

The Kaleidoscope of Voices: An Action Research Approach to Informing Institutional e-Learning Policy

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1. Abstract

The EU policy framework (EU, 2020) is designed to encourage and support digital competency, offering this as a solution in addressing the huge gap in digital skills. Digital competence and capability are an essential for enhancing immediate and enabling life-long learning (EC DIGICOMP, 2013). Measuring Digital Skills across the EU (2014) estimated 39% of the workforce had insufficient digital skills, while 64% of those in disadvantaged groups have insufficient digital skills for the workspace. This policy agenda is reflected in UK Government policy documents, the House of Lords (2015) reports that 2.2 million people can be categorised as 'digital muggles'. Yet Labour force studies (UKCES, 2015) indicate 300,000 recruits are needed to invent and apply new technologies. This reflects earlier work by Frey and Osborne (2013) whose model shows that as technology adaptation and use speeds up, low-skill workers will be replaced. The challenge for Higher Educational Institutions is how best to embed these skills, and enable and facilitate institutional change? Heppell (2016) states: 'the use of digital technology in education is not optional'. This paper draws from the experience of a single university and evaluates their approach to managing change. Our methodology is located within an action research framework (Norton, 2009). Informed in conjunction with a 'Panel of Experts', thought-leaders drawn from industry and academia, and incorporating a strong student voice, we believe this approach is relevant for complex and policy based studies, as the framework can encompass a mixed methods technique (Johnson and Onwuegbuzie, 2004). Findings indicate that strong research and technological leadership, building internal alliances with key stakeholders, focusing on the 'middle out' (Bryant, 2016a) and a partnership approach to working with the Students Union all contribute to a transformational and shared approach to institution-wide change at a time of complexity and contestation in Higher Education policy.

Keywords: Higher Education, Action Research, Digital Competencies, Technology Enhanced Learning.

2. Introduction

The EU policy framework (EU, 2020) is designed to encourage and support digital competency and offers this as a solution in addressing the huge gap in digital skills. Digital competence and capability are seen as an essential for enhancing immediate and enabling life-long learning (EC DIGICOMP, 2013). Measuring Digital Skills across the EU study (2014) estimated 39% of the workforce had insufficient digital skills, while 64% of those in disadvantaged groups have insufficient digital skills for the workspace. This policy agenda is reflected in recent UK Government policy documents on the new skills needed to be fostered in the UK. The House of Lords (2015) reports that 2.2 million people can be categorised as ‘digital muggles’, only capable of basic internet skills and tasks, and unable to be digital content makers. This contrasts with the recent Labour force studies (UKCES, 2015) indicating 300,000 recruits are needed to invent and apply new technologies. This reflects earlier work by Frey and Osborne (2013) whose model shows that as technology adaptation and use speeds up, low-skill workers will be replaced.

The challenge for Higher Educational Institutions is how best to embed these skills, and enable and facilitate institutional change? This paper draws from the experience of a single university and examines and evaluates their approach to managing change. Our methodology is located within an action research framework (Pedler, 2011; Raelin, 2011; Pedler and Abbott, 2008; Norton, 2009). Informed in conjunction with a ‘Panel of Experts’, thought-leaders drawn from industry and academia, and incorporating a strong student voice, we believe this approach is relevant for complex and policy based studies, as the framework can encompass a mixed methods technique (Johnson and Onwuegbuzie, 2004). This theme is addressed more broadly by Denzin’s (2008) analysis of the politics of evidence, in which it is shown that by Governments’ and other powerful institutions’ insistence on methods and methodologies of quantitative inquiry that, “a narrowly restricted view of what counts as knowledge is imposed on research” (Satterthwaite in Denzin, 2008:ix). Satterthwaite argues that locating this work within the scope of a deliberate, solution-orientated investigation, as advocated by Kemmis, McTaggart and Retallick (2004), which is characterised by spiralling cycles of problem identification, systematic data collection, analysis and reflection, data-driven action and problem redefinition that the work can be recognised as theory based, relevant and improving practice (Holley and Boyle, 2012). Thus, the development of policy within its context recognises that knowledge is socially developed, as suggested by McNiff (2013).

