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Improving the student experience in higher education: An action research approach to implementing collaborative learning strategies

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Abstract

Although higher education institutions (HEIs) tend to use traditional teaching formats, such as Lectures, this teaching strategy clashed with our commitment to a student-centred approach. Using an action research approach, we sought to promote greater student engagement via the implementation of collaborative learning activities. Previous literature has found largely positive effects of collaborative learning on student engagement and attainment, the present study therefore sought to extend on this prior research to examine whether there were positive effects of collaborative learning on the student experience. A qualitative and quantitative module evaluation was carried out using a questionnaire designed specifically for the study. The sample consisted of 30, second year, undergraduate students, enrolled on a particular psychology module. The module evaluation was administered during the last class of the module. Data were analysed through use of thematic analysis and t-tests. Results found collaborative learning to have a positive effect on the student experience, the details of this effect will be discussed further.

Keywords: student engagement; collaborative learning; student experience; action research; higher education

Introduction

Stenhouse (1975) famously advocated that 'curriculum research and development ought to belong to the teacher'. It is not enough for teachers to merely teach, but their 'work should be studied: they need to study it themselves' (p.143). Advocates of action research (e.g., McNiff, Lomax and Whitehead 2002; Whitehead 1989, 1999) have contended that the impetus to carry out an action enquiry can often arise from a realisation that we are not living our practiced values in our professional lives. The current study emerged from this very type of contradiction; as educators committed to a student-centred approach, it was difficult to realise these values within the traditional teaching methods utilised within our everyday practice. Whilst other educators (e.g., Tormey and Henchy 2008) have acknowledged these very ideological challenges between teaching values and contextual practice, we personally found recognising this clash to be extremely difficult, especially as newly qualified teachers within a Higher Education Institute (HEI).

More specifically, action research starts with the process of enquiry by the educator(s) into the effectiveness of their own teaching and their students learning (Pernecky 1963). In the current study, this process of critical reflection and enquiry came as a direct result of the student feedback produced. Recognising this clash between the student-focused values we held as educators and the traditional applications within our teaching practices, we began to ask: "how do we improve our teaching?". This question provided the starting point to our action enquiry. We sought to redesign the delivery and content of a second year undergraduate psychology module, based on the feedback provided by student evaluations. Upon our review of student feedback, issues were identified in areas of class engagement and consolidation of information.

Collaborative learning strategies were devised to maximize engagement and student experience, all actions were implemented within the following academic year (2014–2015). The current study is therefore a second cycle analysis and review based on the learning solutions that we implemented. The action taken will be critically reviewed based on the module evaluations collected from students enrolled on the redesigned module in the 2014-2015 academic year.

We begin by exploring the literature surrounding the student experience, with particular reference to teaching and learning quality. The literature further identifies specific collaborative learning strategies which have been shown to enhance the student experience. Subsequently, these activities were implemented into the classroom; both qualitative and quantitative data was collected following these classroom changes, revealing a detailed response from students in regards to the quality of teaching and learning received.

Undergraduate student experience in in UK

At the start of the 2012-2013 academic year, tuition fees in England trebled as the government removed all public funding. As a result of these increases, the landscape of the UK higher education system shifted into a more competitive environment (Temple, Callender, Grove and Kersh 2014) and now more than ever the student experience is at the heart of Higher Education Institutes (Sabri 2011). Whilst the student experience encompasses the totality of a student's journey with the institute (Morgan 2012), the learning and teaching quality is often seen as the most important feature within the student experience and a key value within the UK Quality Code for Higher Education (QAA 2012). In 2012, the National Union of Students produced a Student Experience Report which surveyed 5000 UK higher education students on their experience. Results found that over 90% of students indicated teaching and learning quality as the most important aspect of their university career.

Similarly, the Times Higher Education Student Experience Survey (2012) gathered the views of more than 14,000 undergraduates on what mattered the most in their student experience. Students were asked to rate the importance of 21 aspects of university life, including; quality of teaching, learning opportunities, student life, accommodation and student support. Overall, students considered teaching and learning to be crucial for a fulfilling student experience; with specific reference to the positive impact of interactive and collaborative learning. Therefore, it is crucial that HEIs provide their students with quality collaborative learning opportunities and teaching practices to ensure a greater student experience.

