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‘Fostering learning for capability and assessing authentically: a vision for Enterprise Education’

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Abstract

This paper explores how universities working in partnership with employers and students can design, deliver and assess a curriculum that actively encourages student engagement and helps prepare students for future multiple career pathways. After discussing a range of contextual factors impacting on employability, the authors propose an eight stage approach to developing a fit-for-purpose curriculum, with a particular focus on authentic assessment, and conclude by arguing for the necessity of an approach to curriculum design and delivery that is aligned to current and potential future graduate and employer needs

Introduction

We are currently preparing students for careers that we can't envisage in employment contexts that don't yet exist, so setting out to teach a fixed body of knowledge isn't sensible. Employers covet graduates who possess relevant skills demanded by industry (Jackson and Chapman 2009) so students will not only need to be competent at locating, accessing, evaluating and using source material we also need to help students to be flexible, adaptable, creative, empathetic and competent. Drawing on scholarship and experiences of working globally, this article considers how universities can design, deliver and particularly assess a relevant and appropriate curriculum that actively encourages student engagement and proposes some thoughts on how best to prepare students for purposeful and productive futures.

Contextual factors impacting on employability

On vocationally-orientated programmes, authentic assignments that relate to real world tasks tend to be highly prized by students and employers alike (QAA, 2014, Wharton, 2003), hence the need for authentic learning experiences and assessment. Increasingly theorists suggest that experiential learning is key to generate the meaning of theory (Huq and Gilbert, 2013), to develop higher level skills, operate in an enterprising manner are so clearly sort after by today's employers (Jones and Irdale, 2010). Universities worldwide take pride in ensuring that their graduates are employable, particularly when students pay substantial fees to study, and in the UK employability data is seen as a key metric by funding councils as well as being a matter of high interest to all stakeholders including university governors, students themselves and their parents/funders and employers.

An example of the views of the latter can be evidenced in a major initiative, 'Job Ready', between 2012 and 2014 which explored how universities and businesses could best work together to create opportunities for UK students and graduates to develop their skills. Based upon extensive and in-depth interviews with 50 employers, it captures a snapshot of the 21,000 interactions between businesses and University Alliance universities (University Alliance, 2014). Within the report, Libby Hackett, Chief Executive of University Alliance, said: "At a time when most of the employment growth in the UK is in [jobs] involving analytical, problem solving and complex communications, it is important that we ensure universities are working closely with employers". The report provided examples of employers' views on the need for job-readiness including:

"We wanted to align with a university that is being strategic and innovative in what it's doing and looking at ways to grow the employability of their students. This mission fits with our values on innovation". (Annalise Hayward of IBM working with Kingston University).

"For us to maintain our competitive advantage, we need to be finding and nurturing talent to develop a future pipeline of highly skilled employees" Rhys Williams of GE Aviation working with University of South Wales.

"I expect students to come in highly motivated, energetic and with a very good core base of up-to-date skills in terms of technology, computing and presentation skills. I also expect them to come with an enquiring mind, because all of those skills are immediately applicable to the roles we put them into. After this, it's the task specific knowledge that we are looking to provide for them. We're looking for self-starters really." (David Webber, Business Development Manager for Agustawestland working with Plymouth University).

"To ensure our long-term prosperity and to ensure that we will be able to provide a competitive maintenance service back to our airline into the future (the next 10, 15, 20 years) we needed to transform our skills and experience. For example, simple things like the way we conduct repairs to the aircraft and the challenges around things like fibre optics, avionics, hydraulics, that's all moved forwards from a technological standpoint and we really needed to sit back and ask how we prepare our engineers". (Bill Kelly of British Airways working with University of South Wales).

