be the most expedient means of investigating the source of student disengagement in this cohort. A lack of professional identity and limited understanding of exactly what skills they will need to use professionally may be the reason this student cohort experienced the diminished engagement seen in the present study. A final methodological consideration lies in the scale developed for this study; despite demonstrating strong reliability, its external validity cannot be established, and it lacks the factorial capacity to explore individual elements of student engagement. Therefore while useful as a pilot study, employing a proven measure of student engagement such as the AUSSE survey would expand the scope of the study, while providing the capacity to quantitatively explore any areas raised during qualitative investigation (Coates, 2010).

**Conclusion**

Communication skills are a fundamental graduate attribute across a range of disciplines (Lindsay, 2014) including allied health professions. Unfortunately there are limited opportunities to explore how students engage with these skills at an undergraduate level as so few dedicated communication courses are included in undergraduate allied health programs. This paper reported on one attempt to explore how student engagement with the subject material may have differed as a function of discipline across the duration of the teaching period. The multidisciplinary context of the unit provides a unique atmosphere of learning opportunities, where diverse perspectives and experiences can be shared, compared and contrasted, however the ultimate value of this learning environment is subject to students’ engagement with it. The findings of the present study suggest that to maintain student engagement, understanding and
addressing students’ perception of relevance to their needs and interests may be more influential than the relevance of the content to their development as an allied health professional. The challenge of student engagement in the multidisciplinary context therefore lies in reconciling the gulf between students’ and educators’ expectations of each other and the course itself, towards creating a learning experience that is accessible, authentic and appropriate.

References


Dreyfus, S. E., & Dreyfus, H. L. (1980). *A five-stage model of the mental activities involved in directed skill acquisition.* University of California, Berkeley.


---

Engagement in multidisciplinary classrooms, refereed paper 10