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Staff-student collaboration: student learning from working together to enhance educational practice in higher education

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Abstract

The association of research and teaching, and the roles and responsibilities of students and academic staff and the nature of their interrelationship are important issues in higher education. This article presents six undergraduate student researchers' reports of their learning from collaborating with academic staff to design, undertake and evaluate enquiries into aspects of learning and teaching at a UK University. The students' reflections suggest that they identified learning in relation to employability skills and graduate attributes and more importantly in relation to their perceptions of themselves as learners and their role in their own learning and that of others. This article draws attention to the potential of staff-student collaborative, collective settings for developing pedagogic practice and the opportunities they can provide for individual student's learning on their journey through higher education.

Keywords: student learning experience; student researcher; student-staff collaboration; student-staff partnership; student leadership

Introduction

This article presents six undergraduate students' reports of their learning from a project that formed part of a longitudinal study in which they collaborated with academic staff to develop learning and teaching. It is written by three participants: a researcher, a member of academic staff and a student. Set within a UK University from 2010 to 2013, the study comprised sequential enquiry-based projects involving students and staff working together to design, undertake and evaluate enquiries into aspects of educational practice. Engaging students and academic staff in partnership to explore pedagogical practice is seen as 'a threshold concept in academic development' (Cook-Sather 2014, 186), which 'represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress' (Meyer and Land 2003, 1). The students' reflections of their learning from working with their peers and with academic staff are themed and discussed within the framework of the University's graduate attributes (University of Hertfordshire website, January 3, 2014). They are also explored in relation to what they reveal about the students' views of their own learning journey and their perceptions of the roles of students and staff in higher education. A student perspective of these issues voiced during discussions with staff is also considered in relation to the nature of collaboration in this study. This article concludes with some implications for academic practice. It contributes to the literature on approaches to student-staff collaboration in higher education, the role of students and staff and students' development as learners. It draws attention to the potential of staff-student collaborative, collective settings for developing pedagogic practice and the opportunities they can provide for individual student's learning. As Barnett (2007, 63) asserts: 'Higher education is a voyage of perpetual self-differentiation, but self-differentiation is not self-individuation, for others are essential in assisting this solo journey'.

Setting the higher education context

The role of students and staff and the teaching-research nexus

This study is situated amidst ongoing discussions about the roles and responsibilities of students and staff, particularly academic staff in universities and the nature of the relationship between them. The introduction of quality assurance frameworks, associated with an emphasis on student evaluation of university teaching, means that students are positioned as customers or 'consumers in their educational experience' (Singh 2002, 682). Developed in industry, Total Quality Management (TQM), with its emphasis on the customer is now applied in educational organisations (Sallis 1993), as well as in other sectors such as health care (McLaughlin and Kaluzny 2006). Singh asserts that 'While Sallis's views, premised on the student-as-customers metaphor, are now becoming the norm, this metaphor has severe limitations in both the university-student and pedagogic relationships' (2002, 686). McMillan and Cheney (1996, 1) note that viewing students as consumers 'inappropriately compartmentalizes the educational experience as a product rather than a process'. Seeing students as customers raises the question of the identity of the product (Clayson and Haley 2005). Marketisation of higher education can be said to encourage a situation 'where students seek to "have a degree" rather than "be learners"' (Molesworth, Nixon and Scullion 2009, 277, italics in original).

Whilst many in higher education, including students, have expressed concerns about manoeuvring students into a customer or consumer role (for example, McMillan and Cheney 1996; Bay and Daniel 2001; Afolabi and Stockwell 2012), which implies passivity, there are examples of alternative positionings. Students are variously seen as enquirers (Ovens et al. 2011); consultants and partners (Little 2011; Cook-Sather 2014); producers (Neary and Winn 2009) or co-producers (McCulloch 2009); and researchers (Jenkins and Healey 2009; Dunne and Zandstra 2011) in learning and teaching and conducting pedagogic research (Butcher and Maunder 2014). This has given rise to a number of different approaches or models of practice (Table 1), which suggest that students are proactive, enquiring and productive participants in learning.

