Chapter 5
Challenging Pedagogic Norms: Engaging First-year Undergraduates in an Intensive Research Informed Learning Programme

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The University of Exeter is a research intensive university located across three campuses in the South West of England. It has a reputation for high quality education, and has been rated consistently by its students as one of the top 10 universities in the UK in the National Student Survey[1]. It takes an innovative approach to curriculum and pedagogic innovation which is reflected in its ambitious education strategy (University of Exeter 2010). The university has recently piloted 'Grand Challenges', an ambitious, intensive programme during which first-year undergraduates work alongside academics, postgraduate students and external experts to explore twenty-first-century global issues (Kay 2013; University of Exeter 2013). In this chapter, I will locate the programme within the contemporary Higher Education context, describe the pilot, discuss key pedagogic principles and reflect critically on the challenges faced by staff and students. In the tradition of case-study based research (Gilgun 2011), I shall reflect on how the initiative can contribute to wider curriculum theory. In particular, I shall explore the ideologies and values which underpin the programme (Barnett and Coate 2004; Toohey 1999; Peach 2010) and the relevance of the concepts of structure and agency (McKernan 2007).

My personal background as a lecturer in Geography, with extensive experience of the challenges and benefits of running intensive residential field courses, has been helpful in developing Grand Challenges and my role as educational advisor to the programme draws on this experience and on my work as an academic developer in three universities over the last 12 years. My contribution has been integral to the development of the programme's educational principles. Therefore, this is not a highly objective evaluation, but rather one which reflects on my lived experience of working for 18 months with a team of academics, postgraduate students and

[1] The National Student Survey is an annual survey of student opinions taken across the Higher Education sector in the UK.

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professional staff in preparing for and delivering the programme. The insider view which I present, supplemented by staff and student feedback, casts light on emerging challenges and successes and provides insights which might support others who are contemplating taking a similar journey.

National and International Contexts for Grand Challenges

Research universities across the world are actively engaged in reviewing, and often reforming, their curricula (Blackmore and Kandiko 2012; Lines 2012). Explanations for this trend include the rise of student empowerment (Fotheringham et al. 2012) and the neoliberal 'turn' which emphasises performativity, employability and graduate attributes (Barnett 2000 "Supercomplexity"; Boden and Nedeva 2010). Lines (2012, p. 3) points to international shifts in governmental rhetoric and 'political inclinations' resulting in a shift from Higher Education being seen as a 'public good' to Higher Education as essentially a 'private good' in which the individual pays. In addition, rapid changes in the way technology is used in education and, in the UK, the emergence of private institutions as competitors to existing universities are creating a belief that the curriculum is 'ripe for disruption' (Barber et al. 2013, p. 36). All these challenges inevitably make institutions more responsive to external competition, customer entitlement and to the cost efficiencies required to survive; ultimately they are the rationale for many universities rethinking their curricula.

In a recent report commissioned by the UK government, Ramsden (2008) suggests that:

> 'We need to encourage universities and colleges to explore new models of curriculum. Government and funding bodies should incentivise and support the radical realignment of undergraduate curricula: we require curricula that are transdisciplinary, that extend students to their limits, that develop skills of inquiry and research, and that are imbued with international perspectives'. (10)

He argues that students should have greater opportunities for interdisciplinary study, the chance to work in coherent learning communities on research based projects and to develop global perspectives. However, in discussing how new models of curriculum can be enacted, Barber et al. (2013) suggest there is no simple solution:

> 'We see many possibilities but are by no means certain what the way forward is—because there is no single way forward. Instead, what we will probably see is a diverse range of experiments, some of which will work and some of which won't. Our central message to leaders of universities and those who shape and regulate education is, in the words of the old hymn, to 'ponder anew'. The certainties of the past are no longer certainties'. (3)

Many ambitious universities are adopting centralised managerial policies for realigning the curriculum (Vidovitch et al. 2012). For example, the Universities of Aberdeen and Kings' College London in the UK and the Universities of Melbourne and Hong Kong internationally are promoting large-scale curriculum reform based

on radical revisions of programme structure, content and pedagogy. These are often marketing-led and typically start out as curriculum branding exercises which, when initiated, can lack pedagogic validity, may sit uneasily with well-established institutional values and may not command widespread academic support. However, when translated by teaching staff into the delivered curriculum (Barnett et al. 2001; Bernstein 2000) these interventions often gain pedagogic leverage providing undergraduate and postgraduate students with inspiring curriculum opportunities that go 'beyond rhetoric and aspiration to make enhancement a lived reality' (Hounsell 2011, p. 3).

The 2013 Grand Challenges Pilot

The Grand Challenge 'experiment' at Exeter is a comparatively modest centrally conceived co-curricular programme which sits alongside existing university structures and quality processes. This programme was trialled with groups of about thirty students for 2 years prior to the large-scale pilot. This meant we had opportunities to experiment with some of the pedagogic and structural ideas which underpin the programme and which are reported in this chapter.