Each of these employers is emphasising the crucial role universities play not only in designing fit-for-purpose programmes from which they can recruit, but also shaping the student experience in such ways that graduates can bring to employment a range of skills and capabilities that enable them to be 'job ready', that is, able to fit into working environments well prepared for their roles and committed to self-development and lifelong learning in an ever-changing work environment. Jones (2010) would suggest that

this evolves from the students displaying entrepreneurial behaviour and skills that allows them to adapt as a result of learning in the work environment

Students' commitment to employability

It is clear too that students want to be employable when they graduate since they (and their families) are making an investment in their personal and professional development by undertaking higher education. Hence they tend to have high expectations of the usefulness and relevance of their programmes and particularly the means by which they are assessed. In the current climate, since so many students regard university study as a career advancement or progression route, they are likely to regard programmes which do not add value to their capabilities and knowledge as perceived by potential employers as a poor investment of their time and energy.

Final year undergraduate sport students and graduates at Liverpool John Moores University typically make comments such as:

'Understanding what employability is has been an important part of my education at university. I now understand that employers expects so much more than just knowledge of my subject.'

'In the interview for my current job, I was asked more about my personal qualities than subject knowledge: things like problem solving, organising and planning, leading. I was confident with my answers as I was able to give examples from my both my work experience but also my university work'.

'The environment in which we have assessed at university made us think on our feet, respond to new information quickly, re- negotiated deadlines and lead other students. I much preferred this type of assessment than writing essays as I can now see how it is much more relevant in the real work to have such skills.'

A fit-for-purpose curriculum

Employers want universities to provide relevant and appropriate curricula but unfortunately, are not always impressed with the work-readiness of new graduates, particularly those who have been taught and assessed in conventional ways, who are lacking the competencies required for a modern workplace (Cummings 2010) Arriving with a sound body of knowledge is, of course, expected, but more than that, graduates need to be able to demonstrate interpersonal skills, digital literacy, familiarity with and confidence in the relevant use of social media, as well as a commitment to ongoing personal and professional development.

Good curriculum designers pay meticulous attention to ensuring that the subject content taught is relevant, current, suitably benchmarked against Professional, Regulatory and Subject body and national requirements, and paced and sequenced appropriately, and this is, of course, essential.

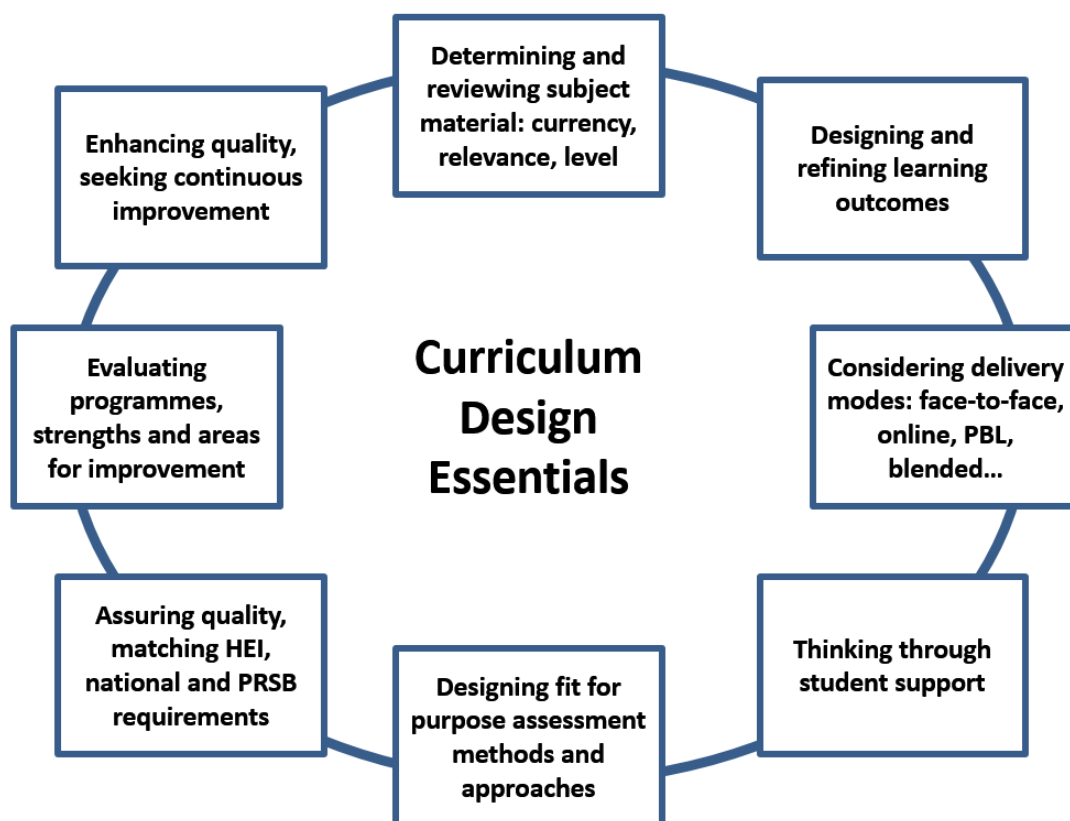
Nevertheless authentic learning experiences, which have a key role to play in helping students become employable by helping them to be flexible, adaptable, creative, empathetic and competent require more than this. This requires a focus on ‘learning by doing’ (Race, 2015) but while subject content and knowledge are essential for competence, students in the digital age need less reliance on ‘learning by heart’ and a greater focus on ‘learning by use’.