Table 1 Examples of approaches or models of practice

Approach/model	Purpose/vision or aim	Role of students Role of staff
Inquiry Into Learning (IIL) (Ovens et al. 2011)	'for (ideally) all our students to be fired up, lively learners, thirsty to know more and do better, able to think and act independently and keen to go on improving, for themselves and each other' (2) 'A central aim of the programme is professional autonomy' (20)	<i>Students</i> : inquirers into learning <i>Staff</i> : inquirers into teaching
The Students as Learners and Teachers (SaLT) program (Cook-	The 'SaLT program pairs faculty members and undergraduate students in explorations of pedagogical practice' (186)	<i>Students</i> : pedagogical consultants (also change agents, informants, participants)

Approach/model	Purpose/vision or aim	Role of students Role of staff
Sather 2014)		<i>Staff:</i> partners
Student Academic Partners (SAP) scheme. Birmingham City University and Birmingham City University Students' Union (BCUSU)	'SAP aims to integrate students into the teaching and pedagogic research community within Birmingham City University, to develop collaboration between students and staff and to instill a sense of ownership and pride in the University.' (BCUSU website, March 7, 2014)	<i>Students:</i> partners, active project team members <i>Staff:</i> partners
Student as Producer. University of Lincoln	'The purpose of the Student as Producer project is to establish research-engaged teaching and learning as an institutional priority at the University of Lincoln.' (University of Lincoln website, March 7, 2014)	<i>Students:</i> collaborators, producers <i>Staff:</i> collaborators

Although some of these models do incorporate the consumer (or service user) and service provider typology this has a different emphasis; for example, the 'co-production model' put forward by McCulloch (2009, 177), drawn from the literature on public administration. The conceptual framework used to define students also defines others in university settings, who they are, their activities and thinking (Clayson and Haley 2005) so each alternative positioning has important implications for both students and staff and the way they work together.

Initiatives designed to more closely associate research and teaching in higher education through enquiry-based learning (for example, Brew 2003; Healey 2005) provided an important context for this study. Drawing on McCulloch's (2009) view of students as 'co-producers', Maunder (2015) suggests 'Co-production emphasises active engagement, mutual learning and collaborative knowledge creation, thus progressing the long-standing debate about the research-teaching nexus, because both staff and students are involved in the (co-)production of knowledge'.

Developing employability skills and graduate attributes

An emphasis on outcomes-focused graduate attributes in higher education (James, Lefoe, and Hadi 2004) could be seen to lend support to the view of the student as consumer, although these authors 'suggest that the graduate attributes open up a particularly interesting pedagogical space...a teaching space which encourages, even demands, that our teaching practice be more than content transmission'. Such a change in teaching practice for staff also expects a great deal from students because of the nature of their interrelationship.

Building on his phenomenographic investigation into academic staff members' conceptions of generic graduate attributes, Barrie (2007) identified six increasingly complex categories of academics' understandings of the way students develop these attributes. The first four categories focus on the teacher and teaching, whereas the remaining two foreground the learner and learning. Thus, engagement (category 5) suggests learning generic attributes 'through the way students engage with the course's learning experiences' (Barrie 2007, 448) and participatory (category 6) denotes learning them 'through the way students participate in

the experiences of university life' (449), encompassing extracurricular activities. Focusing on developing graduates' generic skills of interest to potential employers as well as disciplinary knowledge raises interesting questions about the role of university teachers, and forms part of a wider discussion (James, Lefoe, and Hadi 2004), which centres on the purpose of higher education itself (for example, Barnett 2004; White 2013).

Students as learners

In their recent discourse on new pedagogies in schools, Fullan and Langworthy (2014, ii) suggest that students adopt a new role of 'equal learning partner' emphasising the importance of their mastery of the learning process, which entails supporting students to 'learn about themselves as learners and continuously assess and reflect upon their own progress'. Previously described in models of learning that include different approaches or levels of learning relating to school and university learners (for example, Marton and Saljo 1976a; Marton and Saljo 1976b; Biggs 1987), Fullan and Langworthy (2014, 7) define 'deep learning' as 'creating and using new knowledge in the world'. In their 'new pedagogies model, the foundation of teacher quality is a teacher's pedagogical capacity – their repertoire of teaching strategies and their ability to form partnerships with students in mastering the process of learning' (Fullan and Langworthy 2014, 3, italics in original). Developing this mastery and the ability to contribute effectively to the world is predicated on students having what Barnett (2007) terms 'a will to learn' not only during their time in higher education but lifelong. Thus, although the generic skills and attributes that students learn or develop in higher education might be viewed as one of the outcomes, more fundamental issues relate to how they develop as learners, the factors that influence this development and what characterises them as learners. Bruner (1985, 8) emphasises the importance to the learner of 'learning how to go about learning'; and in reflecting on a learner's practice Ovens et al. suggest that a student in higher education should develop as a learner whose:

'practice should engage them in learning as whole persons, drawing on emotional and social intelligences as well as powers of reasoning, their tacit knowledge and intuition as well as public knowledge, their individuality as well as collaboration, their contextualised experiences as well as abstract, generalised thinking.' (2011, 15)

This view of learning relates to social constructivist approaches to learning and teaching, based on theories of learning such as those proposed by Piaget (1954), Bruner (1974) and Vygotsky (1978). However, using Edward's view of constructivism, which 'implies that learning is *constructed* from *experience* when the learner, in *collaboration* with others engages in *activities* which are *realistically* situated and incorporate the opportunity to *test* the new-found knowledge' (2001, 431, emphasis in original), Ovens et al. (2011) seem to imply a wider view of learning that involves more than experience. Van Huizen, van Oers and Wubbels' Vygotskian-based paradigm for teacher education has synergies with the study described in this article, which involved students and staff learning through participating as 'learning practitioners', although the newness of this venture meant that all participants shared the experience of 'newcomers' (2005, 274).

Collaboration between students and staff

Although the roles and responsibilities of students and staff and the nature of their relationship vary both between and within the different models cited earlier, the process of working together usually involves aspects of collaboration:

‘Collaboration is a complex, sophisticated process. It requires competence, confidence and commitment on the part of all parties involved. Respect and trust, both for oneself and others, is key to collaboration. As such, patience, nurturance and time are required to build a relationship to the point where collaboration can occur’ (Henneman, Lee and Cohen 1995, 108).

Through engaging in collaborative activities, educators can model collaborative approaches for students (Freeman 1993). In the school setting, Bland and Atweh (2007) identified challenges in developing meaningful collaboration between participants (students, teachers and university researchers) in participatory action research, some of which apply in the university context, such as students' uncertainty about their position in the power relationship and tensions between multiple roles for individual participants. Also described by van Huizen, van Oers and Wubbels (2005) in relation to trainee teachers, this multiplicity of roles is common and in the present study students and staff were engaged at different times as, for example, teachers, learners, researchers and project managers.

Critiquing ‘the student as collaborative partner’ model put forward by Bay and Daniel (2001, 1), Clayson and Haley (2005) suggest that although this represents a positive move it does not take account of the relationship with a wider range of stakeholders, including parents, government and the public. Drawing on the social or societal elements of concepts put forward by Bell and Emory (1971) and Feldman (1971) they assert that the balance could be redressed by seeking to promote the needs of society, the organisation, the student and the person the student will become. This approach resonates with Neary and Winn’s proposal:

‘...to reconstruct the student as producer: undergraduate students working in collaboration with academics to create work of social importance that is full of academic content and value, while at the same time reinvigorating the university beyond the logic of market economics’ (2009, 126).

Developing and implementing a staff-student collaborative approach

Setting

Situated within the University of Hertfordshire, UK, which has a student community of over 27,200, the project reported here was part of a longitudinal study involving collaborative work between staff and students designed to enhance learning and teaching. The project was based within the Schools of Education, Humanities and Law.

Purpose

In common with many higher education initiatives involving transformative pedagogical changes (for example, Anderson et al. 2008), the overall purpose of the longitudinal study was to develop, scale-up and embed a process of using staff-student collaborative enquiry-based projects to enhance educational practice, thus contributing to long term organisational

change. Individual projects within the study had related sub-aims; one of these projects forms the focus of this paper. Staff learning from the longitudinal study about implementing new pedagogies and working collaboratively with students will be reported elsewhere.