Grand Challenges is designed to provide first-year students from the Colleges[2] with an exciting educational and social experience at the end of the academic year. It has been launched at a time when students are contributing more than ever before to the cost of their education (Department for Business Innovation and Skills 2011) and are looking for additional opportunities in the summer term. A whole host of educational, employability, cultural and sporting activities are on offer for those choosing to participate in Grand Challenges, including a weekend Campus Festival.

This chapter focuses on the educational aspects, and in particular on the twenty-first century dilemmas which address global issues such as climate change, ageing, ethical banking, child health and international security (University of Exeter 2013). All the dilemmas emerge from Exeter's strategic research themes. Central to the dilemma design is the idea that a coherent and rigorous research-like educational experience can be offered in 11 days. It draws in part on the US experiences of end of year 'keystone' courses (Cohen and Kisker 2009) which typically:

- add significant value to the core programme that students are undertaking by broadening their knowledge and understanding;
- use research-like approaches to learning and teaching;
- focus study on engaging and contemporary issues, dilemmas or themes;
- encourage students to integrate or synthesise their prior learning;

[2] At the University of Exeter departments are grouped into Colleges which form the organizational structure for teaching and research.

- develop important student skills, competencies and perspectives that are underdeveloped in the rest of the curriculum;
- promote connections between academic subjects and future careers;
- adopt a range of different (innovative) teaching and learning approaches.

Students select one dilemma and then work in small interdisciplinary inquiry groups. Teaching and learning approaches are highly interactive and students have a role in designing their own experiences and defining the outcomes of their research inquiries; they produce negotiated outputs which are communicated to wider audiences. Examples of these include writing a policy paper, U-tube videos, debates, awareness campaigns, myth buster pamphlets, social media discussions and dramatic presentations (Kay 2013; University of Exeter 2013a). Through this process students develop and articulate graduate level employability skills which are recorded in their university transcripts[3].

Dilemmas are structured around a common staffing framework. They are championed by senior research academics with support from other academic staff; learning is facilitated on a day-to-day basis by postgraduate students, drawn from across several disciplines. A key role is that of the 'anchor academic' who co-ordinates dilemma activity and leads on creating and sustaining staff/student communities of practice. Local community leaders, alumni and graduate employers provide support in the form of time, resources and expertise to underpin the Grand Challenges.

Training for postgraduate facilitators occurs before they meet their student groups in the second term; this includes a briefing about the dilemma they are working on, background information on Grand Challenges and support for implementing the pedagogic principles (see below). The project is managed by a full-time team and is led by academics, professional staff and the student Guild[4] who form the project board. The project had funding from the university to cover administration costs, pay the postgraduate facilitators and to resource dilemma activity including visits and the costs of external speakers.

The process of recruiting students starts before they arrive at the university and during 'fresher's week'. In 1 week during the autumn term the academic timetable is suspended for first-year students and they have the opportunity to attend stimulating introductory 'taster' sessions for the dilemmas. Students then have several weeks to sign up to their chosen dilemma and to select a small group inquiry theme.

It is important to note that during 2012–2013 the framework constantly evolved as the programme was being implemented; while this is to some extent inevitable in a major undertaking such as this, in this case it was also a conscious decision to work with a degree of uncertainty. Staff, in agreeing to take part, signed up to the idea that this was an experimental programme involving uncertainties and risks; they were committed to being flexible, creative and reflective. This had advantages in that it created a strong sense of ownership and reduced the extent to which the

[3] Students leave the University of Exeter with a transcript of achievements including details of successful engagement in co-curricular activities such as Grand Challenges. This enhances their employment opportunities.

[4] At The University of Exeter the students' union is called the Guild.

framework was viewed as a top-down initiative; however, it also created rather more stress for staff and facilitators than there might have been in a more controlled environment.

Pedagogic Principles

Four key pedagogic principles are central to the ethos of the dilemmas; these are broadly defined with the expectation that they will be refined by the dilemma teams within the constraints of the programme. To support the teams some guidance materials are made available for use in interpreting these principles.

Research-led Education

In the University of Exeter (2013b) it is made clear that undergraduates are introduced to aspects of research at an early stage in the degree. As is the case in most research intensive universities (Healey 2005), Exeter academics draw much of their inspiration for teaching from their own research and the twenty-first-century dilemmas provide creative contexts in which to realise this goal. The original thinking behind the dilemmas was that they would be predominantly *research-based* (Healey 2005; Healey and Jenkins 2009; Fig. 5.1); students would learn as researchers, working alongside academic staff and postgraduates but largely though their own