Student involvement

The Quality Assurance Agency for Higher Education (QAA) safeguards and supports the improvement of academic quality for students in the UK. To this end, the QAA sets the Quality Code, which outlines the expectations about learning and teaching within higher education providers. Whilst the Quality Code states that identifying effective learning and teaching strategies can be complex, providers must work with students to review and enhance the provisions of these practices (QAA 2012). In 2012/2013 the Quality Assurance Agency (QAA) funded a research project exploring the views of UK students in higher education. In particular, the project investigated their expectations and perceptions of the quality of their learning experience and the academic standards of their chosen programmes of study. Results from over 150 students at 16 institutes across the UK indicated that students valued courses that embraced student involvement (Kandiko and Mawer 2013). These findings have been heavily supported by a number of other empirical studies over the years. Taken together, there is a strong argument that students who are involved in their learning, with both other students and faculty, are found to not only enjoy their university experience more fruitfully, but also tend to learn and understand course content to a higher degree (Astin 1985; Bonwell and Eison 1991; Lujan and DiCarlo 2006; McCarthy and Anderson 2000; McCuddy and Pinar 2007).

As a result of the increasing evidence suggesting that overall student experience and learning quality is increased through involvement by students, HEIs have shifted towards a student-focused approach (McCuddy and Pirie 2007; Morse 2007). Underlying this approach is the strong focus on placing the student at the centre of the learning process, through encouraging student engagement and ensuring students are treated as co-creators in the learning process (Bain 2004). By doing so, students assume ownership of their academic process and their interest in academic development becomes heightened (Nair 2002). This increase in student commitment creates a more stimulating academic environment and inevitably leads to the enhancement of students overall university experience (Sheppard, Johnson and Leifer 2002). It is therefore vital that HEIs ensure student-focused incentives are provided, as student input has been seen as a valuable instrument in measuring quality assurance in the UK's higher education system (Leckey and Neill 2001).

Collaborative learning strategies

Research has indicated that a student-centered approach can be facilitated by collaborative learning strategies (Attard, DiLoio, Geven and Santa 2010). This type of learning is based on instructional strategies that allow for students to engage with the content, with each other, and with staff, to achieve a common goal (Bain 2004). Within this approach, student learning goals are structured to promote collaborative efforts. Therefore, instructional activities are aimed at accomplishing these goals, with teachers' providing support and monitoring student learning (Johnson and Johnson, 2009).

The concept of collaborative learning is centred on the idea that information is consolidated more efficiently when students work actively together with new material (Gokhale 1995). In particular, rather than simply recording the lecturers presentation of new concepts, students integrate new concepts with what they already know or use it to reorganise what they thought they knew; subsequently enabling students to focus on understanding concepts rather than memorizing facts (Briggs 1999). Collaborative learning activities therefore challenge students to practice and develop higher order reasoning and problem solving skills, which are considered crucial to learning (Smith and MacGrego 1992). The Quality Code also supports and encourages this notion of a collaborative learning within the classroom, believing that only by working together can authentic student engagement be established and the learning experience of students be improved (QAA 2012).

Past research has highlighted the benefits of collaborative student engagement, notably: greater academic achievement (Graham, Tripp, Seawright and Joeckel 2007), improved retention (Fry, Ketteridge and Marshall 1999; Krause 2005; Lujan and DiCarlo 2006; McCarthy and Anderson 2000), higher student motivation (Machemer and Crawford 2007) and improved critical (Smith, Sheppard, Johnson and Johnson 2005) and reflective thinking skills, which help students become more self-directed learners (Justice et al. 2007). Overall, there is substantial evidence to suggest that students learn more when they actively engage with the material, the lecturer and their classmates (Howard 2002). Teaching and learning strategies therefore need to be designed to encourage students to become active thinkers and cooperative partners within the classroom (Park 2003). For instance, various collaborative techniques such as class discussions (Anderson, Mitchell and Osgood 2005; Armbruster, Patel, Johnson and Weiss 2009; McDaniel, Lister, Hanna and Roy 2007), group work (Born, Revelle and Pinto 2002; Cortright, Collins, Rodenbaugh and DiCarlo 2005), or even problem based activities

(Capon and Kuhn 2004; Preszler 2004) can help students to enhance their learning environment (Cavanagh 2011).

Collaborative learning strategies and student experience

Although the majority of research on collaborative engagement of students in lectures has been favourable, some studies have found that collaborative learning in lectures can be detrimental. For example, Huxam (2005) found that interactive learning tasks had a negative effect on their recall and learning, amongst a group of university students' studying sciences. Similarly, Vreven and McFadden (2007) carried out a study on a group of psychology students, incorporating collaborative learning activities in lectures, results indicated no additional benefits to the students learning. Crucially, much of the research in the area has focused on how these approaches improve student learning outcomes (Hu, Kuh and Li 2008), with very few studies attempting to explore how collaborate learning activities affect the student experience (Hodgson 1997). Consequently, these types of mixed results indicate the need for further research exploring the integration of active student engagement and collaborative learning in lectures, with specific focus on how this impacts the student experience. Thus, the current study examined this gap in the literature and sought to examine whether activities of collaborative learning improved the student experience within higher education.