The approach

The ‘collaborative action research for learning’ (CARL) project

The CARL project was designed to pilot a process for enhancing undergraduate students’ employability skills through staff-student collaboration in learning and teaching. It explored whether students could identify, enhance, evidence and evaluate their employability skills within this project and contribute to student and staff learning.

The structure comprised a central coaching group established to support the students in identifying and developing employability skills, and six small-scale School-based learning and teaching research projects (Table 2) each managed by one staff member and one or two undergraduate student researchers from the relevant School. Students applied for the paid student researcher role through a process administered according to University requirements and open to all undergraduate students within the three Schools. Twelve students were identified, four from each School; one student withdrew due to personal circumstances leaving eleven men and women from different ethnic and language backgrounds.

The eleven student researchers, the study lead, the researcher and other experienced staff were members of the central group that met fortnightly for two-hour workshops throughout the academic year. The students documented their developing skills and learning from the project in reflective logs and presented their employability skills using the Challenge-Action-Result (CAR) approach. During workshops staff and students worked together as a whole group, in small groups or one-to-one to develop the School-based research projects, discuss ethical and other aspects of the research, and carry out discrete enquiry projects. These mini-projects were conducted with the student researchers in order to model and develop understanding of pedagogic research.

Table 2 Setting and purpose of the six small-scale research projects

School setting	Purpose
Education	1. An evaluation of the process of assignment support for the students’ first piece of assessed work 2. Development of employability skills on a practice-based module
Humanities	3. Using the electronic voting system (EVS) homework facility and online ‘teach yourself’ pre-session materials in teaching English grammar 4. Students’ responses to a new skills based module
Humanities and Education	5. Student teaching of students about assessment and feedback at university
Law	6. Using online lectures

Evaluation methods

Aims

The study lead and researcher designed the evaluation activities for the coaching group during the CARL project. The main aims of the activities reported here were to:

1. Document aspects of the process of the project;
2. Investigate the student researchers' views of their learning from the project; and
3. Record participants' views of staff-student collaborative working in a staff development setting.

Data collection, management and analysis

1. Documentation of coaching group workshops

The researcher made notes during each session to provide a contemporary record of the project process and other contextual information.

2. Reflective activities during coaching group workshops

Reflection and shared learning were emphasised and an example of a reflective activity and the associated findings is reported here.

Reflective activity. Six of the eleven student researchers attended the workshop and documented their learning from the project by responding to the following statements: 'what I've learnt' and 'this is important because...' This second statement provided some insight into any impact of the reported learning, as suggested by Mezirow's definition of learning: '*the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation and action*' (1990, 1, emphasis in original). The students were not asked to identify their contributions, which are presented anonymously. The collective record of learning concurrently prepared by academic staff is not included here.

The researcher transcribed the students' responses and carried out content analysis, a 'qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings' (Patton 2002, 453, original in bold). The responses were collated into one of five themes: professionalism, employability and enterprise; learning and research skills; intellectual depth, breadth and adaptability; respect for others; and social responsibility (Table 3). These themes were drawn from the list of graduate attributes developed locally by the University Learning and Teaching Institute in consultation with stakeholders (University of Hertfordshire website January 3, 2014) and used as a framework or 'coding scheme' (Zhang and Wildemuth 2009, 310) to present the findings through inductive and deductive analysis (Patton 2002). Although the response to the first of the pair of statements was treated as 'the unit of analysis' (Zhang and Wildemuth 2009, 310) that determined the categorisation, responses to both statements were treated as a single unit for the purposes of classification. During data analysis and interpretation two further categories were identified and units relating to the students' perceptions of the roles of students and staff and those including an explicit reference to the learner and learning were extracted; a process of 'decontextualisation' which enables closer scrutiny (Malterud 2001, 486).

Documentation of study day discussions

At the end of the CARL project the study lead organised and led a professional development study day for project participants and other interested colleagues. Professor Mike Neary, University of Lincoln, shared his experience of working with students as producers (Neary and Winn 2009) and critiqued the local study. Table 4 includes extracts from the researcher's notes of the dialogue arising within the context of staff-student collaborative working, transcribed with minimal editing and presented chronologically.