Many argue that creativity can’t be taught, but it can be fostered by providing learning environments in which trying things out without a fear of failure is actively encouraged. Similarly lessons in theories about empathy are less likely to be productive than getting students working in groups and finding out for themselves about conflict resolution and collegiality.

“In an increasingly globalised world, businesses are looking for excellent graduates with international experience while at the same time attracting lifelong learners with appropriate working experience and state-of-the-art knowledge and skills” (Morgan, 2013).

Eight steps towards a curriculum for employability

We argue that curriculum design can be seen as an eight-element process, which is often concurrent rather than cyclical: the following diagram illustrates these eight dimensions of activity:



1. Determining and reviewing subject material:

In earlier decades curriculum designers pointed students towards what they needed to know in order to successfully graduated by giving them reading lists of books and articles to be read for each subject area. Subsequently academics and what were termed in some nations instructional designers produced syllabi, that is, lists of what would be taught. Latterly university teachers have focused on learning outcomes, that is, what students need to be able to know and do at the end of a programme. Subject material needs to be current, relevant, at the right level for the mode of study and particularly nowadays focused on the employment contexts towards which students are aiming.

Meyer and Land (2003) argue that some areas of the curriculum encompass what they describe as “troublesome knowledge”, that is, areas of the curriculum with which students regularly struggle, and which therefore need particular attention in order for students to succeed. Typically such material is conceptually complex and provides a threshold beyond which students have great difficulty passing, therefore requiring thoughtful and strategic curriculum designer and delivery helping student pass through these ‘conceptual gateways’ leading to transformational ways of understanding, interpreting, or viewing material with which they formerly had problems. Using live employment contexts, virtual simulations and case materials which brings subject context to life can be invaluable in unlocking these portals of complexity.

2. Designing and refining learning outcomes

Race (2014) argues:

‘A well-designed set of intended learning outcomes is evidence of good curriculum design, but more importantly should link really strongly to the evidence of achievement which will be developed by successful learners. After all, it is such evidence of achievement which is drawn from learners in assessment contexts, and such achievement can be regarded as the whole point of education and training. The word ‘attainment’ is sometimes used by policy-makers, but I don’t think this adds much to our thinking about curriculum design, as attainment is only ‘real’ to the extent that we are able to quantify and accredit achievement.’ (pp.52-3)

A constructively aligned curriculum (Biggs and Tang, 2007) requires learning outcomes to be clear for all who use them and suitably link what students can be expected to know and be able to do at the end of a programme with the curriculum delivery process, the means by which what has been learned is assessed and how the whole learning experience is made coherent. They should be designed to support and align learning across and between levels. Good learning outcomes are written in a way that find them sufficiently specific for learning to be guided (without being over-prescriptive), susceptible to suitable and manageable

measurement processes, achievable by students at that level of study, realistic and real-world aligned, and appropriately paced, sequenced and timely.

