Linking learning - towards bringing learning in formal, informal, education and work settings together

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Abstract
Recent shifts in emphasis in the UK's Higher Education strategy mean there is a greater requirement to link undergraduate study to career developments and the workplace. This is a problematic shift for many academics, and students. This paper explores the use of an online tool in overcoming some of these difficulties. The Effective Lifelong Learning Inventory (ELLI), developed at Bristol, is a tool that creates a seven dimensional framework for individuals to self-report how they engage with learning in all areas of their lives. As such it provides a language and a way of exploring the connections that exist. The paper considers how using this online tool can bring a broader understanding of the way in which an individual learns, any differences in approach that they make in different contexts, and what can be considered core learning strengths. It also considers how this inventory can support an individual in bringing approaches to learning in one context into another.

Keywords: Lifelong learning, open distance learning, personal development, HE, ELLI. Employability

Introduction
The emphasis on employability, career relevance and employer engagement placed on HE by the UK Government poses difficulties for institutions and for individual academics. For many it is hard to know where to start when considering how to achieve this. It is also difficult for many students to see how their study relates to the world of work in any detailed way. Even some studying for a professional qualification may not be able to describe in detail how their study prepares them for a life of work other than to speak of competencies specific to a particular role or environment. In this paper I describe a pilot study into aspects of lifelong learning and how this may offer a step towards resolving these dilemmas.

Description
The Effective Lifelong Learning Inventory has been described as an instrument that can identify the elements of an individual’s capacity for lifelong learning (Deakin Crick et al., 2004). It is a self-reporting questionnaire that shows what a learner thinks about themselves in terms of seven dimensions of learning. It is purported to have a diagnostic role for teachers – that can inform in evaluations of their interventions in the learning process. We will be working to establish the value of these claims for the Open University context.

We called our pilot project ELLIPSE, with the PSE standing for Practical Student Experience. The aims of this study were straightforward. They were firstly to explore the use of the ELLI approach (the online questionnaire, profile and supported reflection) in an HE open distance learning context, and secondly to gain an initial indication of the validity of the tool as a support to lifelong learning in this context. There was an additional aim – whether the Engineering curriculum should be modified to incorporate ELLI instead of the Honey and Mumford learning styles questionnaire that was currently embedded.

With a view to enhancing an individual’s ability to learn how to learn. Claxton and Carr in 2002 wrote of a concern with developing aptitudes and attitudes that equip people to function well in the modern World and called this learning power p.9 (Carr and Claxton, 2002) and detail an analysis describing a good learner. The idea of
assessing learning power was also introduced in 2002 in two reports to the Lifelong Learning Foundation, (Deakin Crick et al., 2002a), (Deakin Crick et al., 2002b) as a way of describing an individual’s capacity for lifelong learning and the Bristol team then empirically tested and refined the Effective Lifelong Learning Inventory tool (Deakin Crick et al., 2004).

This tool was initially trialed with younger school children, and the dimensions gradually refined through factor analysis and further trials. Through 2007 and 2008 a group of 13 higher education institutions, HEIs, in the UK worked together on a set of projects under the umbrella name of ELLI in HE. This involved at an early stage of the project one of the authors in a meeting with the Bristol team and other representatives from ELLI in HE project in order to review the wording of the items within the inventory to ensure they were appropriate to the lives of adults without changing the items themselves. This tended to involve changing individual words to reflect the different life context for adults learning. The final report of the ELLI in HE project launched in October 2008, (Small and Deakin Crick, 2008).

An individual responds to 72 statements about different aspects of their learning and is then provided with a chart showing their ELLI profile for that point in time. This tool provides a description of a learner’s profile in terms of seven dimensions of learning. These and their opposites are listed in the table (Table 1) below and described fully in (Deakin Crick, 2007). They are plotted on a profile chart and used to seed and inform a reflective and exploratory discussion that may lead to the individual deciding on actions intended to promote change. As the tutor is also involved in this reflective practice they too may decide on changes to the way they teach and support their students. ELLI, whose development and effectiveness is well documented, was trialed with four groups of students covering two subject areas (arts and engineering) and including those at the beginning and end of their degree studies.

Table 1: The list of the dimensions of learning power as described by Deakin Crick, (Deakin Crick, 2007)

<table>
<thead>
<tr>
<th>main pole</th>
<th>opposite pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>changing and learning</td>
<td>stuck and static</td>
</tr>
<tr>
<td>critical curiosity</td>
<td>passivity</td>
</tr>
<tr>
<td>meaning-making</td>
<td>fragmentation</td>
</tr>
<tr>
<td>dependence and fragility*</td>
<td>resilience</td>
</tr>
<tr>
<td>creativity</td>
<td>rule bound</td>
</tr>
<tr>
<td>relationships/interdependence</td>
<td>dependence or isolation</td>
</tr>
<tr>
<td>strategic awareness</td>
<td>robotic</td>
</tr>
</tbody>
</table>

* In this text we will refer to resilience rather than dependence and fragility. This is in line with practice in the Bristol team