Method

The objective of the research was to improve the student experience within the classroom and create a more student-focused module. This was addressed by reviewing student feedback on a particular module both before and after learning strategies were introduced based on current literature and student evaluations. The action research cycle used within the current study was adapted from Sagor's (2005) Action Research Process and based on the basic action research models used within previous research (e.g., Bruner 1960; Kurt 1946; Norton 2009; Ritchie et al. 2002). There were three stages, each of which are described in more detail below.

Stage one: Focusing

The first stage was directed at identifying module issues from a student perspective. This stage was carried out at the end of the 2013-2014 academic year. All students enrolled on a second year psychology course were advised that part of the last lecture would entail a focus group to discuss and evaluate their psychology course. Of the 48 students registered for the course, 30 (62%) attended the focus group. According to the psychology departmental policy, whilst the completion of a module evaluation is voluntary, the process of allowing students to provide feedback on modules is embedded across all psychology modules. For this particular module, a focus group was set whereby students were asked to provide verbal feedback on whether the module met their expectations, including: its content, learning resources, readings, assessment and feedback. Students were further asked to provide suggestions of any changes they felt might benefit the module. As such, the overall themes discussed in the focus group related to the module evaluation questions asked post-evaluation (*See Appendix A*).

In May 2014, this focus group data was subsequently reviewed by the researcher, who was also the module convener of the psychology course (i.e. the first author of this paper). This process was carried out as part of the researcher's annual departmental appraisal, which emphasises the involvement of student feedback in all module changes. Student feedback revealed a number of suggestions from students, in particular, it was noted by the majority of students that lectures needed to provide greater class engagement ($N=19$, 63%) and more opportunities to consolidate information ($N=20$, 67%). Consequently, based on student feedback, a focus on improving student experience within the lectures was identified.

Stage two: Clarifying strategies

The second stage involved identifying the strategies which may lead to greater class engagement and the consolidation of information. These strategies were identified through a further investigation of research and literature in the area. Upon this review, collaborative learning techniques were identified as effective strategies to increase class engagement and students retention of information. These techniques included various activities, such as; collaborative writing, debates, class discussions, group work, case study reviews and role playing exercises, which were subsequently introduced within the 2014-2015 curriculum. Moreover, at the start of the module, students were introduced to the concept and benefits of collaborative learning. Students were further advised that collaborative learning strategies would be used throughout the module. These strategies

were implemented around every 20 minutes within each of the eight 2-hour lectures that made up the module. This method was based on the research that suggests that the upper limit of the human brain's capacity to pay focused attention to a lecture is about 20 minutes (Junco, Heiberger and Loken, 2011). These were the only changes made to the module, all other factors (e.g., lecturer, class size, learning environment) remained consistent.

The strategies introduced led to the identification of the following research question: do collaborative learning activities within higher education promote a more positive student experience?

Stage 3: Implementing and evaluating

Data for the final stage was collected from module evaluations completed by students enrolled on the same psychology module the following academic year (2014-2015). All 30 students were asked to complete a module evaluation during the last lecture of the academic year (*see Appendix A*). To facilitate student's willingness to feel that they could be honest and open in their evaluations, no identifying information was collected and students were assured all responses would remain anonymous. The evaluation was created for the purpose of this study and was based on the standard forms used at the university. The evaluation consisted of 10 questions pertaining to the module content (e.g., *Did you feel the module content developed your existing knowledge and challenged you?*), teaching methods (e.g., *Was there enough variety in the teaching methods on this module?*) and overall satisfaction (e.g., *Overall, would you say you were satisfied with the quality of the module?*). Each item was captured on a 5-point scale (*1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree*) to indicate the degree to which each student agreed with each item. Students were further provided with the opportunity to expand on each of their answers and offer suggestions for module improvements. Upon completion of the module evaluations all students were thanked for their feedback.

Findings

The purpose of the data analysis was to evaluate the impact and overall satisfaction of curriculum changes based on student feedback.

Qualitative analysis

Data was firstly analysed using thematic analysis. This technique was used to identify themes within the short answer responses provided by students. All 30 module evaluations were analysed using Luborsky's (1994) technique, which is suitable for analyzing qualitative data obtained from semi-structured interviews and open-ended questions. The themes from students were generated from reoccurring comments in relation to their experiences, perceptions and overall satisfaction with the module. Themes were identified using an inductive ('bottom up') method (Frith and Gleeson 2004), this type of approach involves identifying patterns which are strongly linked to the data (Patton 1990). This approach was applied as there was no theoretical underpinning which generated the exploration of specific themes. Several patterns emerged from the module evaluation's short answers, all identified patterns were placed within two overarching themes: (1) Teaching Methods and (2) Overall Student Experience. Once themes were highlighted, they were refined with sub-themes to ensure the detailed nature of the sample was identified. Each theme and corresponding sub-themes are presented below (Table 1).