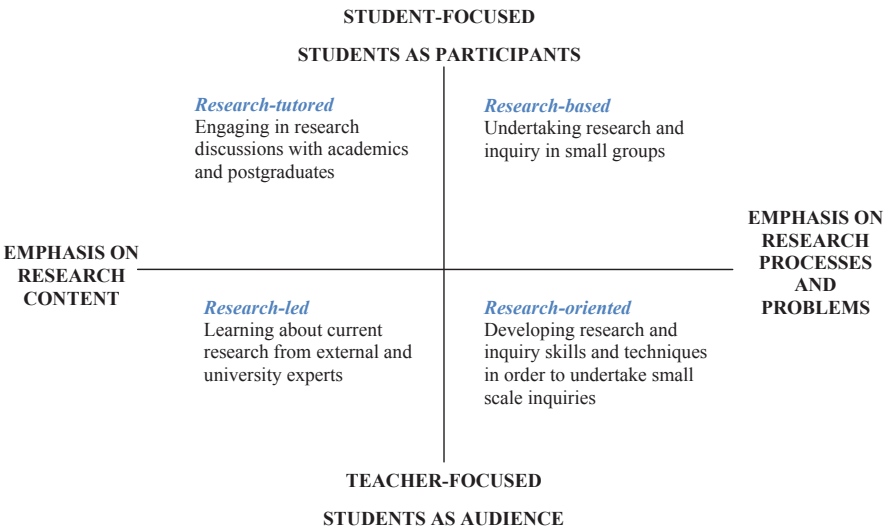

Fig. 5.1 Approaches to research-led education adopted by the twenty-first century dilemmas. (Based on Healey and Jenkins 2009, p. 7)

inquiries. The potential for individual creativity meant this would be enacted in different ways in each dilemma.

In reality, most of the academic teams felt that students, at such an early stage of their academic studies, needed some intensive taught 'content' and that they also needed a fair amount of support in deciding on appropriate inquiry processes; as a result *research-led* and *research-orientated* approaches (Fig. 5.1) were more dominant than we expected and contact hours were higher than anticipated. This high level of support seemed to result partially from concern about the very short time period in which students had to 'get up to speed' on the topic and deliver something intellectually rigorous (Knight 2001). The level of support was also partially dependent on the dominant discipline in each dilemma (Griffiths 2004; Healey 2005); the science-based dilemmas devised *research-based* experiences while the social science and arts based dilemmas adopted more *research-tutored* approaches.

Active Inquiry Based Learning

From an early stage in the planning, emphasis was put on the need for students to be engaged actively in their learning. This was partly driven by our assumption that students are most likely to show high levels of intrinsic motivation at the end of the summer term if they are learning actively (Dewey 1952; McKernan 2007; Spronken-Smith and Walker 2010); and partly by the close link that we know exists between active inquiry based learning and research processes (Levy and Petrulis 2012). Although the way in which this principle was interpreted varied greatly between dilemmas, they all involved students in actively setting their own goals, taking part in a range of activities to gain knowledge and skills and taking responsibility for communicating high quality outputs at the end of the dilemma. This was generally recognised as a successful feature of the dilemmas:

> 'I think one of the key strengths of the Grand Challenges programme has been interactivity of events—exposing Exeter students to experts of this university and national and international speakers with great depth of expertise in their areas of work. Another strength has been the format of events where students have had the opportunity to learn 'by doing' rather than passively listening in class'.[5]

At an early stage, teams were encouraged to think about adopting problem-based learning (PBL). The possibility of using PBL as a pedagogic framework emerged from discussions between the project's education advisers and the University of Exeter's Medical School which uses PBL to structure undergraduate learning. Our experience with medical school students shows that 2-week PBL learning cycles are effective and we felt this might be helpful in running an 11 day programme. None of the teams adopted the principles of PBL in their entirety and, in retrospect, it was

[5] All the quotations in this chapter are from anonymous feedback provided by staff and students at the end of the programme. It has not been possible to request the permission of individuals as their total anonymity has been assured.

probably unrealistic to expect staff to adopt an unfamiliar innovative pedagogy in addition to all the other challenges faced in designing their programmes.

Interdisciplinarity

The third pedagogic principle introduced was that dilemmas should draw inspiration from interdisciplinary work being undertaken at the university. In the context of a very short course we decided that offering interdisciplinary themes would be both attractive to students and would also open up creative approaches to designing the programme. The assumption that pedagogic creativity is particularly likely to emerge through interdisciplinary course design derives in part from ideas developed by Giroux (2009) who argues that disciplines tend to be conservative and show resistance to adopting innovative pedagogies; the educational debate over whether this is the case is, as McArthur (2010) suggests, not completely settled as disciplines can, and do, also act as spaces in which educational creativity is realised.

This principle also ties in with the increasingly important requirement (in the UK) that funded research should be interdisciplinary and be shown to have impact (Higher Education Funding Council 2013). The intention was to inspire senior academics to work together, align the dilemmas with real world research and engage students in disseminating contemporary research ideas to non-specialist audiences. In addition, we felt that students who have insights into research that transcends disciplinary boundaries will be able to transfer their new knowledge and skills into their substantive university programmes during subsequent years. Bringing together staff and students from diverse disciplinary backgrounds to study cross cutting themes seems to have been a popular and successful aspect of the programme.

