

Peer-Based Teaching and Learning: A Student Perspective

Christopher Ross is a third-year student at the University of Lincoln studying games computing. He is currently developing his portfolio, and has publicly released a game on the Android market. Before coming to Lincoln, Chris worked in IT support at a hospital.

Dave Prichard is Head of Administrative Support for the Lincoln Academy of Learning and Teaching and manages corporate student engagement under the ethos of Student as Producer as well as overseeing Higher Education Academy recognition within the University of Lincoln, academic peer-led CPD, and supporting VCO in delivering the Teaching Excellence Framework and the National Student Survey.

Dr Chris Headleand is a Senior Lecturer and the Programme Leader for the Games Computing degree. Furthermore, Chris is the Digital Lead, and Student Engagement Champion for the School of Computer Science. In addition to his role with the university, he is the managing director for Picselica Ltd, a Virtual Reality development agency. His research interests include virtual worlds and student engagement.

Abstract

In this perspective paper we describe the PLUS+ peer teaching model currently being piloted in the School of Computer Science. The purpose is to present the personal reflection of one of the PLUS+ students, encapsulated in further contextual information about the programme contributed by the programme team. We begin by introducing the motivation for the programme and research that inspired its development. We subsequently discuss the programme from the perspective of one of the students currently engaged with the programme. We discuss how the student's perceived benefits of the programme largely align with those found in research into similar peer-led teaching models, specifically with regards to social and academic confidence. We conclude by discussing the ongoing reflective process that is embedded into the programme. In addition, we propose a direction for future research.

Introduction to the PLUS+ Programme

In this paper we will discuss students supporting and teaching other students, while learning valuable skills themselves. However, to avoid confusion the following terminology will be used consistently throughout this paper. The students undertaking the PLUS+ programme will be referred to as either 'participants' (in reference to their participation with the programme) or 'peer-tutors'. Students who are recipients of the sessions organised by PLUS+ participants will be referred to as 'learners'. If we discuss all students generally (participants and recipients) we will refer to them as either 'students' or 'the cohort'.

The PLUS+ Programme is a model of peer-mentorship where students have the opportunity to deliver extracurricular teaching and learning sessions. The intention of the programme is to foster a community of learning where the peer-tutors are embedded as active partners in the learning community. It provides students with subject expertise with a platform to support peers, while developing key leadership and communication skills. Attempting to move beyond the traditional interpretation of the experiential approach (learning by doing) PLUS+, and other similar schemes aim to recognise that teaching skills to others can be a driver of learner development in themselves. In peer tutoring, it is often the case that tutors learn and benefit as much or more than their tutees (Topping, 1996; Bene and Bergus, 2014).

The preparation for teaching itself can be an effective method of study and students who teach have been shown to have higher retention of a topic (Bargh and Schul, 1980). Furthermore, other research has shown that they develop a better-organised conceptual understanding of the domain (Muis et al., 2016). Importantly, peer teachers have been shown to achieve academic gains without the need for additional subject support (Robinson et al., 2005). Specifically, preparing to teach in itself supports academic development. In this way, the PLUS+ programme supports the development of independent learning, and facilitates students in taking ownership over their educational objectives. We feel that the PLUS+ programme embraces Student as Producer at its very core.

Through participation in the scheme, students have the opportunity for CV enhancement. They have the benefit of additional training providing added-value to their university experience, and they get support towards applying for their HEA D1 fellowship. In addition to the explicit benefits, the PLUS+ programme is also intended to help students to recognise the value in their peer-support experience, allowing them to better promote themselves to potential employers.

Peer-led learning can provide an immensely valuable opportunity to develop skills for mentors and mentees in addition to providing transitional support across the year groups. Research has also demonstrated that peer teaching can improve student satisfaction of the learning environment (Lin et al., 2017). Furthermore, students have the opportunity to learn beyond the requirements of their programme. This allows them to develop useful skills that they may not otherwise be exposed to and research has demonstrated that when tested, students can perform equally whether they have been taught by peers or faculty educators (Bene and Bergus, 2014).

Businesses often look at graduates as candidates that could suit leadership roles, and peer support duties are a great way of developing and evidencing the skills required. Indeed, in many post-university careers, continuous learning is a requirement of the role, with sectors moving quickly and knowledge constantly evolving (Office for Science 2017). With this in mind, many Higher Education programmes will benefit from including teaching skills among their transferable learning objectives as a future professional requirement.

Students undertaking the PLUS+ aim to achieve HEA Associate Fellowship status. The Associate Fellowship is explicitly targeted at early career educators, educational support and postgraduate students. Students undertaking the PLUS+ scheme prepare an account of practice which provides selected examples of practice that meet Descriptor 1 of the UK Professional Standards Framework. The students aim address two HEA Areas of Activity, namely, Activity 2 (teach and/or support learning), and Activity 5 (engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices.)