Table 1. A summary of the coding framework

Main Theme	Sub-Theme	Key comments within sub-themes
Teaching Methods	Variety of methods	<i>Active engagement</i> <i>Collaborative learning</i>
	Effectiveness of methods	<i>Consolidated information</i>
Overall Student Experience	Positive experience	<i>Classroom activities</i> <i>Engaging lectures</i>
	Future recommendations	<i>Pace of lectures</i> <i>Constructive feedback</i>

Quantitative analysis

To strengthen the themes further, the quantitative data generated from module evaluations was analyzed using one sample t-tests. This mixed method design was used to triangulate the qualitative and quantitative data (Lobe 2008). Thus, both the qualitative and quantitative findings will now be reported together, by theme.

Teaching methods

When examining the teaching methods, this theme refers to the principles and methods implemented within the classroom. Students were asked a number of questions about the teaching style of the lecturer, such as the delivery of teaching methods, the range of teaching methods and the usefulness of teaching style in relation to the content. This theme encompassed two sub-themes which developed from participants answers to the above questions; (1) Variety of methods and (2) Effectiveness of methods.

Variety of methods. When students were asked to provide comments about the teaching style of the lecturer, the vast majority ($N= 25$, 83%) made reference to the diversity of teaching methods used throughout the module. For example, the integration of traditional lecture, discussion, debates, virtual technology and case studies. Key comments were further categorised within either *active engagement* or *collaborative learning*.

For example, students highlighted the activities which motivated them to engage within the course content, making comments such as; *"I liked the group interactions and hands on tasks used in lectures e.g., debates, creating models of experiments and posters. It helped to keep me focus"* (Participant 18) and *"It was easier to keep my attention because it was so interactive"* (Participant 22). Likewise, other students talked about the specific activities that they enjoyed, making comments such as; *"I enjoyed the role playing activities used to recap information"* (Participant 2), *"Great anecdotes and use of clips"* (Participant 7) and *"Lots of real life examples, use of virtual technology and debates"* (Participant 6).

Similarly, students further commented on their satisfaction with the methods of *collaborative learning* dispersed throughout the module. One student explained how they liked the *"use of group discussions, fun interactive games and class debates to teach"* (Participant 15), whilst other students talked about how they enjoyed having *"good class discussions and small group activities which were based on real life case*

examples" (Participant 16). One student went on to explain how the *"discussions were good as it got everyone involved – answering questions on readings and helped to break things down"* (Participant 1).

Further support for the variety of methods came from the quantitative data collected from the module evaluation forms. A one-sample t-test was used to examine the overall satisfaction with the variety of teaching methods used on the module. Student scores were evaluated based on whether their mean was significantly lower from a neutral score of 3 (neither agree nor disagree). The sample mean of 1.83 ($SD=.592$) was significantly lower than 3, $t(29) = -10.79, p < .001$. The results support the conclusion that students were satisfied with the variety of teaching methods.

Effectiveness of methods. Another sub-pattern which developed within the teaching methods theme emerged when students were asked to provide comments on the delivery of the course content. The vast majority of students ($N=27, 90\%$) made reference to the effectiveness of teaching methods used by the lecturer, making reference to phrases such as *helped with understanding* and *very memorable*. Specific comments primarily pertained to the practicality in *consolidating information*, with students elaborating on the various techniques used which they found most effective. For example, a vast number of students commented on the lecturers' use of case studies which *"added to the understanding of content"* (Participant 5). As one student explained further, *"I found the lectures to be very informative and enthusiastic. The class discussions around specific case examples made the information more memorable"* (Participant 3). Similarly, another student talked about the effectiveness of group work and collaborative exercises, *"the group activities helped me to apply what I had just learnt which helped with my understanding of the subject."* (Participant 13).

The quantitative responses from the module evaluations reinforced the usefulness of the teaching methods. A one-sample t-test was carried out to find whether students felt the teaching methods used were strongly able to deliver course content in a manner they understood. When compared to a the neutral factor of 3 (neither agree or disagree), the sample mean of 2.03 ($SD = .615$) indicated an agreement amongst students in regards to the effectiveness of the teaching methods, $t(29)=-8.610, p < .001$.

