The Learning Outcome in Higher Education: Time to think again?

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As a head of an academic development and practice unit it is with some trepidation that I set out to write this critique of learning outcomes. For the learning outcome has become the bed-rock of the infra-structure that determines quality assurance processes in higher education in the UK and elsewhere. In theory, they should be used to design courses, determine appropriate learning opportunities, measure the level of courses and provide the standard against which students' achievement can be measured. In this article I will argue that the learning outcome is a false god, to whom too much attention is paid and probably by the wrong people. It is important to say, that I am not the first to make this case, but do so in the hope of raising a greater level of critical discourse on what has become a hegemony within higher education.

The learning outcome, purpose and origin

The learning outcome in higher education can be seen as a development from outcome based education within the vocational sector (e.g. National Vocational Qualifications a.k.a. NVQs). In the vocational sector learning outcomes based on competencies are used to underpin the assessment of job related skills. Once the notion of having to account for learning had been set in place the adoption of a system related to one already introduced into parts of the education system was relatively simple and as James (2005) notes, the learning outcome is a seductively simple concept, it seems to 'do what it says on the can' but does it?

The pedagogic purposes of learning outcomes are clear, in that they are designed to give a clear indication of the learning destiny, that the learning opportunity provider intends the learner to reach. In doing-so they give power to the learner, as armed with knowledge of the destiny the learner can if they wish, chart their own journey to this destination. It is this potential for empowerment which allow the proponents of outcomes based education to claim that is 'student-centred' and in contrast to the previous models where often the destination was perceived to be hidden, and based largely on what teachers teach. Curriculum models that use learning outcomes, as logic would dictate, try to ensure that assessments test that students have reached the destination described by the learning outcomes. A further development to this is seen in the constructive alignment model of Biggs (1996). In this model the totality of the curriculum and assessment is aligned with the learning outcomes. Indeed it is Biggs's model that underpins much of the UKs quality assurance system.   The learning outcome is used to define the level learning (Davis 2000 and it is worth noting that it also used to describe learning and differing scales of opportunity, for example at the level of the individual session, unit or course.

To the potential learner, the learning outcomes describes what will be learnt, to the potential employer they describe what should have been learnt , to the quality agencies they provide a system for audit and for the funders (if there are still any left) they provide a means to account for how the money was spent .

A learning outcome is a description of what a learner will have learnt at the end of a period of study. Learning outcomes in theory can encapsulate a wide range of knowledge types skills and behaviours. We can thus have learning outcomes that describe: particular skills, such as operating a microscope, ways of thinking, such as analyzing, ways of behaving, such as respecting clients and the possession (de novo) of good old fashioned declarative knowledge. In some setting, learning outcomes are also written in relation to the values that

will (must) be acquired during a period of study. In many education systems the word learning objective is synonymous with the use of 'learning outcome' in UK HE. There is however some disagreement with this position (see Adams 2004). The term 'learning outcome' being seen as identifying what was actually learnt, whilst the learning objective, what the tutor intends should be learnt. Thus the learning objective could be seen as being more akin to the 'intended learning outcome'.

The origin of the learning outcome in education theory is difficult to trace, but may stem from the Mastery learning movements, variously promoted by authors such as Block (1971), Bloom (1981)and Carroll (1963). The mastery movement is interesting in that it proposed that the vast majority of learners were capable of achieving to the same extent, but that learners would take differing amount of time and input to achieve. Within Mastery programmes learners must achieve (Master) specific learning outcomes before being permitted to proceed to the next stage. The mastery approach was an overtly behaviourist strategy, yet in recognising that, given time, most learners can achieve to a high standard it also seems to have been fundamental in the birth of the Outcome Based Education [OBE] movement in the 80s which puts emphasis on the outcomes of learning processes rather than the inputs . Outcome based education, at least in theory, claims to be more constructionist in its approaches.