Students on 21st century programmes need a range of graduate attributes which are likely to include:

- team work, leadership and working effectively in groups;
- interpersonal communication, emotional literacy, social skills, social competence, self-efficacy;
- writing and speaking fluently and accurately in a variety of contexts relevant to their professions and workplaces;
- problem-solving;
- essential numeracy relevant to the job;
- competence in the uses of information technologies; digital literacy; the ability effectively and confidently to use basic packages like Word, Excel, PowerPoint, Prezi; confidence in appropriate uses of social media;
- Autonomy, independence, self-management, time management and diary management;
- The ability to think creatively and 'out of the box'. (Brown, 2015)

Race *op cit* would include:

- Having demonstrable intellectual curiosity, generosity of spirit, understanding of purpose, and adaptability;
- Being positive, responsive, thoughtful, well informed, organized, sociable and, above all, able to listen and try to fit in while also contributing to the workplace;
- The ability to interpret appropriately your role within an organization.

Deakin University in Australia for example demonstrate their commitment to the development of employability skills and advocate:

'educating learners for effective citizenship and employability through courses enhanced for highly personal, engaging and relevant learning experiences through premium cloud and located learning. We focus on clear expectations and standards, evidence of learning, personal and connected learning experiences and enhancing courses (rather than focusing predominantly on units)'. (O'Brian and Oliver, 2013).

They suggest that 'excellent student learning is most likely to be achieved when:

1. Learning outcomes are clearly articulated and relevant to graduate destinations;
2. Assessment and feedback are carefully designed opportunities to enable students to demonstrate, improve and evidence achievement of graduate learning outcomes;
3. Educators engage, enthuse and inspire;
4. Learning experiences, on location or in the cloud, are highly personal, interactive and focused on engaging learners in authentic tasks and work-integrated challenges'.

Hence when designing a curriculum to enhance employability, the chosen learning outcomes must clearly represent (and require the demonstration of) fit-for-purpose graduate skills and attributes.

3. Considering delivery modes and methods

Curriculum designers who want to enhance employability of their students have key decisions to make about both delivery modes (should teaching be face-to-face, online using virtual delivery mechanism, using problem-based learning or using a blended approach combining two or more of these approaches?) and delivery methods. Traditional lectures continue to have high value where they are well-designed and effectively executed (Brown and Race, 2002), but the repertoire of available delivery methods is substantially greater nowadays and challenges the orthodox pedagogies (Rae 2010) than it was even twenty years ago.

University teachers seeking to enhance employability are likely to draw on open educational resources including YouTube videos and Ted talks, enabling students to encounter top practitioners in their professional fields, as well as a wide range of case study and simulation material. Increasingly delivery is 'flipped', with students being directed towards significant amounts of content resources in advance of lectures and face-to-face or virtual sessions focussing on interaction rather than content-delivery, and active learning in technology-rich contexts being actively fostered (Beetham, 2007). Having a blend of active learning with external inputs can prove valuable to students: Liverpool John Moores University Education students frequently praise the LJMU approach to project work in these kinds of terms:

'During the course last year I was involved in a project with an external agency, so I got to experience first-hand what it meant to work in a specific industry. Not only did this experience improve my subject knowledge as I got to see some of the theory from the classroom in practise, but it also made me realise that I needed to be much more confident and willing to put my ideas forward in order to contribute to the work of the agency'.

'What was good about the experience I was able to get feedback on my ideas from the external agent, which was not always positive I might add and from this I felt I learned more as the feedback as it was based on what would happen in the real world. Also I was able to set my own learning goals that I would later be assessed on, so it allowed me to pin point some key skills to be assessed on'.

