Students as Academic Partners Scheme (SAP) reflective piece by Karen Blackmore, Sophie Pearce and Carolyn Nisbet.

Introduction

The aim of this piece is to explore the teaching and learning opportunities and reflective practice afforded by the Students as Academic Partners scheme (SAP) at the University of Worcester. In order to fully explore the effectiveness of this teaching initiative we have chosen to structure our reflection through the use of a model by Brookfield's (ref). This model uses four lenses through which teaching and learning opportunities can be viewed.

They are:

- Learner lens
- Teacher lens
- Colleague lens
- Theoretical lens

Brookfield argued that by viewing teaching through different lens a meaningful picture of authentic learning opportunities could be assessed. Like any model, this model is not perfect for our purposes; as central to the SAP scheme is the understanding that teaching and learning is a symbiotic process, teachers are often learners and *vice versa,* as you will see from our student perspective below learners (in the classical sense) can also become teachers.

The reflections below focus on a highly successful technology enhanced learning project funded by SAP which was subsequently presented at the Change Agents Network conference at the University of Exeter in April.

Learner (but also teacher) lens.

The following section details the experience of Sophie Pearce a level 6 BSc Physical Geography Undergraduate student from the Institute of Science and the Environment (ISE).

Genesis of the project

Our SAP project was developed between Ian Maddock (Professor in River Science) and myself, Sophie Pearce (Level 6 BSc Physical Geography Undergraduate student). Our project aimed to integrate the use of Unmanned Aerial Vehicles (UAVs/drones) into the geography curriculum at the University of Worcester. The idea for the project was initiated on a third year field trip in the Swiss Alps (as part of the Mountain Environments Field Course). On this trip field work was being undertaken by students for an assessed piece of practical work using traditional surveying techniques.

Up to this point I had yet to see any of the drones which the department have fly, but having had an awareness of drones at Worcester I asked Ian if there was a potential to use them for the fieldwork that we were currently undertaking. He mentioned to me that ISE had recently bought a new drone for the purposes of learning and teaching (the DJI Inspire 1 Pro), however that he was under time constraints to create a program which would introduce the use of drones within the curriculum. It was from this small conversation whilst undertaking fieldwork that our SAP project were initiated.

The project aimed to create a session which included a lecture, a taster of the drone flying and a practical session introducing Structure from Motion photogrammetry software; this software is used to process the imagery collected by the drone to produce 3D scenes of the area surveyed. We planned to integrate the practical into a second year module GEOG2120 Mountain Environments, Landscapes and Hazards, as well as for use on interview days. The SAP project was approved in October 2016 and the first interview day was scheduled for 14th December 2016, therefore little time was available to plan, learn and create the resources necessary for a successful practical.

Successful co-construction

Ian and I worked well in partnership, both taking responsibility for different tasks which would allow completion of the project under the strict time-constraints. Ian created the lecture using a PowerPoint presentation which included relevant information for students such as why and how drones can be used within geographical research, examples of where they have been used, the different types of drones, and logistical requirements regarding drone use. I learned how the innovative new Structure from Motion (SfM) software *Agisoft photoscan* worked and created a practical hand out for use in the sessions; this took the form of a step-by-step guide of how *Agisoft Photoscan* can be used to "stitch" together imagery (aerial photographs). Within the practical sessions, students could use the simplified guide I designed to help them to learn the basics of how imagery collected using drones can be utilised for visual analysis.

We were both very organised and this approach whilst completing the project enhanced my awareness of the thorough planning and cooperation necessary when creating subject material for a lecture in collaboration with a member of staff, something which I believe will be of great benefit in my future.

This SAP project was successful in part because Ian and I shared common views on what we wanted to gain from the project, and what we wanted the students to take away with them. We were both organized and driven individuals who after initial planning, took the initiative to work on the project independently and then share our information when necessary; without this natural synergy I believe that the project would not have been so successful.