Education for Employability

The fourth principle focussed on the extent to which employability and key skills should be central to dilemma activity. In referring to interactive inquiry based learning about global problems, Ramsden (2008) takes the view that:

> ‘This type of experience helps prepare students both for future academic challenges and for an uncertain global future in which their capacity for commitment, agility and boldness will be tested to the limit’. (7)

Employability related opportunities run throughout the 11 days; for example, skills master classes (e.g. debating skills, writing policy papers; making videos) and high level skill development activities (e.g. leadership, communication, conflict resolution) are embedded into the programme. In addition, all students engage in a workshop supported by careers staff to reflect on and record the skills they have

developed. A significant link has been made with the Exeter Award[6] and students attend employer-led events. All students complete the programme having created an online personal profile[7] in which their engagement in the dilemma is recorded.

The four pedagogic principles were by no means imposed as I have already indicated. They were constantly refined over a period of nearly 2 years; the small pilots in 2011 and 2012 provided practical insights into the feasibility of some pedagogic approaches and discussions with key university stakeholders influencing final decisions.

Those of us who were closely involved in the project throughout had developed views on how we might best implement the pedagogic principles but were very careful to be flexible when discussing these with the academic teams. In reality, there was considerable variation in learning and teaching experiences; this nicely illustrates the fine balance between structural frameworks dictated by policy decisions and the role of human agency in creating these experiences. In summary, the fine grained programmes for each dilemma were ultimately developed by academics and postgraduate students. These academic teams interpreted the overarching ethos, values and broad principles to create their own visions of an inspiring, intensive learning experience for first year students.

Critical Reflections on the 2013 Grand Challenges Pilot

Since the completion of the Grand Challenges pilot in June 2013 there has been a chance to discuss the programme with the participants and to reflect on successes and challenges from both a student and a staff perspective.

Engagement and Motivation: Student Perspectives

We took the decision that the programme should be neither accredited nor compulsory following a great deal of discussion amongst student representatives, academics and professional staff. While there were ways in which credit might have been awarded, there was considerable resistance to the idea from staff responsible for quality assurance, those potentially involved in marking student work and, in particular, from student representatives. They felt that many students would be using the post-examination period constructively in other ways (taking on internships, for example) but without expecting to gain credit for their activities. Staff and students felt that they would have to be more cautious if ‘high stakes’ assessment was attached to the programme.

[6] The Exeter Award—The Exeter Award provides students with a certificate to recognise successful participation in a range of extra curricula career related activities.

[7] This is recorded in their personal uk | LinkedIn profiles.

Mixed messages percolated through to students about compulsion, many of whom signed up initially on the basis that the programme was compulsory and later withdrew when they became aware that it was optional. Therefore, the greatest risk was that the programme would not attract sufficient participants. Students had just completed their end of year examinations, had no obvious extrinsic motivational drivers and were well aware of the long-standing tradition in the UK that students leave their universities after the assessment period is over and before term officially finishes. There was little reliable research which we could draw on to determine the likely reaction of students to the programme on offer. Fotheringham et al. (2012, p. 3) suggest that the vast majority of planning decisions made about student experiences are based on the perceptions we have about how 'implied students' will behave. We know from our student surveys that students believe that they are given too little to do in the summer term but we had no way of knowing whether what we were offering would prove attractive enough to retain them. We were prepared to work with about one and a half thousand students who had initially expressed an interest but in the end 530 students completed the programme, around 15% of the first year cohort.

To counteract the lack of extrinsic drivers the launch of the programme involved a highly organised recruitment drive led by the project and the university marketing teams. The strap line 'compelling not compulsory' was used to engage students and the autumn taster sessions gave students the chance to see what they might expect from the dilemmas. Soft incentives were offered based on the assumption that students would respond positively to their participation being formally recorded on their student transcript. These messages were clearly heard by the students. Typical of their feedback was:

> 'It was really well advertised- e.g. posters up in the Forum, leaflets handed out right from the beginning of the year, told about it by members of staff, received lots of emails about signing up etc …'

Some students felt they were under a lot of pressure to sign up which may explain the high level of initial registrations and later cancellations:

> 'It was annoyingly forced on us by academic staff' and 'Constant promotion by the University. Constant'.

Drawing on available research on creating cohesive learning communities (Lave and Wenger 1991) we gave students the opportunity to select their own inquiry groups and then invited these small groups to engage with staff and each other well in advance of the start of the programme. The intention was to 'bond' the group members and develop a sense of group responsibility which might counteract last minute cancellations. It was thought that they would participate more fully if there was a strong sense of group responsibility both towards each other and also to co-producing something which would be shared with the outside world.

However, we may have misjudged how effective this process would be as students were fully occupied with their substantive programmes at the time when the inquiry groups first formed and in reality the community-building process only started on the first day of the summer programme. By this time many of the students

had decided not to take part and left the University. Most did apologise, and of the 65 % who withdrew about half of them told us they had been offered paid employment or were involved in other University activities. This was encouraging as it indicated that students were taking part in career related activities in the summer term even if these did not involve the Grand Challenges dilemmas.