Ethical considerations

This study was conducted in adherence to the University Research Ethics Committee requirements.

Evaluation findings

In this section, findings from the reflective activity and the study day documentation are presented and explored and interpreted in the subsequent discussion in relation to the nature of collaboration, and three frames of interest: developing graduate attributes, the role of students and staff and the student as learner.

Findings: reflective activity

Table 3 shows the findings from the reflective activity for each respondent (R), themed according to the University graduate attributes. Here, 'The University' has been replaced by 'Staff-student collaboration' at the start of the descriptor of each attribute. In Table 3 superscript 'r' denotes students' perceptions of the roles of students and staff and superscript 'l' denotes perceptions of the learner and learning.

Table 3 Students' views of their learning from the CARL project

1. Professionalism, employability and enterprise		
<i>Staff-student collaboration</i> 'promotes professional integrity and provides opportunities to develop the skills of communication, independent and team working, problem solving, creativity, digital literacy, numeracy and self-management' ... 'graduates will be confident, act with integrity, set themselves high standards and have skills that are essential to their future lives'		
Respondent:	What I've learnt:	This is important because:
R1 r	Teachers listen to your opinions and use what you have to say to aid you ^r (see also theme 4) Employability skills that I have and need and how this research project will help me gain them	It's important to know that you can make a difference or ask for change if things aren't going well Raises my employability
R2	How to present my ideas + suggestions with confidence	Makes you a more useful team member, allows you to contribute

	How to prioritise + balance my time	more effectively Essential skills in the workplace. Demonstrates professionalism
R3	I have found that I can put forward new ideas whereas before I couldn't do that (see also theme 4) I have joined in more with group discussion not just in these projects but in my degree	- Confidence skills
R4	Articulate my words to make my point quicker How to approach staff if I have a problem ^r (see also theme 2)	Makes my seminar participation clearer Able to talk to my tutor & get a better idea on how to improve
R6	A great amount of work can be achieved in a relatively short time. – Time management Practical application/interview question skills	I can take a more relaxed approach to assignments as I can manage my time well – stress is never helpful and the realisation that I can achieve more than I thought when working to a deadline is helpful in this respect Has taken some of the worry out of the job application process I have to undertake in a few week's time
<p>2. Learning and research skills <i>Staff-student collaboration</i> 'fosters intellectual curiosity and provides opportunities to develop effective learning and research abilities' ... 'graduates will be equipped to seek knowledge and to continue learning throughout their lives'</p>		
Respondent:	What I've learnt:	This is important because:
R2 1	How to be a reflective learner ¹ To keep a log of thoughts, ideas, processes etc	Being able to self-criticise is needed for development. Need to be able to look back + identify what went well + what can be improved upon Can be used to look back at what you did, to use as examples, in presentations, reports etc. Feedback in coursework; Each step of projects;

		Employability skills
R4	Improving my ability to concentrate	V. helpful in lectures
R5 ¹	I've learnt how to conduct ethical research which has prepared me for my studies and other research projects ¹	Working as a SR has aided my learning and improved my attainment. It shows there are other ways of developing students which is important to a university
1	Developing a professional work ethic and other professional skills ¹	Makes the learner more productive and empowers the students to take further control of their learning – teaches dedication

3. Intellectual depth, breadth and adaptability

Staff-student collaboration 'encourages engagement in curricular, co-curricular and extracurricular activities that deepen and broaden knowledge and develop powers of analysis, application, synthesis, evaluation and criticality' ... 'graduates will be able to consider multiple perspectives as they apply intellectual rigour and innovative thinking to the practical and theoretical challenges they face'

Respondent:	What I've learnt:	This is important because:
R4	If I don't understand things, look at them from a different perspective Think outside of the box	A lot easier to focus upon essays, a new idea I appreciate seminar participation, and take note of other people's ideas

4. Respect for others

Staff-student collaboration 'promotes self-awareness, empathy, cultural awareness and mutual respect' ... 'graduates will have respect for themselves and others and will be courteous, inclusive and able to work in a wide range of cultural settings'

Respondent:	What I've learnt:	This is important because:
R1 ^r	That the relationship between students and teachers is more open and informal than in school ^r	It's important to know that you can make a difference or ask for change if things aren't going well
R3 ^r	Found it is very easy to approach the teachers ^r	-
R4	Enhanced my awareness of everyone around me	I value other people's opinions a lot more
R5	How to work in different settings	It shows an awareness of the needs

Findings: study day discussions

Table 4 includes excerpts from the professional development day discussions.