The PLUS+ programme is sector-distinctive student engagement, offering an à la carte package of support for PLUS candidates towards professional recognition. Furthermore, the intention of the PLUS+ training programme is to equip the students with the skills and support they need to alleviate anxiety about engagement. There is evidence that peer teachers can be concerned about undertaking the responsibility, and often feel that they lack the specific teaching skills. It is no surprise that studies have repeatedly reported that student teachers appreciate training (Bene and Bergus, 2014), the PLUS+ programme addresses this need in the core of its design.

Many undergraduates are coming to us as skilled practitioners in their own right and some mature students are coming with extensive industry experience. The platform enabled by PLUS+ allows cohorts to capitalise on their in-house expertise while providing the students with exposure to unique learning and development opportunities.

Organisation of PLUS+

PLUS+ participants sign-up at the beginning of the academic year. They discuss their personal skills and with an academic mentor, and begin to identify thematic areas they would like to deliver extracurricular sessions on. These initial discussions, with guidance from the academic, form the basis of a programme of learning opportunities, that PLUS+ participants plan to deliver. These opportunities are then advertised to the cohorts via email, and via the academic societies.

Each opportunity has (generally) been designed to be co-run by two or more peer-tutors, providing support and capacity for larger sessions if learner interest is high. The academic mentor also observes the session and can provide assistance if

required. However, the coordination and delivery of the session is managed by the PLUS+ participants who are running it.

Following each session, the attending learners are asked to fill out a short evaluation. This form is designed to provide the peer-tutor with some useful feedback on how the session went. This feedback is used in conjunction with observations at a debrief with the academic mentor. This debrief feeds into the identification of ongoing objectives and training needs, which may be fulfilled internally, or by signposting the student to other opportunities within the institution.

The participant is also encouraged to proactively reflect on their engagement and skills development. These reflections are recorded as part of a digital portfolio aligned with the HEA D1 standard.

A Student Reflection on PLUS+ Experience

The following section is a reflection by Chris Ross, on his personal experience as a PLUS+ participant. It is written from his perspective.

I have led a number of workshops where participating first year students either learn to develop a game component, or learn how to use a specific feature of the Unity3D Game Engine. The learners were given a guided task (that I designed) which detailed the basics of using the tool. Once complete, students would have successfully developed the first half of a first-person game.

The workshop guides are delivered through a blog that participating learners can access. The blog allows us to edit the content live should we need to. Secondly, the posted exercises become part of the legacy of the activity, and remain accessible for as long as the blog remains online.

To plan the sessions, we proposed a number of workshop ideas to the participating learners and involved them in the planning. When thinking of these initial session ideas, the most important factor was 'how do learners benefit from this engagement?' The topic must allow participants to further their knowledge beyond what is currently taught in the curriculum. The second factor was, is the topic interesting and how will peers engage with it? I started by asking the question 'would I have participated in this extra-curricular event?' If learners are not interested in the

topic, it may impact their future engagement. This leads me to my third consideration, how can I make this session appeal to the targeted audience?

By including the participating learners in this discussion and engaging them in the planning phase I was able to 'test' my ideas before running them. Furthermore, working with my academic mentor allowed me to develop my plans to align with the experience of the group. I was also able to use this support to develop around the curriculum, ensuring my extracurricular workshop was distinctive.

These sessions vary from curriculum engagements. They are more relaxed, as there is no deadline or obligation to be there. The material is still useful and is aligned with the work that the students are currently doing on their programme. This means that they can use the knowledge they gain and place it directly into their work or they can use the skills to polish an assignment piece into a portfolio piece.

The PLUS+ workshops are designed to add something extra to a student's learning through peer education. It is important that the sessions do not confuse any of the formal content taught through the modules. By working with an academic mentor I was able to align my content to ensure that it was useful, without creating any conflicts with academic content of the degree programme.

Driving Objectives from Learner Feedback

The feedback that I have received from the learners who attended my workshops, has been really positive. Most explained that they were very happy to have been able to gain further skills and knowledge outside of their normal workshops and lectures. They also said they were happy with the delivery, as they have a different dialogue with me as a peer than they would normally have with member of teaching staff. I believe that we have a strong staff student relationship at Lincoln, but there are still some things that are easier to ask a fellow student.

It has also been a great social opportunity. I was able to interact with students from the first year who I may not have otherwise met. In this way I believe the PLUS+ model has helped to further develop the learning community within the school.

The feedback has helped me to drive my own development objectives. For example, it helped me to identify that I needed to improve areas of my communication,

specifically around the areas of learning resources. But the feedback also helped me to identify my leadership strengths.