Amongst those who did participate high satisfaction levels were achieved. At the end of the 11 day period students were asked to respond to a survey which achieved an 86 % completion rate. A large majority were pleased they had signed up and attended the programme, 63 % felt the programme more than matched their expectations, 83 % learnt more than they had anticipated and over 80 % felt they had developed additional graduate skills. Inevitably there was variation in responses both between and within dilemmas but typical of the student comments made were:

> 'This was a great opportunity unique to the University'. 'I tackled a problem I felt passionate about' 'It is a great opportunity to enhance key skills as well as a good element to have on your CV'

and

> 'After being offered the opportunity to work on a subject that is far from my degree, I decided to sign up. The opportunity would probably never again present itself during my time at university. The subject I signed up to I felt would be the most interesting and enjoyable, and it has proved to be really fun to work on! I'm very glad I signed up and feel that it has been a really worthwhile two weeks!'

Many participating staff clearly felt the same:

> 'I believe the strengths of the programme lie with the enthusiastic participation of the students… those who committed themselves made the programme a joy to deliver and amazed me with their level of participation, input, and frankly performed far above the level of year one undergraduates.'

Staff and students felt that working together in small groups of highly motivated individuals resulted in an exceptional learning experience and the production of very high quality outputs. Going forward we must decide whether we should continue to run the programme for small numbers of highly motivated students or whether the University's strategic ambition to engage *all* students until the end of the academic year should be realised by introducing a degree of compulsion. We envisage that voluntary attendance will be greater in the next cycle as we intend to involve our highly committed and very satisfied students from this year as leaders in the recruitment process for next year.

Academic Leadership and Facilitation: Staff Perspectives

It has already been made clear that the responsibility for each dilemma was devolved to an academic champion who recruited an interdisciplinary team of senior academic supporters. These champions who volunteered to take part had clear insights into the educational philosophy and ethos behind the programme. They

were enthusiasts who were able to dispel some of the natural staff reticence about engaging in something new and unfamiliar which would take up valuable time at a busy point in the year. The timing of the launch of Grand Challenges in a year when research academics were building up to the census point in the Research Excellence Framework (Higher Education Funding Council 2013) was a disincentive for some.

Two roles, the 'anchor academic' and the 'postgraduate facilitator', were created for Grand Challenges and these have been crucial to the implementation of the programme. Anchor academics were selected to take overall responsibility for the day to day design, organisation and team co-ordination. For many this was a valuable experience:

> 'I would be delighted to be involved in the future. I think this is a programme with great potential …. One way in which Grand Challenges can be improved is to ensure that it is not just a student experience; it should also be sold to staff in terms of developing one's professional skills and profile. If Grand Challenges can also combine a staff member's research output/direction with activities, then students and staff alike will greatly benefit and all parties have a mutual stake in making the programme sustainable and beneficial.'

However, this was also a challenging role which took up increasing amounts of time as the programme launch got closer:

> 'I fear the programme may have been too grand in some respects, particularly in administrative terms… I myself as an academic felt completely under-resourced for the scale that the programme eventually took on…. Another key challenge is the time of the year: clearly timing must be handled very carefully having such proximity to the exams.'

The majority of the anchor academics were young staff for whom the leadership of a complex and innovative programme was potentially a career opportunity (Bolden and Gosling 2008). Several of them felt that their involvement had raised their profiles despite the considerable pressures they were under in balancing this work with their research and other teaching. On reflection, and from feedback received, this role was under-resourced and we shall be reviewing the amount of time allocated to these staff for the next cycle.

One hundred and ten postgraduate facilitators were recruited and allocated to dilemmas on an assumed ratio of 1:20 students. The opportunity was advertised though postgraduate networks and through the University's Learning and Teaching programme. Applicants had to make a case for selection and were required to attend a 3 hour briefing. More facilitators applied than we could accept and so there was a 'light touch' selection process based on three criteria: subject specialism, interest expressed in innovative pedagogies and practical evidence of commitment and availability. Facilitators had to commit to being available for the entire 11 day programme and one of the advantages of having an intensive learning experience was that this could be planned in advance and did not cut across their external research commitments. Facilitators demonstrated engagement, enthusiasm and educational leadership and were outstandingly successful in their roles as evidenced by feedback from first-year students.

From a strategic point of view the University saw Grand Challenges as an opportunity to invest in developing the education leadership potential of newer staff

and postgraduate students who would learn a great deal through their experiences. Several postgraduates were involved in a learning and teaching programme at the university at the same time and were able to use their experience of working on the dilemma as the basis for a reflective assignment to achieve accreditation for their teaching (Higher Education Academy 2013).

Feedback from staff and postgraduates tends to support the extensive literature (Eraut 1994; Knight et al. 2006) relating to professional learning which suggests that where resources, time and good leadership are all in place professionals learn well through a process of what Hargreaves and Fullan (1992, p. 218) and Biesta et al. (2008, p. 5) call *ecological change*. The culture in which this occurs is critical; collaborative cultures or organic teacher networks are most conducive to effective development (Wenger et al. 2002; Biesta 2010). Designing teaching activities which link to research is at the heart of Becher and Trowler's (2001, p. 187) thinking about developing academic staff; they argue that learning to teach happens most effectively when teachers are encouraged 'to create challenges that are likely to evoke fresh learning in the ordinary course of their work'. This supports the view that the most personally valuable, immediately useful and transferable learning about how to teach will be picked up informally when working with disciplinary colleagues and as Coffield and Edward (2009) argue this will often happen when working in teams or communities of (research) practice.