At a more local level it is possible to trace the growth of the learning outcome in UK HE to the formation of UK wide quality assurance bodies that needed models; against which the standards of degree programmes could be compared and affirmed and the spending of UK tax payers' money justified. Thus we see learning outcomes feature within the Council for National Academic Awards (CNAA)'s documentation and then the QAA's; that for many people was originally seemingly built around the structures of the CNAA. Hussey and Smith (2002) argue that the rise of the learning outcome is a response to the state's need for Universities to be seen as more accountable but also represents part of the growing commoditisation of education. Learning outcomes being the 'goods' placed on the table for sale at the new market place. Outwith any pedagogical discussion, Hussey and Smith see the rise of learning outcome being equated with 'loss of trust'. The learning outcome is the tool by which educators can be audited and judged.

Difficulties (or even problems) with learning outcomes

What are they again?
For a seemingly simple concept learning outcomes seem hard to really define. James and Brown (2005) produced a 3 x 7 matrix of learning outcome types based around Sfards (1998). Acquisition and Participation metaphors of learning and seven categories of outcome located by the Learning Outcomes Thematic Group of the UK wide Teaching and Learning Research Project (TLRP). The categories were:
- Attainment - often school curriculum based or measures of basic competence in the workplace.
- Understanding - of ideas, concepts processes.
- Cognitive and creative - imaginative construction of meaning, arts or performance.
- Using - how to practice, manipulate, behave, engage in process or systems.
- Higher-order learning - advanced thinking, reasoning and metacognition.
- Dispositions - attitudes, perceptions, motivations.
- Membership, inclusion, self-worth - affinity towards or readiness to contribute to the group where learning takes place. (James and Brown 2005, 10-11).

Using this matrix James (2005) found that sixteen differing conceptions of learning outcomes could be produced, one for each site of their study. This difference probably stems from difference in conceptions of learning, the relative importance placed on different forms of learning and an understanding of what that learning is for and how it is achieved. In other words, learning outcomes are socially constructed by a varied community and thus, common understanding across the entire sector (FE) that James studied, was absent, this, despite the fact that learning outcomes essentially(at least in theory) dictate what is important to 'know' and what it is not (James 2004). This latter point is important because students often give more significance to the personal and social dimensions of change that occur for them at University than the learning gained through the formal curriculum. Yet this learning, because it is not formally given a 'learning outcome' escapes the learning accountants (TLRP 2008).

Words alone fail me and our students
To illustrate this issue I will take a relatively simple learning outcome from a hypothetical competency based carpentry course.

> *After the period of learning the student will be able to: bang a nail into a plank of wood without splitting the wood.*

At first glance, this seems like a straightforward learning outcome, but the carpenter might well ask, "which type of wood" or "which type of nail". So I would need to moderate the outcome so that it might become;

> *After the period of learning the student will be able to: bang the appropriate nail into a plank from a range of commonly used timbers without splitting the wood.*

Of course, after speaking again with the carpenter, she thinks that accuracy is also important and of course safety. So, after embarking on defining the seeming obvious, I am confronted by the carpenter from the ship yard, who notes that what is a common wood for some is not common for him, how was he meant to know what I meant or what his student was meant to learn. The only defence from the carpenter's demands is to either write with more and more specificity or greater generality. The problem with the former being that increased specificity starts to exclude many practices and as Yorke (2003 p210) suggest leads to;

" the entangling and disorientating jungle of details as was experienced by those faced with the system of NVQs developed under the aegis of the National Council for Vocational Qualifications in the UK...."

On the other hand, writing very broad and general learning outcomes means that either no one is clear what the learning outcome is about or that you can work it out only if you have sufficient prior knowledge and understanding of the subject in question and its context. This argument, as demonstrated in the example above, also applies when we try to use specific and precise language. Hussey and Smith (2002 p225) suggests that in order to explicate a phenomena a learning outcome must "parasitise" that which they are meant to be explaining. The issue of context is also a significant confounding issue. This is because the meaning of particular words varies depending on the academic subject in question. A word such as analyse means something quite different depending on whether your subject is English, Chemistry or Biology. What this means of course, is that the only way the meaning of a learning outcome is understood is through 'experiencing the subject' and the real utility of a learning outcome to the 'outsider' albeit a prospective student, employer or external scrutinisers is very limited. Owing to these issues of language and context, even when learning outcomes use very precise terms they are in fact always quite hazy (Knight and Yorke, 2003) their exact meaning only comes into being when tutors and students interpret them, although we have to hope they interpret them in the same way.

Are learning outcomes really student centred?