Unlike in many cases whereby a student would wait for direction from a tutor, I took my own initiative to work on the project, and ask Ian for input where appropriate; this way I could work the project efficiently around my studies. Additionally, we have both learned how to use the photogrammetry software and helped to steer the acquisition of new knowledge regarding the use of drones within geographical research. Furthermore, through being a part of this project my personal knowledge regarding the use of drones has been improved and I have become very interested in the application of drones within geographical research. It is predominantly because of my involvement with this project and inspiration from Ian that I am now enrolled to undertake a PhD project which will be evaluating the use of drones for monitoring flood flow measurements at the University of Worcester.

Reflection on my presentation and attendance at the JISC Change Agents Network Conference, University of Exeter

Through being a student partner on the SAP scheme, I was given the opportunity to present at the JISC Change Agents Network Conference at the University of Exeter in April; I was asked by Karen Blackmore if she could use our project as an example to demonstrate student academic partnerships at Worcester. Through attending this conference, I was given the opportunity to not only present our project, but also attend other sessions which allowed the exploration of other learning and teaching methods and the wider impact that SAP projects have on student experience. I was interested to note some sessions questioned the applicability of students working as partners. One quote I took away from the conference was:

"Students cannot be partners because they don't have the expertise"

I reflected on this and tend to disagree with this statement, as I believe that one of the core principles of the SAP project scheme is to give students the opportunity to develop their expertise. Firstly, students in many cases do have expertise, just a different set of expertise to academic staff and by allowing students and staff to work together, the student gains many more skills than they may have

done through their studies. For example, the SAP project has opened many doors for my future career, I have learnt an enormous amount about the use of drones and SfM regarding a geographical perspective and worked with enthusiastic and encouraging staff who have inspired me to continue a career within this field of study. Additionally, through presenting in lectures and at conferences I have gained extremely valuable skills regarding public speaking, preparation, planning and organisation, all of which have made me a much more confident speaker as proven within recent interviews. The project itself has also enlightened the fact that not all undergraduate lectures can be created relatively quickly, but need a lot of time to create valuable resources which will ultimately need changing and editing overtime.

Impact on my academic development

The SAP project overall has been an extremely positive experience for me, one that started with a seemingly 'meaningless' conversation on a fieldtrip, to a dedicated project which has not only enhanced the curriculum but provided me with so many opportunities that I couldn't have imagined experiencing when I first applied to University three years ago. It is without doubt, that these opportunities would not have been possible had it not been for the SAP project scheme and working with such an encouraging, supportive and motivating members of university staff.

Teacher (but also learner) lens

The following section details the experience of the Academic Lead for the SAP project - Karen Blackmore

Back ground to the drone project funding

As leader of the SAP scheme I was keen that all parts of the University were able to take part. Last October we were really pleased to receive an application from the Institute of Science and the Environment. I remember discussing the project with my colleague Carolyn (Project Manager) and being excited that this project was not only based on a technology enhanced learning (TEL) approach but also gave opportunities for students to be involved in curriculum development at a grassroots level. I believe in a world which is to a large extent technology driven and consists of a rapidly changing educational landscape it is vital that at the University of Worcester we have the space and time to develop innovative and evolving curricula that inspire and engage our learners. As a great believer of serendipity I was delighted to see the project was initiated by a conversation between an academic and a student, most interestingly half way up a mountain!