Involvement in Grand Challenges has provided just such a context for learning through linking the dilemmas closely to research themes while encouraging reflective attitudes to the pedagogic decisions taken. All postgraduate students had the opportunity to feedback on their experiences and provide suggestions for the future. Some have expressed concern over the impact on their research and other commitments but on balance the experience gained from facilitation seems to have been very positive:

> 'I had to neglect other professional duties during the last few weeks in order to get things accomplished. On top of this, I worked long hours during the event itself working out schedules and generally coordinating student activities. I was utterly exhausted by the time we reached the final day. I did, however, learn an amazing amount during the event, and it gave me a chance to meet students that I will interact with next year in other courses. I'm sure this will also be a useful thing to add to my CV. However, aside from that, it has been a good experience for me facilitating a group of students.'

Contributions to Wider Curriculum Design Theory

I have made it clear that to create a coherent framework and provide students with reasonably comparable experiences, a degree of conformity was imposed. However, even a skeletal framework inevitably brings with it a set of values which are contestable. As Blackmore and Kandiko (2012, p. 9) argue the curriculum is a social construction, a site for 'socio-political and cultural decision making' and the 'locus and transmitter' of values. It is a source of power in institutions and decisions about

the curriculum bring with them financial implications. There are, as Bridges (2000, p. 37) suggests, not only competing epistemologies which are 'struggling to shape the formal undergraduate curriculum of the twenty-first century' but vested power structures which have to be negotiated. In this context, it is appropriate to consider some of the issues that emerged in planning Grand Challenges to illustrate how debates, often driven by ideology, became increasingly political.

Curriculum Design: Issues of Ownership

In setting up the interdisciplinary dilemmas, it was apparent that many academics resisted aspects of the imposed framework. Taking a top down approach to curriculum reform can undermine and undervalue the traditional powerbase of disciplinary experts in deciding what and how they teach their students (Collini 2010). It is well documented that large scale institutionally driven curriculum reform meets with resistance from academic communities (Becher and Trowler 2001; McKernan 2007). Trowler (2008) warns us about the dangers of deconstructing existing teaching and learning regimes and argues that there are powerful characteristics of (subject based) curriculum design which are more likely to succeed. Bridges (2000) argues that the subject or discipline is the most appropriate academic/organisational framework for curriculum planning. In addition, as can be observed in the UK, powerful hegemonic forces in research such as the Research Excellence Framework (Higher Education Funding Council 2013) and in teaching such as the Quality Assurance Agency (2012) can reinforce and perpetuate the dominance of the disciplinary focus for the Higher Education curriculum.

Further resistance emerges when the organisational framework within which the curriculum is delivered is traditionally led by departmental support teams which have vested interests in retaining ownership of student academic experiences. At Exeter decentralised organisational frameworks mean that developmental activity is normally embedded in the College structures. Therefore, it is not surprising that tensions arise when a central curriculum initiative like Grand Challenges, with financial and administrative segregation from these traditional devolved structures, emerges. Issues arose around prioritising workload commitments, establishing ownership and deciding 'who pays'. Some would argue that the introduction of Grand Challenges has created opportunities to move beyond the conventional structures which frame curriculum and pedagogy and to take up Barber et al.'s (2013) challenge for 'diverse experiments'; others that this has been disruptive and difficult to manage. In reality, both these positions are valid. On balance I would argue that, while the underpinning principles and operational structures *have* been developed centrally, at the heart of the pedagogic framework is a respect for academic choices about teaching and a belief in the motivational effect of encouraging individual creativity in curriculum design.

Performativity vs. a Liberal Education

Contemporary curriculum reform in Higher Education often focuses on how to structure learning opportunities around career-related objectives, employability and economic drivers (Gunn 2010). As Barnett and Coate (2004, p. 433) have argued, there is a politically motivated performativity agenda which increasingly dominates both the content of programmes and the way in which curricula are designed. However, Toohey (1999, p. 57) suggests we should not ignore alternative philosophical approaches to curriculum design which emphasise the more reflective and socially critical approach to education traditionally found in the liberal arts. Some would suggest that by working collaboratively and adopting a 'social practice approach' to curriculum design (Weller 2012, p. 27), we can address some of the tensions which arise from these contrasting views.