Overall student experience

This theme refers to the fulfilment of the student's expectations within the module, along with their overall engagement with the learning and teaching methods on the module. Students were asked a number of questions about their satisfaction with various aspects of the module and future recommendations. Whilst all students noted a general satisfaction with the module, key recommendations were also noted. The patterns that emerged within this theme were therefore reflective of students (1) Positive experience and (2) Future recommendations.

Positive experience. When students were asked to comment on their overall experience within the module, taking into account all aspects of the module (i.e., developing knowledge, assignments, course content and delivery of course content), the majority of students ($N=23$, 77%) made reference to the overall positive experience they encountered from the module. Marking particular reference to the *classroom activities* and *engaging lectures*. For instance, one student explained how their favorite aspect of the module was the *classroom activities*:

"I found the module overall interesting, I especially enjoyed the group tasks and scavenger hunt! The class case studies were great and although I didn't particularly like the class debate, it was very helpful and widened my information" (Participant 8).

Similarly, another student talked about how their favorite aspect of the lectures were the *"interactive activities, such as diagnosing disorders and treatment methods"* (Participant 19).

Other student responded that they were more than satisfied with the module and the *engaging lectures*; with many students expressing similar comments such as; *"every lecture was really engaging and interesting"* (Participant 5) and *"the lectures were fun and stimulating. The slides contained the right amount of information and the activities kept the information interesting"* (Participant 20).

A one-sample t-test was used to examine the strength of the students' positive experience of the module from the neutral score of 3 (neither agree nor disagree). The sample mean of 1.63 ($SD = .490$) indicated a significant difference, $t(29) = -15.27$, $p = < .001$, supporting the conclusion that students found the module as a very positive experience.

Further recommendations. The final sub-pattern that developed within the overall student experience theme emerged when students were asked if they had any future recommendations for the module. Whilst all students expressed their overall satisfaction with the module, the majority ($N=28$, 93%) also commented on key recommendations for the module. The majority of students ($N=19$, 63%) provided suggestions when asked for specific module changes. There was a noteworthy emergence of comments surrounding; *pace of lectures*, *understanding of feedback* and *critical thinking*.

More specifically, some students reported the *pace of lectures* as "too quick" at times, with students using phrases such as; "too much content, too quickly" (Participant 4) and "the content was a little overwhelming" (Participant 23), when providing constructive feedback on the module. When students were asked how the module could be improved in relation to their issues several students provided further suggestion; "some content was too slow, some was too fast – need more balance" (Participant 28). Another student explained that "at times there was a lot of content which was sped through very quickly making it hard to keep up, maybe giving us a bit of time before jumping to the next topic would help" (Participant 9).

Along with the *pace of lectures*, a number of students also made reference to the *understanding of feedback* throughout the module; "clearer feedback would be great. We are told to put stuff in assignments which may then be irrelevant or penalised in the marking of the assignment" (Participant 18). Similarly, other student provided suggestions for the future in regards to their issues; "feedback on assignments were sometimes difficult to understand. Be nice to look over as a group on one assignment to help understand comments/marks" (Participant 14). Another student explained how they thought "next year we should have a session on feedback and what certain phrases mean, and how to improve from these" (Participant 2).

Conclusion

This project arose from the initial desire to improve our current teaching and learning practices, based on comments made from student module evaluations. The study aimed to improve the student experience by redesigning teaching practices based on student feedback, thereby creating a more student-focused module. More specifically, student feedback highlighted the need for greater class engagement and more focus on

consolidation of information. Upon review of current literature and standards set by the QAA, a collaborative learning approach was implemented within the classroom.

Following the review of 30 student module evaluations, findings indicated that students responded positively to the collaborative strategies implemented to improve the student experience in the classroom. In particular, the quantitative data indicated that overall, students found the module to be a positive experience. The variety of teaching methods was further regarded as beneficial and effective in helping students understand module content. The qualitative data provided the opportunity to explore the statistical results in more detail, highlighting that students greatly valued the collaborative learning methods dispersed throughout the module, both in terms of consolidating information and maintaining their interest.

These findings are consistent with previous research, which has found that traditional lectures that incorporate a variety of collaborative methods (such as short writing tasks, small-group discussions and problem based activities) not only leads to greater academic success (Pereira et al. 2007), but also helps students re-engage with the content (Young, Robinson and Alberts 2009). Moreover, the benefits of integrating these types of teaching methods provides students with a greater opportunity to consider different perspectives and ways of learning (Herrington and Herrington 2006). Most importantly, it is vital that in today's diverse student populations, teaching and learning practices are delivered in a manner which supports all students in their learning. In particular, it is essential that learning material is delivered in a variety of ways to ensure all students are provided with the opportunity to develop their learning (De Corte, 1995; 2000).