Learning to Teach, Teaching to Learn

The experience of teaching for the first time really gave me an amazing feeling, but I also believe that I gained a lot from the students as well. Teaching my peers gave me a sense of responsibility, and pride in how far I have come. It highlighted the amount I had learnt, both through my degree, and through my independent study. It is often hard to quantify how far you have developed, but having the opportunity to teach someone else is a real eye opener.

I was also amazed at how much I needed to revise before running a session. Although I was confident about the areas I was planning to teach, I found that I needed a different level of knowledge to explain it to someone else. For the workshop guides I needed to clearly explain each topic or processes that the activity required. Some items I knew through having done them myself, but I couldn't explain why that was the right way to do it. Furthermore, I was aware that students may have questions that deviate slightly from the taught topic, and I wanted to be prepared for these, so I found myself reading-around the topic further. This process of developing my understanding so that I could demonstrate it to others, supported me in my own assignments and portfolio projects.

To successfully run these workshops, the biggest challenge I faced was communication. I needed to carefully manage my writing style to create guides that were easy to understand. I also needed to practice my speaking and interpersonal skills to assist my peers during tasks. Through the PLUS+ programme, I have been mentored by an academic who has supported my development and guided me towards training opportunities that have helped me to develop further in these areas.

I now feel more confident talking to people, and more self-aware of my own abilities. Having lived in France for all of my childhood and teenage life, I sometimes felt a communication barrier talking to others, but this opportunity has made me realise that I am more capable than I initially thought. I have a newfound passion for teaching others, and want to inspire others the way that I have been inspired by my tutors in the university.

Tracking Development

As part of the programme I kept track of my engagement and activities, this allowed me to develop my skills and learn from any mistakes. I did this using a digital portfolio system developed for the programme. This tool is in the form of a website where once logged in, PLUS+ participants are able to reflect on an activity by filling in details on the event and describing the skills that were used. As students progress, the tool rewards them with digital badges which can be used to visualise and summarise accomplishments. Over time, you are able to see how your engagement has helped you to develop key transferable skills, and identify any weaknesses.

Self-reflecting has helped me to develop my skills and review the effectiveness of my engagements and help identify changes for future workshops. When I look back on my reflections, I am able to see how much I have progressed by looking at my previous engagements and comparing them to my current practice. By doing this, I have identified a number of weaknesses and strengths ranging from the structure and complexity of my documentation, to how I communicate and assist my peers during the activities.

Session Feedback

As part of the workshop process, learners (largely first year students) have been asked to give feedback. This is with the sole purpose of supporting the development of the PLUS+ participants. The form they are provided with is similar in its structure and themes to a typical session feedback form, and is detailed in Appendix 1. The form is delivered through Microsoft 365 and is used to provide useful feedback for the PLUS+ participant to reflect on their experience and to support their development as a peer-tutor. While overall satisfaction with the sessions has been very high, with students commenting particularly favourably on topics, content, and the preparation and expertise of the educator, the learners have also provided critical and mature feedback to support the development of the PLUS+ participants. They recognise that as a peer, PLUS+ candidates lack experience as educators, and are forgiving of that. The feedback provided has all been constructive, and supportive.

Conclusion

In this paper we have introduced the PLUS+ programme, a pilot peer mentorship model designed to facilitate skills sharing between students. We have discussed the background and motivation to the programme, and described the experience of one of our current PLUS+ participants. The programme is in its first year of deployment, but initial feedback has been positive. Furthermore, the perceived benefits match what has been observed in previous peer teaching research. However, as a pilot programme we are currently evolving the model based on feedback. One area we are keen to develop through further research is our digital portfolio provision.

Finally, the early success of this engagement has encouraged the team to explore the model in other disciplines. We would encourage anyone interested to contact the team so we can share insights, and grow the PLUS+ provision.

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Appendix 1

Participant feedback questions

How would you rate your overall satisfaction with the session? (Likert)

The objectives of the session were clearly defined. (Likert)

Participation and interaction was encouraged. (Likert)

The topics covered were relevant to me. (Likert)

The content was organised and easy to follow. (Likert)

The materials distributed were helpful. (Likert)

The content will be useful in my future work. (Likert)

The educator was knowledgeable about the topic taught. (Likert)

The educator was well prepared. (Likert)

The educator communicated well throughout the session. (Likert)

I see benefit in attending session run by a fellow student. (Likert)

I feel confident in my ability to learn skills from a peer. (Likert)

I am likely to attend a PLUS session in the future. (Likert)

What are the benefits (from your perspective) of attending session run by a peer?
(Free Text)

What are the disadvantages (from your perspective) of attending session run by a peer?
(Free Text)

Do you have any general feedback for Chris on the overall quality of the session?
(Free Text)