How did this debate manifest itself in Grand Challenges? In the development of the framework these different viewpoints were strongly voiced by interested stakeholders leading to tensions around the proposed activities. Given the importance of employability in the university's education strategy many key stakeholders were keen to emphasise activities which would foster career related skill development; they wished to ensure that these were overtly recognised in the dilemma outcomes. In contrast, many academics saw the dilemmas as an opportunity to design their courses in an unconstrained way, to focus on innovative teaching processes freed from what they sometimes see as the shackles of performativity (Hussey and Smith 2002; Knight 2001). They were drawn to the possibilities of designing programmes which focused on broad civic values such as social responsibility, ethical thinking and morality and which allowed them to experiment with innovative teaching methods made possible by an intensive programme within a flexible timetable.

I would argue that, as the dilemmas have evolved, we have ended up with a blend of these apparently conflicting views. In retrospect, the dilemmas have developed as a form of socially critical vocationalism (SCV) in which 'intellectually rigorous, vocationally oriented and socially responsive features' come together (Peach 2010 456).

The two central tenets of SCV according to Peach (2010, p. 456) are that students should 'develop democratic virtues and practices and the capacity to reason about moral deliberations in order to become good citizens' and that they should be prepared to become part of a 'flexible workforce trained for the many professional domains on which society depends'. SCV therefore challenges the 'economic/vocational versus liberal/academic binary'. Through the approach adopted in the Grand Challenges dilemmas, I would argue that we have moved towards something Peach (2010, p. 457) calls 'philosophical reconciliation' between a liberal approach and economically driven performativity.

Education as Action: Critical Pedagogy

One of the benefits of designing an experimental short intensive course, particularly where no student assignments are involved, is that it gives staff and students

opportunities to work together in unfamiliar ways and to take risks. Two aspects of this will be explored; both relate to the ways in which students have 'taken action' during the Grand Challenges fortnight as a form of emancipatory education (Biesta 2010, p. 39).

The first of these actions relates to co-designing the learning experience. One of the key elements of the framework is that staff and students should work together as 'equal social actors' (Weller 2012, p. 27) to construct their learning, define the questions to be addressed and plan the outputs. This approach is seldom encountered in the normative world of Higher Education where rational curriculum planning is widely adopted; however, it is well articulated in adult education (Malcolm and Zukas 2001; Knowles et al. 2011). Central to the approach is the provision of opportunities for students to self-position themselves in relation to the curriculum (Weller 2012, p. 27), to participate in collaborative communities of learning (Wenger et al. 2002) and, vitally, to engage in a dialogic relationship with their tutors to negotiate the curriculum.

How did this manifest itself in the dilemmas? It was, of course, necessary to prepare aspects of the student experience before they met; time was too short to leave all these preparations completely to chance. The academic teams had invited speakers and lecturers, set up external visits, prepared for public interviews and provided a range of reading and other materials online. In some cases the contexts in which the dilemma would be explored (a debate or a simulated international conference, for example) were also predefined. However, students were essentially presented with these as 'ingredients' on which they could draw in defining their research questions and preparing their outputs. To do this in such a short time involved incredibly high levels of commitment and motivation on all sides. This presented challenges which did not go unnoticed:

> 'There was a marked tension between a 'democratic' pedagogic ethos—letting the students work with their facilitator(s) to select their topic and determine its delivery—and a more hierarchical structure with top-down demands for facilitators and lead/anchor academics to comply with deadlines.'

There is also evidence in the feedback that students and staff were at times frustrated by the 'excessive freedom' they were given to plan their work. Many students and some staff told us there was a 'lack of organisation' at the beginning of the programme suggesting that they were unprepared to take the responsibility that comes with emancipation. This is unsurprising as few get the opportunity to take ownership in this way in their normal programmes. This response reflects the view expressed by proponents of the critical pedagogy movement that academics will only become 'transformative intellectuals' when they work outside the repressive mechanisms of power that they experience inside their disciplinary structures (Giroux 2009 qtd. in McArthur 2010, p. 305). Perhaps the interdisciplinary nature of Grand Challenges offered an opportunity here; but it also posed a threat for staff who traditionally champion highly-planned outcomes-led curricula.

The second way in which Grand Challenges has involved students in taking action relates to the expectation that they would be involved in 'social action' (McKernan 2007, p. 41). This draws on Dewey's (1952) pragmatist philosophy of education as preparation for life, reflective citizenship and democracy. The Grand

Challenges dilemmas have provided critical encounters for students through which they have taken direct social action. For example, students have created a manifesto for change relating to the banking industry which was presented to a local Member of Parliament; they have published a pamphlet for residential homes to use with relatives and friends and they have written, and published online, music which highlights the plight of porpoises in the coastal areas around The SW coast of England. One facilitator reported that Grand Challenges:

> 'Requires working in teams to produce outputs in a way that university study tends not to; Skills demanded by the real world are required; Students on the inquiry group said that they might wish to show the final product (the glossy output report) to potential employers at interview. Others said that they would add it to their 'portfolio' required for getting a Training Contract in order to become a solicitor.'

Barnett (2009, p. 433) suggests that a liberal education involves students in coming to know in a way which allows them to distance themselves from their own ideologies and take some control over the world in which they are living and studying. He calls this approach a 'curriculum for transformation' (Barnett 2009, p. 264) It would be a grandiose claim to suggest that an intensive 11 day programme could achieve extensive transformations; however, there was consistent evidence in the feedback about the programme that students' grew in stature and confidence, were more socially and intellectually engaged and had taken responsibility for challenging and reporting on critical social, cultural, economic and environmental issues.