Methodology
Prior to being allowed to mentor others in their reflections on their ELLI profiles, the Bristol team request participation in a two day training event. The two staff involved attended separate events and recommend these to anyone planning to use this tool either for research or for teaching. This is also an ideal opportunity to meet with others actively interested in ELLI.
When we originally began to describe the project it rapidly became apparent that we could not simply adopt what had become the standard face-to-face model that had developed alongside the inventory itself. The resource implications of bringing such a geographically dispersed group together especially when their individual circumstances also placed multifarious constraints on them, meant that this approach was not sustainable for this pilot study and would be even less feasible if we were to adopt the tool more widely. Therefore, we looked to adopt an approach using models already in place for OU staff and students. Each student is a member of a tutor group and may contact their tutor by telephone or electronically by email or in web based conferences hosted by the University. In addition, each student studies largely on their own. Although they have the option to attend regular face-to-face tutorials with other students in their group and their shared tutor. Also, depending on their area of study they may also be offered regionally organised day schools or longer residential schools at a variety of locations.

As we had two distinct groups of students we used two differing approaches, one with the arts students where we were inviting around 400 students across a large number of tutor groups and the other with the engineering students where there was just a handful of tutor groups. The final numbers of students participating are shown in the table (Table 2). The methodology is described more fully in (Edwards and Hush, 2009).

All the participants in this project were part time students learning through supported open learning techniques developed at the Open University. The students were widespread geographically around the UK and also Germany and Hungary.

Table 2 – Shows participant numbers in this scoping study. Level 1 and level 3 indicate the first year and final year modules respectively. The table contains numbers for the 1st and 2nd rounds of data collection and divides into those who completed the online survey, Qs, and those who were interviewed, Int.

By choosing whether to participate in the study the group taking part effectively became self selected. The group sizes were too small to consider a full statistical analysis of the responses to each of the items within the inventory. However, as we shall describe, these data have been combined with all the data collated from the use of ELLI, including a dozen UK studies of within higher education.
Figure 1 – Typical chart produced by the online tool – showing the before (in the heavy line) and after (the boundary of the shaded area) plots for one individual as described by the seven dimensions of ‘learning power’

The numbers of students involved in this study are relatively small as one would expect with a pilot study. They are also very skewed towards the arts modules and therefore do not lend themselves to great comparison between the two groups. The actual numbers are shown below (Table 2).

Findings
For a significant proportion of the students it took quite some time and quite a bit of conversation to begin to assimilate the meaning of the dimensions for themselves but once they had they began to see patterns that were very personal to them. Some to the extent of finding links between the dimensions for instance one student saw clear links for them between three dimensions – critical curiosity, creativity and strategic awareness. Only a small proportion described such links and not one of these made the same set of links.

The changing and learning dimension was almost universally high. This is understandable as most adult learners have signed up because they want to change and believe this is possible.

Almost all the profiles changed shape between the two conversations. Sometimes this was a surprise to the student but they nearly always found a meaning in this for themselves. For a number the relative positions on the axes were essentially the same but the area enclosed had increased, and this seems to suggest an increase in confidence in responding to the inventory which may also correspond to an overall increase in confidence and a greater ability to engage with learning.

The results show those closest to the beginning of their study reporting the greatest benefit from using ELLI to reflect on their learning, and the ways they learn. For example one participant suggested it would be best to do ELLI at the very beginning and then said ‘yes, you’re sort of pre anything then aren’t you? Sort of any of the experiences that you get through the OU…So yeah, I think it would be beneficial as well to sort of, to perhaps sort of interview people when they start their [study]…’ This person also explained that it was a big decision for them to return to study after such a long break but they had a strong desire to develop a career, and then found they really enjoyed their study.
These students also find that their experience of study varies greatly from one week to the next. Their study is often squeezed into their days wherever they can find a little space and they are frequently juggling demanding jobs and demanding families as well as trying to maintain a semblance of a social life. One student said ‘Erm, family life makes it harder. But I always have had to juggle with that. In fact it probably takes last place in my life, does learning, funnily enough, because it’s part-time and because I have to fit work, I have to fit family. I have to fit a rather demanding hobby in that I’m committed to. It always comes last and it frustrates me sometimes that it has to come last.’ There are others, of course, who have the time and the resources to study every last detail of their courses.

Some, if not all the dimensions, have an aspect that relates to an emotional response and the emotional state of the participant is likely to have an influence on the results – of course it will because it will also strongly affect capacity for learning.

Enabling learners to develop a reflective practice is important for improved learning and the activity associated with this inventory strongly support this. They also enable greater expression of these aspects of learning by providing a framework and a coherent language.

Because the inventory asks to focus on recent learning, this can just as easily be learning at work, home, or things learned informally amongst friends, family and colleagues, it can help remove some of the anxiety that mature returners often experience as they begin HE study after what may be a gap in formal education of many years. This often means they bring with them additional anxieties about their ability to study effectively and to keep up with others.