Table 4 Student views: selected extracts from the researcher's notes of dialogue in the context of staff-student collaborative working

- Like all the students I have really gained from coming together and talking about stuff. People from different Faculties. University is such a big institution that 'you just feel like a brick in a wall'. With this project [you] see yourself as a learner as well as a student. Having a coffee, biscuits, breaks down the barriers.
- The project [School-based research project] was the turning point. As a student you have a back of the scene view – see it from the lecturer's side. When they criticised the lecturer I found I was taking the lecturer's side. Learn more about how things work. Actually trying to see how you can improve the learning for other students. Obviously we learned employability skills. It really builds your confidence in talking etc. for the future.
- When I knew that there would be staff in the team – concerned about what you say. But that changed – you feel valued – anything you say is noted and taken seriously.
- We were actually in the same level – staff and students working together.

Discussion

The approach

The approach to working together in this project had several elements of collaboration; seen as an important future quality, defined by Fullan (2013, 9) as: 'work in teams, learn from and contribute to the learning of others, social networking skills, empathy in working with diverse others'. Atweh and Clarkson's assertion that, in an international context 'Collaborations should be based on mutual respect and trust in the ability of the different partners to contribute different types of learning to the collaborative enterprise' (2002, 107) is also relevant. One student commented: 'We were actually in the same level – staff and students working together' (Table 4), implying a sense of 'partnership between equal partners' which suggests collaboration (Iversen 1998, 6). Involving students with staff in this way meant that particular consideration had to be given to issues of power and voice (Bland and Atweh 2007). Initially, these issues were a concern for one student: 'When I knew that there would be staff in the team – concerned about what you say. But that changed – you feel valued – anything you say is noted and taken seriously' (Table 4).

Fullan and Langworthy (2014) suggest that activities involving deep learning often use social aspects of learning involved in collaboration; noting the complexities associated with such 'Collaboration in learning' (26) that involves teachers and students moving to a situation in which groups rather than individuals demonstrate their learning and share the responsibility for the end result of working together. Indeed, shared responsibility, together with co-agency were identified as two principles underpinning the way that staff and students worked together in this project. Whilst responsibilities were shared however, all parties

engaged in this approach could not have equal responsibility. As Cook-Sather, Bovill and Felten assert:

'In student-faculty collaborations, we need to acknowledge that our roles, expertise, responsibilities, and status are different. And they should be. Partnership does not require a false equivalency, but it does mean that the perspectives and contributions made by partners are equally valued and respected and that all participants have an equivalent opportunity to contribute' (2014, 7).

For the CARL project, the study lead was responsible for negotiating the uncharted, evolving process of working together, managing the risk of changing the nature of the working relationship between students and staff inherent in introducing a new pedagogic approach.

Working with staff provided students with an induction into a previously largely unseen world of academic practice; it gave 'a back of the scene view' and an opportunity to 'Learn more about how things work' (Table 4). This suggests what Cook-Sather (2011, 45) describes as 'discerning, and working to see from, more than one angle of vision in the classroom', noted as a consistent finding in her work with student consultants. Here, perhaps it could also be framed as an example of the 'empathy in working with diverse others' (Fullan 2013, 9) that is a component of collaboration. Whilst the *way* of working together might be described as collaboration, however, Fullan's (2013) definition cited earlier suggests that the central coaching group itself, the 'entity' should have elements of both a project team and a scholarly or learning community: 'a space in which people come together; explore, enquire and exchange views, opinions and knowledge; and learn and grow as a community' (University of Hertfordshire 2006, 6). It might therefore resemble a 'project learning community' a suggested 'mechanism for developing an environment conducive to maximising learning opportunities throughout a project, and for supporting team members as they engage in project-related professional learning and development' (Dickerson, Jarvis, and Levy 2014, 31).