The current findings also suggested that the use of collaborative learning methods not only helped students maintain interest, but also assisted in consolidating information. These findings are supported by the ample amounts of research showing the advantages associated with collaborative learning in lectures (Cavanagh 2011), including; greater retention of information (e.g., Fry et al. 1999; Krause 2005; Lujan and DiCarlo 2006; McCarthy and Anderson 2000), higher student motivation (Machemer and Crawford 2007) and an overall increase in student interest (Totten, Sills, Digby and Russ 1991). Many proponents of collaborative learning further argue that this strategy is the best way to ensure high quality learning (Chao, Saj and Hamilton 2010; Graham et al. 2007). Furthermore, these arguments are supported by the Quality Code for Higher

Education, which emphasises the need for universities to take steps in engaging their students collectively in the classroom (QAA 2012).

The noteworthy distinction between previous research and the present study, is the emphasis placed on the student experience. As previously mentioned, the vast majority of research on collaborative learning methods has focused on how these approaches improve student learning outcomes (such as academic success, retention and cognitive output, Hu, Kuh and Li 2008), with less focus being placed on how these methods affect the student experience (Hodgson 1997). The current study added to the literature by providing a student perspective of how collaborative learning enhances the student experience, both in terms of motivational interest and the understanding of course material. In particular, students valued a variety of collaborative methods and found them to have a beneficial and positive effect on their experience of the module. Most importantly, the results from the current study have led to the inclusion of more collaborative teaching approaches across all areas of our teaching practices. It has further led us to ensure student feedback is reviewed and taken on board more directly within our own practice.

While the results of the project indicated the positive impact collaborative learning could have on the student experience, there are a number of considerations that need to be addressed when viewing the findings. In particular, whilst the only changes made to the module pertained to the collaborative learning methods, other factors which remained consistent, such as the lecturer and class size, were not explored in the module evaluations. Moreover, the module evaluations were not compared to the focus group evaluations made the previous year. As such, further research is needed in the area before any definitive conclusions can be made about the impact collaborative learning has on the student experience.

To conclude, although the results showed that overall students found their experience within the classroom as a positive and that they were satisfied with the teaching methods used throughout the module, the qualitative results also indicated some noteworthy recommendations from students, including: the pace of lectures and clarity of student feedback. These comments provide us with the starting point to our next action enquiry and further highlights the need for us to continue to engage with students concerning their experiences in higher education. Action research is designed as a process of enquiry by the practitioner(s) into the effectiveness of their own teaching

and students learning. We therefore view it as a continual process that is designed to encourage ongoing enquiry into our teaching and learning practices. The next step in this process will be to explore the new recommendations made by students. This process will help us to continue to build on good practice and develop other areas of our teaching and learning practices, which we can review and change for the greater good of our students.

References

Anderson, W. L., Mitchell, S. M., & Osgood, M.P. (2005). Comparison of student performance in cooperative learning and traditional lecture-based biochemistry classes. *Biochemistry and molecular biology education: A bimonthly publication of the International Union of Biochemistry and Molecular Biology*, 33, 387-93.

Armbruster, P., Patel, M., Johnson, E. & Weiss, W. (2009). Active learning and student-centered pedagogy improve student attitudes and performance in introductory biology. *Education*, 8, 203-213.

Astin, A. W. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education*. San Francisco: Jossey-Bass.

Attard, A., Di, E., Loio, K., Geven, E. & Santa, R. (2010). *Student centered learning: An insight into theory and practice*. Education International, Bucharest: European Students' Union.

Bain, K. (2004). *What the best college teachers do*. Cambridge, Mas: Harvard University Press.

Biggs, J. (1999). *Teaching for quality learning at university*. Philadelphia, P.A: Open University Press.

Bonwell, C.C. & Eison, J.A. (1991). *Active learning: Creating excitement in the Classroom*. Washington, D.C. ASHE-ERIC.

Born, W., Revelle, W. & Pinto, L. (2002). Improving biology performance with workshop groups. *Science Education*, 11, 347.

Bruner, J. S. (1960). *The process of education*. Cambridge, Mass: Harvard University Press.

Capon, N. & Kuhn, D. (2004). What's so good about problem-based learning? *Cognition and Instruction*, 22, 61-79.

Cavanagh, M. (2011). Students' experiences of active engagement through cooperative learning activities in lecture. *Active Learning in Higher Education*, 12, 23-33.

Chao, I. T., Saj, T. & Hamilton, D. (2010). Using collaborative course development to achieve online course quality standards. *International Review of Research in Open and Distance Learning*, 11, 106–126.