Some of the students that took part readily made links to their workplace, e.g. a quotation from participant ‘Yes it does, it does. Because I’ve started as an adult trainer in the hospital and I’m starting to learn myself about different learning tools and, you know, how we should be aware of how people learn basically. So, yeah, so I was interested in perhaps participating as much from that point of view as much as giving back to the OU what I’ve gained from it. I thought that was only fair for future learners.’

The reflection on recent study may include a tutorial, a day school, the deadline for sending in an assignment, and these may have clear affects on the responses made and therefore the shape of the profile.

A high proportion of participants liked the visual graphical display of the profile and found that they were quickly able to interpret this for themselves.

Many students picked up on the learning relationships dimension and found it a little problematic. The problem seemed to relate to the fact that they have no choice for the most part and have to study on their own for the vast majority of the time. There are opportunities to learn with others at tutorials, both face-to-face and online, and at day or residential schools but these are all formally arranged. The people students are closest to when they are studying tend to be their close family and these can offer general support and encouragement rather than a shared learning experience.

Although this pilot study was small nearly 2000 participants took part across the institutions and the projects that comprised the larger ELLI in HE project and of the many interesting findings there are some of particular interest to this paper. The graphs in figure 2 are taken from pages 18-19 (Small and Deakin Crick, 2008) and show the variances in means across a number of variables for all the participants.
grouped by mode of learning: full time; part time; work based; distance; other, including staff. As things stand the numbers in some of these groups is relatively small and no firm conclusions can be drawn. However, these do show that there is a clear possibility, if not a likelihood, that different modes of learning foster different learning dimensions.

Figure 2 – Six graphs showing apparent differences in the dimensions of learning power across different modes of HE study: n = 1879 with 1516 studying full-time, pp. 18-19 (Small and Deakin Crick, 2008)
Variances of means in Creativity

Variances of means in Critical Curiosity

Mode of study

Mean
Discussion

Ideally it seems that if we are to make wider use of ELLI, we should put more effort into preparing students in their understanding of the seven dimensions of learning power at the outset and that this would enable them to make greater use of the information displayed in their profile chart and in the opportunities for conversation and supported reflection.

There seems to be potential benefits for students with sufficient time and space to fully engage with their course of study and for those who struggle to balance the competing demands on their time. Perhaps the latter group of students would potentially gain most as ELLI can enable them to see that they are constantly learning in each of their many roles and that the way in which they approach learning, their learning disposition, is one way of finding links and a coherence in a seemingly fragmented life.

Our findings show that the large majority, though not all, participants felt the dimensions of learning power had some meaning to them and their approaches to study. They gained some personal benefit from the ELLI approach. This was sufficient to encourage us to undertake a second study into the use of ELLI with new students to the University.

We describe the possible reasons for the low number of technology students and the effect this has had on our results in (Edwards and Hush, 2009)
ELLI also provides a framework that enables students to make helpful links between their learning in HE and that in other contexts – this has particular value for supporting the transition of mature students into HE, and in supporting those in work based learning. In fact, although our study was relatively small the final report into the ELLI in HE study (Small and Deakin Crick, 2008) which analysed the data for all the projects across the participating HEIs included results from over 1900 students. The results show some initially surprising results. For example, the values for resilience of students at the OU are very strikingly higher than any of the other institutions, and in fact the members of university staff who completed the inventory seem to show the same pattern when compared to the students in the different disciplines. Another example is that part time, distance learning and work based learning students show themselves to be stronger than full time students in all dimensions apart from learning relationships where distance learning students show the least strong result. Ideally it seems that if we are to make wider use of ELLI, we should put more effort into preparing students in their understanding of the seven dimensions of learning power at the outset and that this would enable them to make greater use of the information displayed in their profile chart and in the opportunities for conversation and supported reflection.

Although the numbers involved means the graphs reproduced above in Figure 2 show provisional relationships, they do hint at something requiring further exploration. Students studying in particular modes appear to develop different strengths in their ELLI profiles. Whilst the actual picture is almost certainly more complex this does provide an opportunity, a reason, and a framework in which to think more holistically about approaches to learning in different contexts. This can clearly benefit the student but may also be useful to staff who can develop activities within the curriculum to show connections and highlight how skills developed in one area are valuable to another.

**Conclusion**
The seven dimensions of learning power offer a descriptive framework for reflection and discussion that can be readily communicated to and used by these students. In using this online tool the supported reflection is a key element. As the tool was set up for use face-to-face we have the challenge of enriching the experience for distance learners. In fact this is an ongoing challenge within education itself.

Students using ELLI are encouraged to think about the ways in which they learn in a variety of contexts, not solely their formal learning environment, but also any others in which they are engaged. These include work, (full, part time and voluntary), leisure activities and hobbies, family and home life. From the graphs above, although constructed from data in formal learning contexts, it seems that different environments have potential to foster different learning dimensions and therefore individuals can perhaps hold multiple profiles for their different learning contexts. By exploring and reflecting on these, with supported reflection and mentoring, individuals can begin to find ways to strengthen aspects of their learning in the contexts where they are less well developed. For all involved this will enable the development of a more holistic view of learning and begin to break down some of the barriers that make it hard to link learning at a university to the working environment.

**References**