4. Thinking through student support

Graduate employers often seek to employ students who are self-motivated, self-starters capable of autonomous and self-directed task fulfilment. They want to recruit people who can work with incomplete information and act calmly, confidently and collegially in changing environments. They prefer students with all the graduate attributes discussed above. However, universities recruit students from all kinds of diverse backgrounds, and not all bring with them the social and cultural capital necessary to demonstrate all these things. Hence universities need to offer a range of support that includes but also goes beyond traditional

student services to enable students to develop and demonstrate such behaviours and attributes. This also fulfils the UK government's key economic and educational objective is to ensure a legacy of a skills and productive workforce that are able to act in an enterprising way (Department of Trade and Industry 2001).

This inevitably implies that the curriculum must necessarily include support systematically to develop all the capabilities students that need to succeed. These include the capacity to locate, evaluate and use a range of information derived from both traditional text based and electronic resources, the progressive ability to self-organise and manage time to get the work done, the ability to work as a member of a group, taking turns in various roles including leader, the capability to manage and resolve conflict and the self-knowledge to seek help when needed as well as to identify possible sources for such help.

Acknowledging these needs, proficient and supportive curriculum designers build into programmes opportunities to learn about these capabilities, but to interrogate what they really comprise, to rehearse and practice them and to get advice on them in advance of summative assessment as well as feedback on how to improve them when they have been assessed. This implies a recognition that support for student activity and entity within programmes is as important as content delivery which may be a substantial shift in thinking for traditionalists, but is crucial to enhance graduate employability.

5. Designing fit for purpose and authentic assessment methods and approaches

We often assess what is easy to assess, or proxies of what has been learned, rather than the learning itself. A valid assessment is one that has close relevance to the criteria, which are in turn constructively aligned to the stated learning outcomes of a programme. Effective assessment is highly relevant to ensuring that graduates can demonstrate the knowledge, behaviours, qualities and attributes that were described in the course outline or programme specification. We would suggest that assignments that require students to write about something, rather than *be* or *do* something, may not be fit-for-purpose. (Brown, 2015)

If we are to devise and manage fit-for-purpose assessment that validly and reliably captures students achievement, we must ensure that students learn the theory they need to practise and develop the practices they need to be effective in their chosen fields of work and research as well as ensuring that programme or institutional assessment strategies are pedagogically sound, and are manageable for both staff and students.

Liverpool John Moores University undergraduate sport students generally comment that 'assessment that involves creating reports, videos a product are more meaningful to their learning than writing an essay'. They can see the theory in practice, and the end piece of work they see as an additional industry skill that they need.

Authentic assessment happens when we directly examine student performance on worthy intellectual tasks, when students are required to be effective performers with acquired

knowledge, and when we can make valid inferences about the student's performance from the assignments presented for assessment (Wiggins, 1990).

Wiggins further argues that authentic assignments present the student with the full array of tasks that mirror the priorities and challenges found in the best [teaching] activities, attend to whether the student can craft polished, thorough and justifiable answers, performances or products and involve students coping with potentially ill-structured challenges and roles, with incomplete information, that help them rehearse for the complex ambiguities of adult and professional life.

There are multiple benefits of using authentic assessment (HEA, 2012). Students undertaking authentic assessments tend to be more fully engaged in learning and hence tend to achieve more highly because they see the sense of what they are doing. University teachers are able to use realistic and live contexts within which to frame assessment tasks, which help to make theoretical elements of the course come to life. It is also clear as discussed above that employers value students who can quickly engage in real-life tasks immediately on employment.

By contrast, inauthentic assessment is when proxies for assessment of competence performance are undertaken rather than performative elements themselves and the tasks being undertaken by students have little intrinsic value in themselves in terms of advancing students learning. In such assignments, theory is prioritised to the detriment of practical applications, and activities lack currency to contemporary practical contexts.

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To achieve authentic assessment, we must take a proactive approach to assessment design, interrogating and clarifying purposes, applications, approaches and methods, agency and timing (Brown, 2015, *op cit*). What students learn needs to be quickly and effectively translated into practice, so students can make the connections for themselves. In addition it is necessary for institutions to ensure that up-to-date means to manage the assessment process, including Electronic Management of Assessment (Ferrell, 2014) are implemented.