Developing employability skills and graduate attributes

Pedagogical projects such as this one provide the potential for skills development and when undergraduate students adopt the role of learning and teaching consultants these skills 'can be captured under the umbrella of gaining a more informed critical perspective and are played out in the building of greater confidence, capacity, and agency as learners and people' (Cook-Sather 2011, 45). Here, the students were encouraged to document their developing employability skills and graduate attributes and the contemporary focus internationally on graduate attributes meant that the locally derived set of attributes provided a useful framework for theming their learning. However, this means of categorising and 'making sense' of the data also raised interesting questions about the meaning of 'attributes' and how they might be taught and learnt. Holmes dismisses what he terms the '*possessive*' and '*positional*' approaches to graduate attributes and skills in favour of a suggested '*processual* approach' (2013, 540, emphasis in original), which he suggests takes cognisance of the interaction between graduates who are looking for what they see as appropriate employment and those who manage the selection process.

The six students identified examples of learning arising from their involvement in the School-based research projects and the central coaching group enquiry projects; and working with their peers and academic staff in both settings. These activities took place alongside their

undergraduate programme and the students described how they had used what they learnt to enhance their curricular activities in different ways, such as clarifying their participation in seminars and managing their time better when completing assignments, examples of drawing on skills learned in one setting and used in another. Five students identified learning in relation to aspects of communication (Table 3), suggesting 'Teachers listen to your opinions' (R1), 'How to present my ideas + suggestions with confidence' (R2), 'I have joined in more with group discussion' (R3), 'Articulate my words to make my point quicker' (R4) and 'To communicate ideas with different types of people' (R5). Some of these and other responses might be described as reports of Mezirow's 'instrumental learning' or 'learning to do', where the student could identify a change in 'productivity, performance, or behaviour' (1990, 3) in response to the question about the importance of what they had learnt. For example, one student asserted that they had learnt to 'Think outside of the box', which was important because 'I appreciate seminar participation, and take note of other people's ideas' (R4).

Two students suggested that their learning was important because their attainment had improved; associating this with awareness of others they could ask for help and to learning about conducting research (R4, R5, Table 3). Several responses suggest that the students' learning related to developing a wider view of their context, perhaps associated with a stepping back from routine curricular activities leading to learning that was then taken back into their studies. This is implicit particularly in responses themed within the 'respect for others' category, in which students reported greater awareness of others and of different settings (Table 3). Whilst some responses suggest 'transformative learning' (Mezirow 1990, 6), for example, recognition that learning about different departmental approaches was important because 'Collaborating with different people is very beneficial as they bring new ideas and structure to problems. – It is not necessary to restrict yourself to a set group or way of thinking' (R6, Table 3), this suggestion would need further exploration.

The role of students and staff and students as learners

Whilst 'labelling' students as customer or consumer, for example, enables discussion of important issues in higher education it can conceal the complexity of engagements between participants, where individuals adopt multiple roles. Thus, a student might move fluidly between engaging as 'customer' when completing the UK National Student Survey, as collaborator or partner with academic staff and peers during a module session and as producer in another context. Here, the students' accounts include references to various roles they adopted within the university, as reflective learner and student, researcher, team member, seminar participant and discussant; and expected to occupy in the future as job applicant and interviewee, employee and professional (Table 3).

Four students referred more explicitly to aspects of their own role and/or the role of academic staff (Table 3). One student suggested that they had learnt that the nature of the relationship between staff and students was less formal than in school; they now saw teachers as listeners and facilitators, whilst recognising their own ability and responsibility to ask for and bring about change (R1). This sense that staff were more approachable was acknowledged by others (R3, R4), one of whom also recognised the importance of this in relation to their studies; and one member of the group shared their understanding that students could play a role in organisational change (R5).

One student's assertion that 'With this project [you] see yourself as a learner as well as a student' (Table 4) highlights an interesting feature of this work; the student researchers' differentiation between the terms 'student' and 'learner' arising during a workshop activity (Jarvis, Dickerson, and Stockwell 2013). Two students' responses in particular suggest that

they had gained a different perspective on their role as a learner and themselves as learners (R2, R5, Table 3), one recognising the importance of taking responsibility for their own learning and that of others. This was reiterated when a student commented 'Actually trying to see how you can improve the learning for other students' (Table 4). This new perspective has been reported in research on similar projects (Werder and Otis 2010) and has an impact on students' engagement with their learning.