Cortright, R. N., Collins, H. L. & DiCarlo, S. E. (2005). Peer instruction enhanced meaningful learning: ability to solve novel problems. *Advances in Physiology Education*, 29, 107-111.

Fry, H., Ketteridge, S. & Marshall, S. (1999). *A handbook for teaching and learning in higher education*. London: Kogan Page.

Graham, C.R., Tripp, T. R., Seawright, L. & Joeckel, G. L. (2007). Empowering or Compelling Reluctant Participants Using Audience Response Systems. *Active Learning in Higher Education*, 8, 233-258.

Herrington, A. & Herrington, J. (2006). *What is an authentic learning environment?* Hershey, P.A: Information Science Publishing.

Hodgson, V. (1997). Lectures and the experience of relevance. In Marton, F., Hounsell, D. & Entwistle, N., *The Experience of Learning*, Edinburgh: Scottish Academic Press.

Howard, S. (2002). A spiritual perspective on learning in the workplace. *Journal of Managerial Psychology*, 17, 230–242.

Hu, S., Kuh, G. & Li., S. (2008). The effects of engagement in inquiry-oriented activities on student learning and personal development. *Innovative Higher Education*, 33, 71–81.

Huxham, M. (2005). Learning in lectures. *Active Learning in Higher Education*, 6, 17–31.

Johnson, D.W., & Johnson, F. (2009). *Joining together: Group theory and group skills (10th ed.)*. Boston: Allyn & Bacon.

Justice, C., Rice, J., Warry, W., Inglis, S., Miller, S. & Sammon, S. (2007). Inquiry in higher education: Reflections and directions on course design and teaching methods. *Innovative Higher Education*, 31, 201–214.

Kandiko, C. B. & Mawer, M. (2013). *Student expectations and perceptions of higher education*. London: King's Learning Institute.

Katinka, K.V., Albert, J. A., van der Vleuten, C. P. & Verwijnen, G. M. (2004). Student participation in educational management and organization. *Medical Teacher*, 20, 451-454.

Krause, K. (2005). *Understanding and promoting student engagement in university learning communities*. Paper presented at the James Cook University Symposium Sharing Scholarship in Learning and Teaching: Engaging Students, Queensland, Australia, 21-22 September.

Kurt, L. (2010). Action research and minority problems. *Journal of Social Issues*, 2, 34-46.

Leckey, J. & Neill, N. (2001). Quantifying quality: The importance of student feedback. *Quality in Higher Education*, 7, 19-32.

Lobe, B. (2008). *Integration of online research methods. Information Technology/Social Informatics collection*. Ljubljana, Slovenia: Faculty of Social Sciences Press.

Luborsky, M. (1994). The identification and analysis of themes and patterns. In . Gubrium, J.F. & Sankar, A. (1994) *Qualitative methods in aging research*. Thousand Oaks, CA: Sage.

Lujan, H.L. & Dicarolo, S. E. (2006). Too much teaching, not enough learning: What is the solution? *Advances in Physiology Education*, 30, 17–22.

Machemer, P. & Crawford, P. (2007). Student perceptions of active learning in a large cross-disciplinary classroom. *Active Learning in Higher Education*, 8, 9–30.

McCarthy, J. & Anderson, L. (2000). Active learning techniques versus traditional teaching styles: Two experiments from History and Political Science. *Innovative Higher Education*, 24, 279–294.

McCuddy, M.K. & Pirie, W.L. (2007). Willingness to innovate: Use, misuse, and abuse of student evaluations of instruction. In McCuddy, M. K., van den Bosch, H., Martz, B., Matveev, A.V. & Morse, K.O. (2007). *The Challenges of Educating People to Lead in a Challenging World*. Springer: Dordrecht.

McDaniel, C. N., Lister, B. C., Hanna, M. H. & Roy, H. (2007). Increased learning observed in redesigned introductory biology course that employed web-enhanced, interactive pedagogy. *CBE—Life Sciences Education*, 6, 243-249.

McNiff, J. & Whitehead, J. (2002). *Action research: Principles and practice*. 2nd ed. London: Routledge.

Morse, K. (2007). Learning on demand: The education objective for the knowledge economy. In McCuddy, M. K., van den Bosch, H., Martz, B., Matveev, A.V. & Morse, K.O. (2007). *The Challenges of Educating People to Lead in a Challenging World*. Springer: Dordrecht.

Morgan, M. (2012). *Improving the student experience: A practical guide for universities and colleges*. Abingdon: Routledge.