For teaching to be student centred the student voice should be at the heart of both what is learnt and how it is learnt. In addition there should be a shift of power towards the students and away from the tutor. But can this be achieved if the 'authority' pre determines learning outcomes and objectives and the assessment methods? The original empowering feature of the learning outcome approach is that they provide transparency of the destination and that learners should then be free to plot their own course to their arrival point.

To do this students would need to be able to choose their own learning opportunities, resources and time required to achieve their learning outcomes. To do this tutors may need to appreciate that they are 'side-kicks' in the overall learning process; something which paradoxically seems difficult to achieve in a massified system of education.

The use of learning outcomes to define courses and programmes removes power from students. They do this by failing to recognise that for many students the learning outcomes that emerge are not the ones that were intended by the designer (Megginson, 1994). Given that learning is inherently relational at the individual level this is no surprise. What I learn from a learning event will be different from what you learn because we relate to it differently, because of our differing abilities, motivations and past experiences. Thus to some extent the whole notion of pre-defined learning outcomes become spurious. If this is true, then the best that learning outcomes can hope for is that they are loose notions of what it is intended a student might learn.

It could be argued that for some programmes that prepare people for professional practice having pre-defining learning outcomes is axiomatic. However there is no evidence that those professional qualifications that have become incorporated into higher education have become more clearly defined. Furthermore the NVQ system used to qualify people for a wide range of roles, using outcomes to define those roles, has been widely criticised (see for example Eraut, 1989, Field, 1991 and Callender, 1992). The case of professional learning outcomes may demonstrate that; just because there is a need to define something does not mean that it is meaningfully definable. Definitions based on learning outcomes in reality will always remain unclear irrespective of the specificity of the language used (Hussey and Smith, 2002).

An extension and perhaps wider element to this is the issue of construct validity and assessment raised by Daugherty *et al* (2007). Assessment theory would suggest that if a phenomenon does not have construct validity then it is difficult to assess. In Daugherty *et al*'s study of the relationship between curriculum design and assessment in five contexts in the UK and mainland Europe they found for example that 'none of their participants…. Was confident that 'business studies' had been adequately defined (Daugherty et al 2007 p247). Clearly if you can't agree on what something is, assessing it is rather tricky.

Assessment and Level

The academic level of a course or programme of study is often set by its learning outcomes. During course approvals and reviews it is often a requirement that it be confirmed that the learning outcomes are at a suitable level, with reviews looking for the appropriate words used at the appropriate level. Below are two genuine learning outcomes/objectives from two differing subject areas. Can you locate what level of study they are from?

> 'describe *the strengths and weaknesses of a range of available models and select the most appropriate*'

> '*analyse how texts are shaped by audiences' preferences and opinions*'

If you had noted that they were from key stage 3 of the national curriculum (Year 9) then you would be correct (http://nationalstrategies.standards.dcsf.gov.uk). Yet, they would look

reasonable at home in module outlines of many universities across the United Kingdom. Here again, we have met the issue of language in context, if you were a secondary school science teacher, you would have a good idea what level of learning the first outcome was referring to but the same language placed in the context of HE may mean (we hope) a different level altogether. So it would seem that in terms of level, learning outcomes again only have meaning in the context of their subject and in the context of the level at which they are applied. Thus suggesting that their utility is only to those who understand these contexts and without knowledge of this context the notion of levelling using learning outcomes becomes meaningless.

Similar problems can also occur when learning outcomes are too closely linked to assessments. If we accept that to understand what is meant by the language and context of a learning outcome then a detailed knowledge of the subject and context of that learning outcome is required then, whilst this may be possible for some students, many modular schemes require students to gain meaning from these outcomes before they have been apprenticed into their areas of study. This leads tutors to give more and more detailed information about what is 'required' to pass the assessment which, in turn, results in 'surface' engagement (*sensu* Marton and Säljö, 1976) with the learning that the assessment was intended to help students achieve (Gibbs and Simpson 2004). Gibbs and Simpson (2004) suggest that for students to succeed on assessments they must indeed internalise what is required but the way that this is best achieved is through rehearsal and feedback on performance.