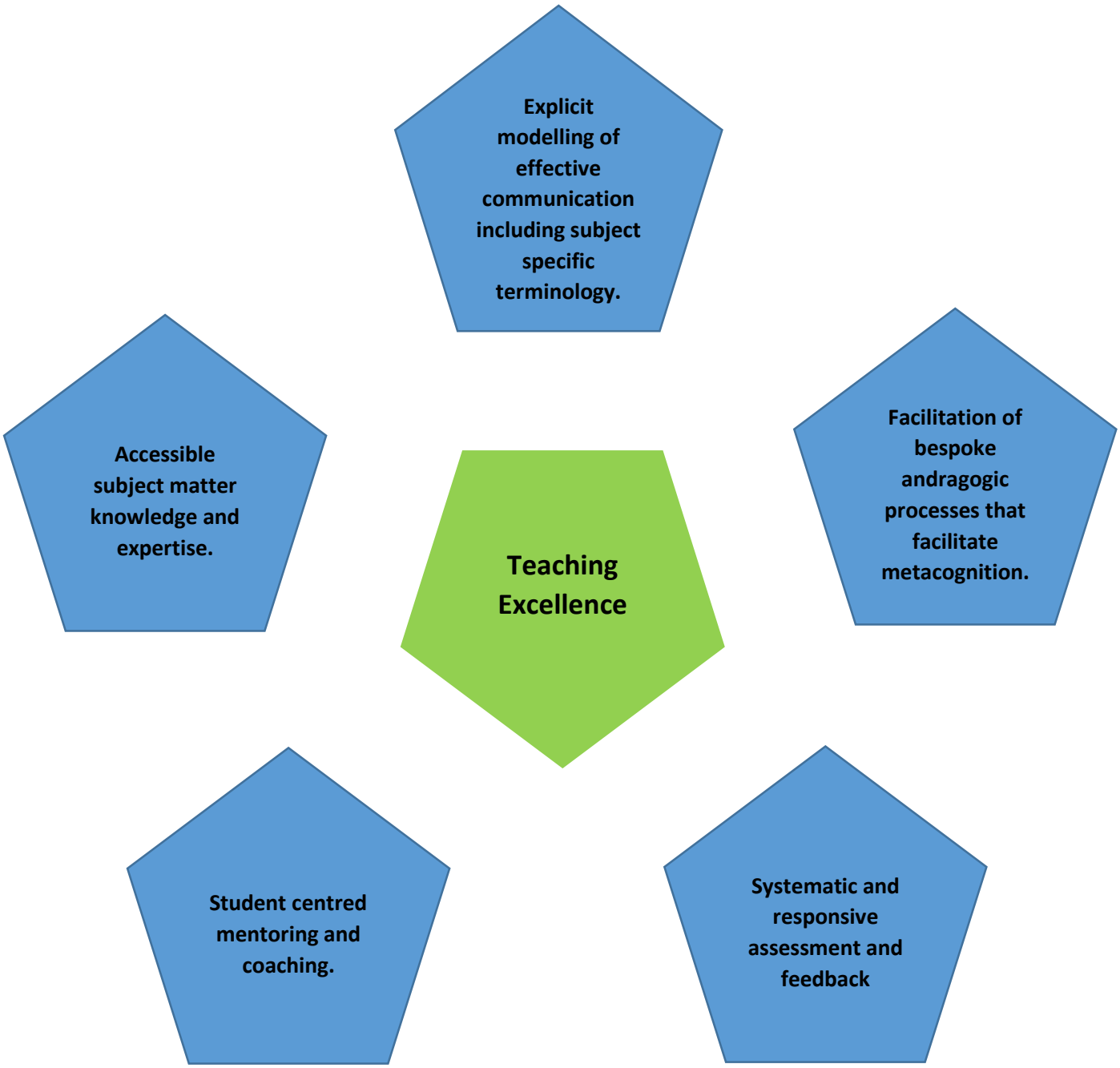
Reflection on SAP practices at UW

As Sophie details above this was a highly successful project and had significant impact both in terms of student and staff development and curriculum innovation. This together with the outcomes of the hundred or so projects funded to date by the SAP project scheme in the last six years started me thinking:

"What is it that makes a SAP project so successful in terms of impact on teaching and learning?"

Like many ardent educationalists with a scientific background I thought it would be interesting to try and create a model to describe effective co-constructional processes within the SAP projects. I took a two pronged approach to this; firstly, I wanted to see what the literature said with respect to the central elements of teaching excellence in Higher Educational, secondly I wanted to see how this dovetailed with successful learning elements reported by our SAP partnerships.
The thinking behind the resultant model was catalysed by reviewing the definition of teaching excellence, fused with an appreciation of learning opportunities that give very high impact (see theoretical lens for more detail).
The following model was created:

HIPSTER (High Impact Pedagogies Supporting Teaching Excellence Reflexion) model



As it can be seen the model consists of many familiar components both within specific subject disciplines and more generic teaching and learning requirements. Of course accessible subject material is a prerequisite for effective learning but there is also much evidence that holistic support mechanisms involving coaching and mentoring help students realise their full potential (Terrion & Leonard, 2007). Likewise accessible subject matter is the cornerstone of inclusive learning practice but needs to be supported by the acquisition of subject specific terminology necessary for further study.