Nair, C.S. (2002). *Evaluation of subject, teaching and research*. Retrieved from: http://www.nus.org.uk/PageFiles/12238/2012_NUS_QAA_Teaching_and_Learning.pdf

- Norton, L.S. (2009). *Action research in teaching and learning: A practical guide to conducting pedagogical research in universities*. Abingdon: Routledge.
- Park, C. (2003). Engaging students in the learning process: The learning journal. *Journal of Geography in Higher Education*, 27, 183–199.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. 2nd ed. Newbury Park, C.A: Sage.
- Pereira, J., Pleguezuelos, E., Meri, A., Molina-Ros, A., Molina-Tomas, C. & Masdeu, C. (2007). Effectiveness of using blended learning strategies for teaching and learning human anatomy. *Med Education*, 41, 189-195.
- Pernecky, J. (1963). Action research methodology. *Bulletin of the Council for Research in Music Education*, 1, 33-37.
- Preszler, R. (2004). Cooperative concept mapping: Improving performance in undergraduate biology. *Journal of College Science Teaching*, 33, 30-35.
- Quality Assurance Agency for Higher Education. (2012). *The quality code: A brief guide*. Retrieved from <http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code>.
- Ritchie, R., Pollard, A., Frost, P. & EAUDE, T. (2002). *Action research: A guide for teachers. burning issues in primary education*. Birmingham: National Primary Trust.
- Sabri, D. (2011). What's wrong with 'the student experience?'. *Discourse: Studies in the Cultural Politics of Education*, 32, 657-667.
- Sagor, R. (2005). *The action research guidebook: A four-step process for educators and school teams*. Thousand Oaks: Corwin Press.
- Sheppard, S., Johnson, M. & Leifer, L. (2002). *A model for peer and student involvement*. 27th Annual Conference of Frontiers in Education Proceedings.

Smith, B. L. & MacGregor, J. T. (1992). What is collaborative learning? In Goodsell, A. S., Maher, M. R. & Tinto, V. (1992). *Collaborative Learning: A Sourcebook for Higher Education*. National Center on Postsecondary Teaching, Learning, & Assessment, Syracuse University.

Stenhouse, S. (1975). *An introduction to curriculum research and Development*. London: Heinemann.

Temple, P., Callender, C., Grove, L., Kersh, N. (2014). Managing the student experience in a shifting higher educational landscape. *The Higher Education Academy*, 1-26.

Times Higher Education Student Experience Survey. (2012). *Student experience survey: What matters most?* Available from <https://www.timeshighereducation.co.uk/news/student-experience-survey-what-matters-most/419770.article>.

Totten, S., Sills, T., Digby, A. & Russ, P. (1991). *Cooperative learning: A guide to research*. New York, N.Y: Garland.

Tormey, R., & Henchy, D. (2008). Re-imagining the traditional lecture: An action research approach to teaching student teachers to 'do' philosophy. *Teaching in Higher Education*, 13, 303-314.

Vreven, D., & McFadden, S. (2007). An empirical assessment of cooperative groups in large, time-compressed, introductory courses. *Innovative Higher Education*, 32, 85–92.

Whitehead, J. (1989). Creating a living educational theory from questions of the kind: How do I improve my practice? *Cambridge Journal of Education*, 19, 41–52.

Whitehead, J. (1999). Educative relations in a new era. *Pedagogy, Culture and Society*, 7, 73–90.

Young, M., Robinson, S., & Alberts, P. (2009). Students pay attention! *Active Learning in Higher Education*, 10, 41–55.

Appendix A

Module Evaluation of MPSMD2FNP 2014-2015

1. Was there enough variety in the teaching methods on this module (e.g., traditional lecture, discussion, group interaction, etc).

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

2. How strongly do you feel the teaching methods used were able to deliver course content in a manner that you could understand?

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Please use this space to make further comments on ideas that have informed your answers to questions 1 and 2. Do you have any further suggestions for future methods? What did you like/dislike the most about current methods?)

3. Did you feel the lecturer was able to explain course content in an effective manner?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

4. How much do you agree that the lecturer made the subject more interesting?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

5. Did you feel the lecturer was enthusiastic and motivating when teaching?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Please use this space to make further comments on what you liked or disliked about the lecturers teaching style.

6. Did you find the lecturer's teaching style helpful?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

7. Did you enjoy the content that was covered within the module?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Please expand (e.g., was there too much or too little content, was the pace too quick or too slow?).

8. Do you feel you were provided with enough support and instructors in the lectures?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

9. Overall, would you say you were satisfied with the quality of the module?

1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

10. Do you have any further suggestions for development on this module?

Please use this space to make further comments on what you liked or disliked about the lecturers teaching style.