Perhaps a more complex problem to overcome is that which relates to whether or not the learning outcomes are those that must be achieved and therefore assessed or whether they are intended learning outcomes only. If they are fixed learning outcomes then if a student assesses as a genius against 80% of a module's learning outcomes but does not achieve the others then they must be given a fail overall.   Given the intractability of defining learning outcomes (described above) we need to ask if such a position is justifiable. A related issue was described by Biggs (1996) who discussed the importance of assessing unintended learning outcomes as well as the intended learning outcomes with the following metaphor:

> *Teacher: How many diamonds have you got?*
> *Student: I don't have any diamonds*
> *Teacher: Then you fail!*
> *Student: But you didn't ask me about my jade!*
> *Conclusion: Learners amass treasure not just diamond.* (Biggs J. 1996 p352).

From this metaphor it is possible to see how the use of learning outcomes as a basis for assessment can drive us to adopt processes that ignore substantive learning simply because our system makes it not liable to assessment. Furthermore, once students realise that only the learning described by learning outcomes is to be assessed they focus only on demonstrating this learning (although not necessarily achieving that learning (see Gibbs and Simpson 2004-5)). Thus rather than encouraging learning learning outcomes can end up subverting it.

The way forward

It is obviously a good idea for students and tutors to have a common understanding of what they are trying to achieve and having learning outcomes seems a reasonable starting point as a means to achieve this. Learning outcomes also form a good departure point when considering how to formulate learning opportunity and develop resources. As soon, however, as we start to believe that learning can be precisely defined and articulated and that these articulations should form the basis of the design, development, definition and assessment of courses then we are divorcing ourselves from the process and outcomes of real learning. It is this lack of authenticity that Hussey and Smith (2002) claim lead to the widespread

derision in which the 'learning outcomes culture' is held by many academics. Just as students do with assessments, academics have learnt to mirror what is required by the quality process and revel in their conspiracy at the cappuccino bar.We should not therefore seek to measure quality and define our programmes by such a simplistic and ill define concept as the learning outcome, but seek to encapsulate the richness of the learning experience that are provided by the university community..

Learning outcomes, at best, should be seen as an intended broad notion of where the learners and tutor think they may be going. As if they were a proposed destination for an exploratory sailing trip. And just with such a trip, although the skipper may have some idea of how to get to the intended destination, the actual route and eventual destination will depend on many factors, such as the weather and abilities of the crew.

Much of the critique above stems from the argument that learning outcomes only have meaning if their context and the prior knowledge they are built on is understood. But how do students know this context and knowledge? In reality students learn what is required by becoming part of the communities in which they are learning. This is the case whether the learning concerns becoming a plumber or becoming a philosopher. Students learn the ways and language of their disciplines by participation and being part of the discipline, vocation or profession. This picture is in many ways similar to the idea of 'communities of practice' as described by Lave and Wenger (1991); with new students standing on the edges of the community and eventually becoming 'experts' themselves. Indeed this process is often seen in metaphor at degree ceremonies, where new Graduates 'full' membership of academic community is acknowledge by granting them permission to join the exit procession.

Following on this line of thinking, learning outcomes and the associated documentation (Programme specifications and the ilk) could be seen as tools that might facilitate a student's journey into a community. Indeed, Wenger (1998) further elaborated on the community of practice model, distinguishing between the practice elements and those that are structural; programme documentation could be seen as part of this 'structural' aspect of the community. It is important to note however that the understanding of the ways of the community only emerge through active participation, thus without rehearsal and engagement a student will never be able to discover the context and the true underpinning language of the community's documentation.

Learning outcomes originated in the movement for more student centred learning. Returning to this aspect of student centeredness may indicate how we can really use this concept. If students were 'permitted' to design and formulate their own intended learning outcomes in their own language it would alleviate the problems associated with context and language described above. Such an idea is at the heart of the Personal Development Movement and the thrust behind many work based learning programmes (Boud and Solomon 2001). Adding credence to this position it is interesting to note that several work based learning providers are working on systems to facilitate translation between work based learning outcomes and academic learning outcomes (see for example the co-gent project at http://www.pebblelearning.co.uk/cogent/).

The challenge for institutions of education, if we really do want to embrace student centred learning, is to produce system and practice that allow students to negotiate and define their own learning outcomes, to be able to revisit and adapt these outcomes and at the end of their learning journey at university to able to say where they have been and what they have learnt.

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