Peer review of the model at CAN, University of Exeter

This model was presented for peer review at the CAN conference using Sophie and Ian's project as a proof in practice that HIPs are taking place at UW. This resulted in very useful feedback to aid further refinement and reflection.

The following themes arose from the points made by the staff/student audience:

Positive indicators for the model:

- The repositioning from a learner perspective was well informed
- The potential to use this model as a reflective/audit tool for what does and doesn't work was high
- Elements of high impact practices were clearly defined within the model e.g. the ability to check for understanding by combining elements like responsive feedback and peer mentoring

Areas for development of the model

- The model was too complex
- At the start of study at university everyone is a beginner in terms of subject specific terminology
- It is necessary to use student friendly language/plain English for all terms within the model
- What was the main purpose of the model? Was it to aid further strategic development or capture existing practice?

On assimilating this feedback, I felt quite challenged especially with respect to the complexity issue which was prevalently expressed. I found myself asking even more questions.

"Was there some way to simplify the model without losing full meaning?"

And with respect to language used within the model:

"Was the language used in the model inappropriate for a staff/student audience?"

For example, should we be reticent of using terms like "andragogic processes" and "metacognition" or

"Should we be confident that all students are aware of the learning processes they are going through?"

And with respect to purpose:

"Was this model trying to do too many things…? Should it just be used to classify high impact practice?"

Further reflection

I am still pondering on these and many associated questions to do with refining the model but what is clear is that the SAP project scheme at UW is affording students opportunities to flourish and develop as evidenced by Sophie's reflections. Impacts on student driven curriculum development are starting to be seen and high quality projects are being co-developed with students.

Colleague lens

The following section details the experience of the Project Manager for the SAP project – Carolyn Nisbet

My involvement in the SAP projects has in previous years largely been confined to the setup, maintenance and delivery of the SAP scheme from a project management perspective. Although I do get to know the projects and some of the students over the course of the year, I do not generally have

the opportunity to directly view how the scheme can have a direct impact on students and their overall course experience.

Being able to attend and co-present at the JISC conference allowed me to achieve a number of aims:

- To showcase the SAP project to a wider HE audience
- To see how the scheme can benefit students who take part
- To gain valuable insights into how other HE providers are approaching co-creation and collaboration with students
- To work with Karen to test the HIPSTER model and see how it might develop

Working directly with a student such as Sophie who has had such a strong involvement with a SAP project, and whose future academic direction has to some extent been shaped by the project has been a very useful and rewarding experience. It has allowed me to reflect on how the SAP scheme may be developed and improved for future years, and how we can continue to encourage students to disseminate their work via events such as the University of Worcester Learning and teaching conference, and the JISC CAN event.

Looking forward to the end of this years' projects and the final report, I would like to be able to showcase the SAP scheme to a much wider audience, and to allow them to see the variety and quality of projects that have been completed under the 2017 scheme. I would also like to review how we approach the launch and selection process for future years, to ensure that the scope of the projects is more widely understood by the academic and student community.

Theoretical lens

The initial stimulus for the model in the shape of the Schreyer Model of Teaching Excellence (Schreyer Institute, for Teaching Excellence, USA (2016) was purposefully repositioned from a learner's perspective as opposed to a teacher's perspective as advocated by Burns (1995) to emphasise what elements were of vital importance for learners.

The HIPSTER model draws significantly on the work of George Kuh and Jill Kinzie who describe certain teaching approaches which give high impact on learning. They call these elements high impact practices or pedagogies (HIPs) (Kuh, 2008 and Kinzie, 2012) and argue they are powerful tools to support deep learning. Other influences on this model include Carol Evan's ideas about high impact activities in terms of research informed learning and explicit exploration of student positionality and Alt (2011) who defines a set of activities that learners and teachers can carry out in order the facilitate exchange of ideas and co-construction of resources. All this body of work can be essentially distilled down to the premise that learners can learn by themselves, but in most cases appropriate support and scaffolding of ideas in social contexts using effective practices, significantly enhances learning.

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