3. The UK policy environment: contested and complex

Narratives of difficulty, isolation and compromise are reported by widening, participatory students as they find their way in the ‘new cold climate’ of HE (Sinfield, Holley & Burns 2004).

Universities have found themselves in an increasing competitive global marketplace (Hemsley-Brown and Oplatka, 2006) and the Higher Education in the UK has been experiencing fragmentation in its strategic and operational management, Deem, Hillyard and Reed (2007) refer to this shift in changing management of UK universities as 'the new managerialism'. In addition, universities have experienced technological transformation and Noble (1998) regards this change as a disguise to commercialisation of education and the role of digital technologies is regarded as a paradigm shift to learning (Beetham and Sharpe, 2013). Others have since referred to the 'marketisation' of higher education and the inherent challenges faced by universities to compete in an overcrowded global space (Jongbloed, 2003; Molesworth, Scullion and Nixon, 2010; Brown and Carasso, 2013).

The shift in the UK university fee structure from the state to the student is regarded as the first stage in 'neoliberalism' (Cruickshank 2016). The second stage is suggested to be the introduction of the UK Government's *Higher Education Green Paper* (Hubble, 2015) with the Teaching Excellence Framework (BIS, 2015) introduced to bring reform to the sector and introducing measure for raising standards of teaching, whilst at the same time focusing on employability and widening participation in Higher Education. At the same time, the 2015 Competition and Markets Authority (CMA) issued new guidelines for the Higher Education sector with a new Consumer Rights Act. A main focus on this act has been to ensure that the accurate and timely information is presented to potential applicants and that the information is in itself fair (CMA, 2015). The implications for these changes in policy has resulted in a crowded market, where Higher Education Institutions are competing at multiple levels to meet the changing needs of students (Wilkins, Shams and Huisman, 2013). One response to the challenge has been the investment in new buildings, regarded as a direct response to competition and offering a better student experience (BBC, 2014). Universities have the further challenge in developing appropriate strategies in response to a new generation of digital students expecting different physical and virtual spaces to harness new ways of learning (Temple, 2014; JISC 2014; Brown, Jenkins and Walker, 2013). The digital native, a term coined by Prenski (2001) has since been refined and developed, however, today's students are increasingly bringing their own devices (BYOD) and expecting far more engagement with technology throughout their studies (JISC, 2012).

3.1 Institutional policy agenda

BU's approach to TEL is led by its Vision & Values to create a world-class learning community through a Fusion of Research, Education and professional practice (BU2018, 2012) and excellence in student learning is at the heart of its vision, with leadership and facilitation delivered through the Centre of Excellence for learning. Thus there is a space for the development of supportive collaborative communities to inspire excellence in learning practice across BU and the sector. The external policy drives from the UK Government (NSS, TEF, CMA amongst others) highlights the need for Universities to offer students a more holistic experience in terms of honing their skills for the fast changing and increasingly technological requirements of the 21st century workplace.

TEL has gathered momentum at BU following a re-establishment of the TEL Strategy Forum (TELSF) that superseded an eLearning strategy group. TELSf is responsible for development and promotion of innovative practices using TEL in pedagogical enhancement and to enable and support an excellent virtual learning experience for BU staff and students. In its initial stages TELSf focused chiefly to develop awareness and promote shared practice followed by a program of engaging academics in innovative education and learning approaches. Once levels of engagement span wider to include cross-faculty collaboration it was apparent that more confidence in the available systems was required to assist staff and students in extending the adoption of learning technologies to enhance learning practices. The journey for TEL strategy has now evolved to a stage where the focus is on developing consistency in the user experience of TEL from both academics and student perspective. Central to taking the work forward is the development and implementation of the 'Technological toolkit', (TEL Toolkit, 2016); offering a medium and acting as the catalyst for developing a different type of institutional change (Beetham, 2015).