> 'The students from this dilemma have gone through a deep transformation, personal and "professional". Not only do they know more and they have developed a wide range of great skills but also they are much more committed to make this a better world. They have learned a lot about themselves and others.'

The Unique Characteristics of Intensive Programmes

My final thoughts are central to the theme of this book. I want to ask whether the characteristics of Grand Challenge dilemmas discussed in this chapter are uniquely related to the intensive and co-curricular nature of the programme or whether they could have occurred in traditional learning contexts. I have argued that there is a fine balance between structure and agency in a programme such as this. There is evidence that the programme has been a vehicle for personal agency and individual creativity amongst students and staff which might not have been possible in a lengthy accredited course. Some academics have argued that they have been constrained by institutional mechanisms, ideologies and central project management resulting (for them) in additional, unnecessary complexity but, in general, the dilemma teams do seem to have been relatively free to develop teaching approaches independently. The fact that this was seen as a desirable feature by the teams reflects strongly held values and beliefs; Biesta (2010, p. 55) suggests that:

> 'the only thing that is needed is to remind people they can see and think for themselves and are not dependant on others to see and think for them.'

I would argue that the room to experiment that has been permitted by Grand Challenges is not unique to intensive programmes but has been facilitated by the principles adopted.

It has become clear that students work effectively and enthusiastically under pressure and produce high quality and creative outputs when they are given responsibility for co-creating their experiences. This is well known to academics who take students away on field visits and other short experiential trips. One of the lessons academics have taken away from Grand Challenges is that they underrate first year students' abilities to lead and produce good academic work in short periods of time. Not only does this support the idea that some aspects of the curriculum should be delivered through short sharp learning experiences, but it also begs the question about how much of the conventional curriculum could be delivered in this way.

In addition, the opportunity for staff and postgraduate students to develop innovative pedagogic approaches was undoubtedly linked to the fact that an intensive non-assessed experience encourages risk taking which would be difficult in a traditional modular framework (Malcolm and Zukas 2001). This does not mean that aspects of these innovative practices cannot be integrated into existing modular programmes but that the programme provided a manageable test bed for these ideas without which they might be considered to be risky and unachievable.

However, learning through short intensive experiences does have its critics. Some have argued that rational curriculum planning, as exemplified by short modules, undermines the potential for students to develop a deeply critical stance (McKernan 2007; Curzon-Hobson 2003) and that an emphasis on truncated experiences particularly when they are defined by learning outcomes is anathema to higher level academic learning (Hussey and Smith 2002); others suggest that education becomes 'planned enculturation' when it is structured into highly specified curriculum and pedagogic outcomes (Osberg and Biesta 2008) as is the case with many modular courses. Arguments for the advantages of returning to 'slow' learning have become more widespread (Knight 2001; Hartman and Darab 2012). The Exeter experiment has illustrated that there are advantages in avoiding the rigours of rational curriculum planning while at the same time challenging the suggestion that short intensive periods of learning inevitably lead to enculturation.

Conclusion and Recommendations

The programme described in this case study had its roots in one university's desire to address the perceived needs of students to have additional useful and exciting educational experiences in the summer term. It has created conditions in which the university has partially addressed the global drivers behind creating a 'well rounded curriculum' (Weller 2012, p. 89). Tensions are exposed which lie at the heart of this

programme but which also relate to values and norms which universally underlie decisions about the Higher Education curriculum.

Co-curricular programmes, such as the one described, can provide a context which liberates teachers from constraints imposed by the positivist, neoliberal epistemologies backed by powerful hegemonic forces which widely influence the experience of contemporary undergraduate students. I have explored whether the programme provides a 'space' in the contemporary university curriculum, as it responds to 'numerous and inchoate' external structural forces (Barnett 2009, p. 260), for an emancipatory approach to teaching and learning with its focus on human agency, individual creativity and personal freedom. I have argued that this is partially, but not totally feasible (or possibly desirable) in an intensive short programme like Grand Challenges.

As we move forward into the next cycle of the programme, we shall be addressing challenging organisational and pedagogic issues around scaling and timing. We shall revisit the interdisciplinary principle, as we are aware that many academics feel more comfortable working within their disciplines and we shall return to the principle of problem based learning as a possible pedagogic framework for working with larger cohorts of students (Spronken-Smith and Walker 2010).

Furthermore, we shall be considering whether lessons learnt through the dilemmas can be embedded more widely in our substantive programmes. This will inevitably lead to a debate about whether the programme might be absorbed into the formal curriculum in the future. I would advocate retaining a programme of this kind as a co-curricular experience, if only because it has proved to be a powerful formula, as Fernandez-Armesto (2013, p. 33) suggests, for teachers who want to 'share passions, inspire, ignite minds, empower intellects and enhance lives'.

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