Implications for future practice

Clayson and Haley (2005) emphasise the interrelated nature of the roles of students and academic staff in higher education such that the model applied to students has important implications for defining the parameters of staff. Although this article focuses on the students' role and learning, greater use of collaborative, enquiry-based learning means that the level of staff engagement in terms of time, skills and understanding of their role also need to be addressed and academic development issues will be explored elsewhere. Adopting this collaborative, collective approach to working together provides opportunities to re-frame the roles of both parties with the consequent responsibilities and potential for learning associated with that re-framing. The findings suggest that the student researchers identified learning in relation to employability skills and attributes and, importantly, in relation to their perceptions of themselves as learners and their role in their own learning and that of others. One student suggested that some of their learning ('To communicate ideas with different types of people and supporting the developments of other people's learning') was important 'Because it aids student confidence, helps create a 'community of learners', it allows the student to take ownership of what is/should be important to them' (R5, Table 3). This relationship between collaboration (or partnership) and community has been recognised:

'Working and learning in partnership then becomes a way of being and doing that is responsive to, and enables, thoughtful engagement with the contemporary landscape of higher education, where students and staff can collaborate as individually valued and invested members of a shared learning and academic community' (Healey, Flint and Harrington 2014, 20).

Thus, whilst the range of skills and attributes reported in this project could be gained through work placements and other contexts, the students' new perspective on learning and of their role in learning is of particular interest because this can influence their engagement with learning and their future role as a learner and as a member of a 'community of learners'.

Pedagogies such as the collaborative approach described here involve complex and dynamic practice; interactions between multiple participants with different conceptions and experiences of learning, and there are difficulties in seeking to identify their perceptions of learning from this way of working. Given the nature of the approach, which involved ongoing dialogue between the participants on a range of issues and emphasised students' employability skills, it is not possible to tease out these influences from the students' reports of their learning. However, although the findings are exploratory; the '*expressed 'perceptions''* (Holmes 2013, 546, emphasis in original) of six undergraduate student researchers within a UK University, they do offer useful insights into their learning, which have implications for student-staff collaborative activities in higher education and also raise interesting questions for future research. For example, was it the nature of the project itself and the confidence that students developed through participating that were important or were other factors involved? Was there a 'halo effect' arising through working with staff? Certainly, if collaborative

working has this impact then it is important to understand how and why this might be the case, so that appropriate pedagogies can be used to enhance this area of student learning. Cook-Sather, Bovill and Felten (2014) report that staff-student dialogue within partnerships provides students with insights into staff members' practices and perspectives, enabling students' greater understanding of learning, which they can apply to their own learning and that of others. Throughout the mutual enquiry process of the CARL project participants' contributions were valued and respected and the educators modelled knowledge development as a shared, uncertain activity, with no 'right answers'. This suggests Baxter Magolda's (2004, xviii) 'Learning Partnerships Model', which portrays 'learning as a complex process in which learners bring their own perspectives to bear on deciding what to believe and simultaneously share responsibility with others to construct knowledge'. In addition, Cook-Sather's (2008) data from the United States indicates that what helped one student to understand more about learning was to be able to step back and look at learning when they were not trying to learn something themselves. This implies that extracurricular work may have value in itself and raises the question of whether the impact on students' perceptions as learners only arises when collaboration takes place as part of an extracurricular activity that involves self-selecting students or whether it could usefully be applied to curricular models involving whole student cohorts. The third author, now a member of staff, is exploring the potential for this in his own work. Whilst the benefits of scaling-up the approach are suggested by the findings from this project, the challenges include the time required to use this approach for all students, and the understanding of some staff members for whom engaging in partnership with students presents 'a threshold concept' (Cook-Sather 2014, 186). The nature of pedagogical practice in higher education and its dependence on the identities, experience and interactions of multiple players means that the interrelation between student-staff collaboration and individual participants' development as learners will be complex.

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