The focus of FUSION on education and professional practice led to the development of a central unit, located within the office of the Vice Chancellor, but with a firm remit to working across disciplines. The Centre for Excellence in Learning (CEL) was formally launched in 2014 (CEL 2016), and tasked with aligning the University with the prospective Teaching Excellence Framework (TEF) and providing:

'the means to raising the profile of fusing research, professional practice and knowledge exchange activity into an excellent student learning experience and is recognised as a focal point for innovation and high-quality educational development'

The institution moved towards a discourse founded on innovation and partnership with students thus enabling themes of digital literacies expectations and needs to emerge. and it captured the student response as well. As a response to the more vocal student voice, as well as acknowledging external policy drivers, a shift change in thinking and approaches to Technology Enhanced Learning (TEL) strategy occurred, enabling a broader and partner action research approach, informed by sector and stakeholder voices. As McDougall, Readman and Wilkinson (2016) argue, 'one significant impact of new technologies in education has been to give teachers and learners a voice through the many "bottom up" channels.

4. Methodology

This research adopts an action research approach as a response to national and institutional policy drivers that in an age of austerity tend to lead to a top-down management approach (Shattock 2013; Feigenbaum and Iqani, 2015; Batini, Ceri and Navathe, 1989). Action research draws upon the work of Lewin (1946), who challenged the dominant research USA 'behaviorist' discourse in the USA (Hill, 1990) in the 1940s by involving his participants in a cyclical process of fact finding, planning,

exploratory action and evaluation, seeing this as the way to improve social formations – an area of significance to him as a refugee from the Nazi occupation of Europe (Lewin, 1948). It is noteworthy that he knew and was familiar with the work of Vygotsky (1980), sharing a desire to share and understand ways to scaffolding learning – and thus these principles are still of interest to educators today.

Attempting to deliver institutional benefits through an IT structured approach proved problematical because a set of propositions for staff around, for example, minimal engagement with the Virtual Learning Environment (VLE) has resulted in VLEs across the sector being used primarily for content storage, not student engagement (Browne, Jenkins and Walker 2006); and a measured approach fails to account for innovation and pedagogy. McNiff (2013) suggests that action research for managing organisational change can be particularly challenging for educational managers as people need a new way of working embodying the concept of collective involvement. Action research approaches involve a genuine sense of partnership despite differing responsibilities and professional expertise. It is a creative dialogue of equals. As researchers uniquely poised at the tipping point between the more traditional management approaches to institutional policy development and the imagined new futures outlined by Somekh and Zeichner (2009). As critical reflection is an almost-universal component of action research (Dick, 2015) we are well positioned for the critical reflection required by action research. Thus the action research approach is one within which we can surface and capture the tensions between the old/new approaches at institutional level, the institutional/national policy tensions, as well as the national/international drivers of the neo-liberal agenda. Somekh and Zeicher (op.cit p 2) point to the 'boundary-crossing nature of action research also makes it a particularly well suited methodology for educational transformation in the twenty-first century', and that the interpenetrating and spiral values of action research deliberately causes discourses and that this makes a unique contribution to educational reform. For McNiff (op.cit) the key benefit of these systematic evaluation procedures is that the voices of others come through to explain how their learning has improved because of the intervention. It is with these underpinning values we approach this study.

Our paper works through two action research spirals (Kemmis, McTaggart and Retallick, 2000) as illustrated in Figure 1 below, to enable analysis of institutional TEL challenges with more scrutiny. The first describes our initial institutional proposition of a traditional 'top down approach' informing our e-learning efforts, consisting of a set of expectations around 'use of tools, leverage of the Virtual Learning Environment and a School based set of 'e-learning champions' charged with diffusion throughout the institution. The second cycle is the transformative change offered by Bournemouth University's 'FUSION' strategy (BU2018, 2012) based around staff engagement with research, education and professional practice.