A fit-for-purpose approach to assessment involves systematically and progressively fostering assessment literacy among students. This includes ensuring that students can make sense of key terms such as criteria, weightings, and level as well as encountering a variety of assessment methods (e.g. presentations, portfolios, posters, assessed web participation, practicals, vivas etc) and get practice in using them. With such support they can gain clarity

on how the assessment regulations work in their HEI, including issues concerning submission, resubmission, pass marks, and so on so that they are not disadvantaged by ignorance of how the regulations work.

Students who have developed good assessment literacy not only cope well with diverse assessments and examinations while they are on programmes, but also become skilled at seeking the cues that lead to high performance in the employment context, since they are used to interrogating what are the expected outcomes implied within tasks and they become experienced in self-review and evaluation which are valuable graduate attributes (Boud, 1995).

6. Assuring quality, matching HEI, national and PSRB requirements

In many nations, national bodies like the UK's QAA, New Zealand's NZQA and Australia's AQA take a proactive role in specifying what good curriculum design should encompass and to provide guidance on matters including employability (QAA, 2014). In many cases, national quality bodies as well as Professional, Regulatory and Subject Bodies provide helpful guidance not only on curriculum content, but also on quality assurance and benchmark standards for graduate achievement which are normally designed in close consultation with PSRBs and employers to ensure graduates meet professional requirements. If universities are keen to ensure their students are successfully 'job ready', then academics must fully and proactively engage with their employer partners in conjunction with regulatory bodies to ensure that benchmarks and standards as well as content specification remain up to date and relevant.

7. Evaluating programmes, strengths and areas for improvement

Partner employers, students and alumni can be invaluable at all stages of the process and can help course teams to remain focused, periodically reviewing the feedback received on teaching, assessment, feedback and support to ensure problems are redressed promptly and programmes continuously improve. Curriculum review must be an ongoing process rather than a single event, with regular refreshment to keep programmes up-to-date, context contingent and in line with employers' current needs. As noted by Campbell (2000), both practitioners and policymakers must have intelligence on the needs of an industry in order to inform academic programme developments. Programme leaders normally have access at a local and institutional level to substantial volumes of data on student satisfaction, levels of achievement, employment destinations after graduation and the financial viability of the programme concerned. Institutional support in comparative analysis of data year-on-year and across and between programmes may be available, but otherwise programme leaders should take responsibility for annual 'health checks' looking at causes for celebration and information to guide improvement as part of an ongoing cycle at least annually. Such systematic review is in many HEIs a requirement.

8. Enhancing quality, seeking continuous improvement

“You don’t fatten pigs by weighing them” is a traditional saying and in terms of curriculum design and development, obtaining and holding data is meaningless unless it is used for diagnosis, analysis and remedial action. Where student feedback suggests students don’t feel they are well prepared for post-graduate employability, as well as providing in-programme employment-related activities and assignments, programme leaders would do well to build in opportunities for dialogue, updating and professional and employment-related inputs to improve students understanding of how they will need interface with the employment context to improve their confidence. If student achievement doesn’t match their or your institutions’ expectations, then it might be necessary to explore the barriers to student success and locate any areas of ‘troublesome knowledge’ that may require extra explication and expansion. If graduate destination data suggests students aren’t getting jobs in graduate professions in their field, then consultation with employers about what they want from graduates in terms of attributes and capabilities so new material, approaches and activities can be built in. If your programme is not viable financially, then increasing recruitment, using higher levels of technology to support assessment or using higher levels of open educational resources might be useful options. In each case the impact expected is positive transformation of the programme.

Conclusions

Universities cannot work in isolation in designing and delivering curricula: while in former years it might have been sufficient for academics to develop programmes in isolation without liaising with the employers and students about graduate outcomes and attributes, that is certainly not the case today. Even though graduates are very rarely recruited to careers for life, an orientation towards employability is essential for all programmes. Curricula must be aligned to graduate and employer needs as well as fitting those who invest their time, energies and resources in higher education for unforeseeable and unpredictable future work and personal lives. In proposing a systematic and articulated approach, the authors seek to contribute to the debate and suggest constrictive ways forward.

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