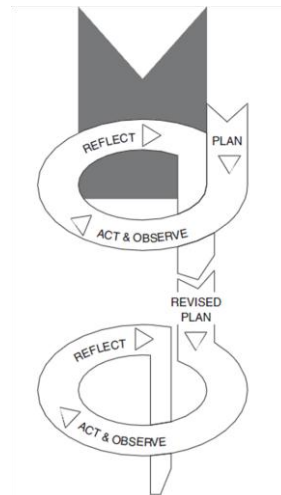


Figure 1. Kemmis and McTaggart (2000)

4.1. Spiral 1 Problem identification, systematic data collection and analysis

Set out the 'issue'

An internal audit, delivered through the auspices of the Leadership Foundation for Higher Education (2015), 'Changing the Learning landscape' programme clearly identified that level of academic and student engagement was accelerated by increasing levels of expectations of technology. Academics were becoming increasingly engaging with a wider range of technologies to promote their activities and support their own, and student engagement within a discipline. Building capacity through shared staff/student ownership and use of such technologies should have created enhanced learning opportunities, where staff and students were empowered in the creation and co-creation of enhanced learning opportunities. However, it became apparent that this was not a systematic and consistent offering, and that a series of technological malfunctions with the VLE and other technologies had dented staff confidence in delivering innovation. A short term response to this dip in engagement by academic staff resulted in a drawing together of a consolidated approach involving both the central technology service and staff development strategies; however this was recognised as unsustainable in the longer term. The new approach did offer a more data-driven perspective, and enabled the identification of 'e-learning champions' across the institution, who were encouraged (but not adequately resourced) to share and disseminate change.

Thus, our analysis contrasts two distinct approaches; the initial efforts of a traditional 'top down approach' informing our e-learning efforts, consisting of a set of propositions round 'use of tools, leverage of the Virtual Learning Environment with 'e-learning champions' to diffuse innovation throughout the institution. The second cycle is the transformative change offered by Bournemouth University's FUSION of research, education and professional practice (BU2018, 2012), where the institution uses a discourse founded on innovation and partnership with students to meet their digital literacies expectations and needs. Accordingly, a shift change in thinking and approaches to strategy occurred, enabling a broader and partner action research approach, informed by sector and

stakeholder voices. This kaleidoscope of voices offers myriad lenses by which to view the development of an innovation driven, a 'middle out', approach to technological advancement (Bryant, 2016b).

4.2. Reflection and Data-driven action

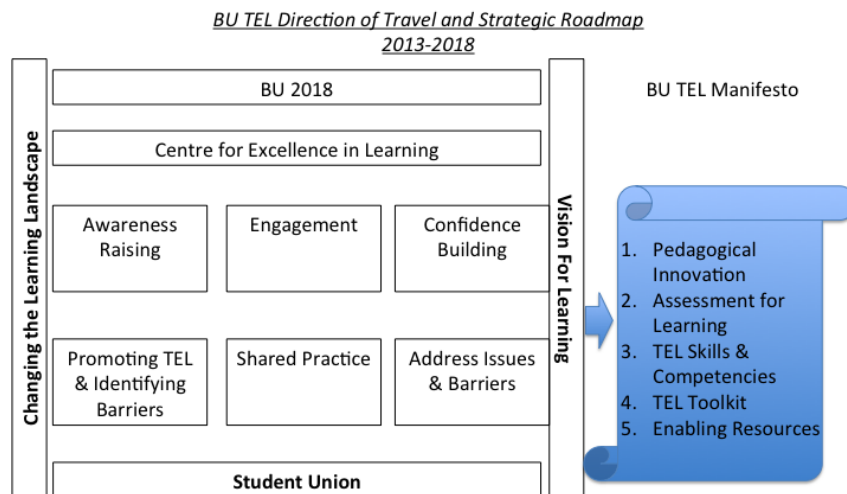
The EU competence framework with well-being proposes a broadening of academic program development to incorporating a framework for digital competencies (Ferrari 2013) and the increasing drive for embedding employability attributes in higher education curricula (Helyer and Lee, 2014; Khanna, Jacob and Yadav, 2014). Internally, BU has implemented a University-wide student survey, Mid-Unit Student Evaluation (MUSE), including questions on how satisfied students are with technology/innovation and this has provided underpinning evidence to reflect a change in strategy by TELSF. The findings mapped those of the UCISA studies between 2007 and 2015 (2016) showing an increase in Universities investment in VLEs, yet evidencing most use as a static repository for materials.

4.3. Spiral 2 Problem identification, systematic data collection and analysis

Spiral one enabled the University to identify the extent to which student and staff expectation had evolved in adoption of technology. The evidence in Spiral one indicated the need for a sustainable offering to enable staff engage in innovate pedagogies through adoption of technology and achieve excellence in student learning. Therefore, Spiral 2 ensued to fundamentally review BU's key TEL stakeholder in TEL offering and service.

Thus the first action research spiral, that of a top down approach to managing the successful implementation of TEL for innovation and student engagement was found to be limited, and resulted in 'patchy' provision across the institution. Consequentially a review of BU's learning platform commenced with the findings used to inform the 2014 proposal to resume an evaluation of the existing platform. This led to a wider visioning piece to develop understanding of requirements for BU to achieve its strategic goals. Vision 4 Learning is the project that is leading this visioning exercise and BU's TEL Strategy is informed by its findings to date and worked in partnership with BU's Executive Team and the Students Union to frame and inform the BU revised approach. BU's strategic approach to change management is outlined in BU 2018 and this is used as a driver to realise learning excellence through the voice of the key stakeholder, the student. Accordingly, the University has developed an exemplary relationship with its student union, SUBU, to work in partnership in meeting students' academic needs. In recent years SUBU's enthusiasm to engage in the University's TEL agenda has been reflected in their inclusion of TEL perception and expectation in student surveys and debates at alignment of Education Council's priorities with the University's TEL review and implementation. Figure 2 represents the multi-facet view of TEL at BU as well as the context within which it operates.

Figure 2. BU TEL Roadmap



A consolidated approach has been adopted by senior management to develop an environment for TEL and harnesses a culture of confidence in positive engagement with excellent learning. Internal and institutional guidelines and benefit realisations are developed to evidence the value of TEL investment and working with stakeholders to contextualize the emerging trends in education technologies. Underpinned by BU 2018 and informed by macro policies (TEF) and drivers (NSS), some key institutional strategic documents include; 'Benefit Realisation of V4L'; 'BU TEL Roadmap' and BU IT Strategy.

4.4. Discussion: the kaleidoscope of voices and Impact

Bryant considers the pivotal role of technology in education as a 'harsh reality' and he regards traditional approaches for change obsolete to meet the needs of agile learners (Bryant 2015). BU's experience echoes Bryant's (2016) evaluation of 'middle out' management where top-down and bottom-up approaches lack sufficient agility in timely digital adoption. The middle out approach enables the array of 'voices' from BU's diverse group of TEL stakeholders (internal thought leaders, SUBU, TELSF, CEL, IT department, Library and Learning Resources, etc.) with a common purpose to deploy TEL in realising learning excellence. The unity of purpose amongst the kaleidoscope of voices has been as a direct result of space created for dialogue contribution through formal and strategic channels (TELSF, CEL) as well as the more informal tactical avenues for example, the TEL Toolkit Working Group that collectively feed into the TEL leadership and decision making. Student Union representation is reflected across both strategic and tactical arenas, and is seen as a key element in ensuring that our efforts are directed at the ultimate users, our students. Alongside the university processes, workshops with students develop both their expertise, and feed into our evaluation; findings are then used to present to BU's education and student enhancement committees to inform strategy and policy at university level. This research shows that the contrast between old and new approaches is nuanced and that the more a corporate approach is used the quicker institutional

benchmarks can be achieved resulting in a top-down spread. The challenge in this case is to harness the management element in terms of setting overall strategic direction, and to emphasise the relevance of external drivers such as NSS, TEF, CMA, and enabling the bottom-up pragmatism to be realised through the voices of the 'middle' in terms of delivering on the policy agenda.

In the context of BU, the first Spiral has occurred in a top-down leadership environment. The second Spiral saw the emergence of a bottom up approach and the problem reflection realised a middle out attitude and deployed a more inclusive style which is better aligned with BU's values and vision. This approach has resulted in increasing staff buy-in as demonstrated in engagement with the online and self-managed pedagogical informed TEL Toolkit on BU's website designed to help staff share TEL practice and for staff to navigate their way through a variety of technologies to assist with learning; and the successful development of BU's Postgraduate Certificate in Education (Biggins, Holley and Evagelinos, 2016). A significant institutional impact has been in the area of ownership of VLE services, and the leading service providers in this matter have been the IT services and the learning technologists who provide an institutional-managed service VLE. The service ownership continues to be joint however, clearer demarcations reinforced by routine evaluation and monitoring has resulted in a more robust set of guiding principles.

This paper evidences the need for greater coordination of key stakeholders to manage a cultural change in universities if they are to realise the full potential of their students in the development of digital competencies for greater learning experiences as well as being better prepared for employability. In order to achieve this, universities' leadership play a pivotal role in preparing academics and developing a culture of collegial approach and working closely with students and the students' union to harness appropriate ways for collaboration. Bournemouth University achieves positive rates of graduate employment and is known to exceed the national average in a number of its disciplines however, more effort needs to be made for a greater number of graduates to achieve high skilled employment (BIS, 2016) and BU recognises the significance of TEL as a key skill attribute for its students. Our revised approach to the roll out and implementation of TEL across the institution is seen as a significant contribution to continuing efforts to address this key agenda.

The policy framing is a derivative of institutional drivers and is represented through the internal stakeholder standpoint. Subsequently, our challenge to research the experience and learning of the University is complex, nuanced and politicised. A qualitative (case study) or quantitative approach would not be sufficient to capture and articulate institutional values; to offer a sharp and critical lens onto our own practice and to encompass the stakeholders' views around TEL. Hence, it is the authors' view that an action research approach has helped to frame and make the body of work more transparent.

5. Final conclusions

Our paper draws upon a number of examples of action research approach in educational practice that pose similarities to BU's experience. Somekh and Zeichner (2009) suggested action research challenges normative values and has discursive power in that it embodies a collision of terms; in this work we have identified a background for analysis and one of the five 'variations' they have identified in action research action research is identified at a time of 'a university-led reform movement'. This work reflects the arguments of Orland-Barak (2009) suggesting that practitioner inquiry approach in education enables change to take place within the paradigm that impacts practice, and the work of Getz (2009) who argued that action learning research in education allows academics to reflect on the influence of their practices on students' learning experience. The process of working through the 'Spirals' clearly shows BU's stakeholders increasingly working more closely together and this in itself has been a positive outcome, which Schwabenland (2009) would perceive as change as a positive source for intervention and our learning endorses this view. An action research approach has enabled this research to track the journey of BU to record and reflect the evolution of TEL leadership and impact on the way key stakeholders worked together to overcome their diverse and overlapping agenda.

There are, of course, limitations to this work. A potential short coming of the research is that the three researchers' role and commitment to TEL may pose a bias, and underreport resistance to efforts to implement TEL. Another issue is the focus on the experiences of a single UK university thus offering a limited assessment of the sector. A possible area for further research is to reflecting on BU's 'middle out' approach to compare and benchmark against the evaluations of comparator institutions. To conclude, the consolidating the stakeholders' 'kaleidoscope of voices' has not been a clear cut or simple process. However, the action research approach has brought to the fore the emergence of a common theme, albeit expressed differently by different stakeholders, of the desire to offer students TEL enhanced excellent learning experiences that will contribute to their future success.

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