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What is the value of an e-portfolio?

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Abstract

E-portfolios have rapidly established themselves as a key feature of higher education as universities strive to meet the auditing requirements of personal development planning (pdp). Initial university e-portfolio pilot projects suggested that students were unlikely to engage with the e-portfolio unless it was assessed (Chalk, 2008) and e-portfolios could be seen as representing a shift from personal development planning as a process (for development) to PDP as artefact (auditing).

Our question was:

Can e-portfolios provide value in increased engagement with learning?

Rather than evaluating existing commercial e-portfolio options we decided to explore the use of repertory grid analysis (RGA) as a means of identifying key personal constructs related to e-technologies that might be employed to support personal development. RGA is a method of providing insights into how a person constructs their unique view of the world (Kelly 1955). Four scenarios were chosen based on the pdp work of researchers. Our initial analysis showed how differently we had developed our work and several key constructs arose including:

Transformation 'versus' recording identity
Ownership
Audience
Conformity

This paper will explore the implications of this work and the further RGA data derived from staff. It describes a shift amongst staff engaged with pdp towards e-technologies that could be seen as enabling a more nuanced and contextualised response to the process of supporting student learning as opposed to simply meeting the requirement for 'reflection as national policy' Clegg and Bradley (2006:465).

Personal development planning (pdp)

Personal development planning (pdp) is defined by the Higher Education Academy (HEA) as 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development' (HEA 2008). All UK HEIs are required to offer opportunities to students to engage in this process. The outcomes of the pdp *process* are a transcript which is the formal record of the outcomes of the students HE experience, and a Personal Development Portfolio (PDP) *product* which encompasses the records and claims for learning that underlie the personal development planning process. There has been a movement toward the use of electronic-portfolio platforms to support PDP production (Strivens 2007)

The research question

Based on our experiences of using commercial e-portfolios at our different institutions, our working hypothesis is that if staff do not value and engage with e-portfolios for their own development, it is unlikely that students will do so, even when offered free tools. Thus our question is:

- Can e-portfolios provide value in increased engagement with learning?

Initial pilots undertaken within the group using a commercial e-portfolio suggested that that students were unlikely to engage with the e-portfolio unless it was assessed and that there were a number of negative responses from staff and students related to the lack of rewards for the effort and time involved (Chalk, 2008). Our interest is in exploring how designers construe the process to which the portfolio tools are put in order to identify key features of different portfolios. The aim is to identify the possible parameters for designing e-portfolios.

Personal Construct Psychology

Repertory Grid Analysis (RGA) is a method of providing insights into personal constructs and derives from the work of George Kelly (1955). Personal Construct Psychology is a theory rooted in understanding how a person constructs their unique view of the world. It emphasises the importance of understanding individual subjectivities as it these that motivate actions and engagement. From an e-portfolio design perspective this is an interesting idea as Kelly would argue the 'the world can only be known through our constructions of it and therefore our behaviour bridges the gap between our constructions/mapping of the world, and…the world itself' (Kenny 1984, p 3). This approach would suggest that rather than evaluating the features of existing e-portfolio platforms we should first be interested in how users and designers are construing the purposes to which e-portfolios might be put. However asking questions directly of users about the perceived benefits and applications of e-portfolios is likely to be of limited value as Kelly emphasised that this process of construing involves the whole person rather than being a largely cognitive or affective process. As such he suggests that many constructs exist a pre-verbal or tacit level of awareness and in trying to articulate these we may be seen to be 'struggling to make sense out of some experience that lies just beyond the reach of …semantic language' (op cit, p4).

Kelly also asserts that we should seek out the 'uniqueness in…the [individual's] constructions of reality' (op cit p 6) and not assume they are the same as ours. Our task as researchers then is to 'make sense of the way in which [users] make sense of the world.' This is perhaps particularly the case in a fast changing technological world wherein technological advances happen at a speed and complexity beyond the understanding of the majority of users. Sense making is unlikely to be expressed in technological design terms.

Another key aspect of Kelly's theory is that 'human thinking is essentially dichotomous, anything which can be said has an implied contrast which may be obvious or difficult to articulate.' (op cit p 10). He suggests that the individual's construction of the world can often be articulated by exploring these hidden contrasts. He called this the "Dichotomy Corollary", as soon as we note an aspect of two events which we consider similar to one another we are at the same time choosing what counts as a contrast' (op cit p 10). Although Kelly's theory is firmly based in understanding the individual Kelly also states that people may behave in a similar manner to one another in so far as they construe events in a similar manner, notwithstanding that the events themselves may not be identical.

Repertory Grid Analysis (RGA)

RGA is a tool which is used to support the process of gaining insights into an individual's personal constructs and also a way of recording these for later analysis. It is this analysis of patterns, linkages, contrasts, similarities and differences that may provide useful insights into the how an individual or groups of individuals are making sense of the events which are the subject of analysis.

Initially used in the field of Personal Construct Psychology, RGA has been adopted by a wide variety of fields, including human computer interaction (Steed and McDonnell 2003 and Fallman 2006). In order to explore the possibility of commonality between different approaches to e-portfolios, we decided to use RGA as a means of identifying the key features, aspects, uses etc for e-portfolios that might emerge during the RGA process. Herman and Kirkup (2006) summarise research into e-portfolio take-up as the search for the elusive 'X factor' – and RGA might be a useful tool for identifying what that X factor might be in relation to e-portfolios.

The team met to consider existing portfolio practice in four different areas, and used RGA as a method to develop the underpinning constructs in relation to the different purposes of these portfolios, none of which were electronic per se.

Repertory Grids contain three essential features:

- Elements which are the objects being examined,
- Constructs which are the dimensions with which these objects are being examined,
- Linking mechanism which shows how each element is described in terms of each construct.

The pilot involved four case study scenarios, derived from the current working practices of the authors, with the authors themselves constituting the respondents for the purposes of this phase of the research. The scenarios A – E constituted the elements for our grid.

Element A
This first element focussed on the process of the Assessment of Prior Experiential Learning or APEL (http://apel.londonmet.ac.uk/) (cf Pokorny 2006).

Element B
The second element was the QuickStart project (learning.north.londonmet.ac.uk/ bssmQuickStart) which leads to an assessed portfolio of tasks and reflective commentary (cf Holley and Dobson 2008).

Element C
The third element was the portfolio produced on the MA Learning and Teaching in HE in relation to participants' teaching practice.

Element D
The fourth scenario was on the Business Information Technology course. In this course the portfolio building process results in a reflective personal statement for formative and summative assessment (cf Wilson-Medhurst 2005).

Element E
There was no single 'ideal' element so in line with (Kelly 1955) an 'ideal' element was logged in the grid. This ideal element constituted the fifth element – and was rated according to how we perceived our collective ideal e-portfolio. We were hoping, in this way, to distil from our analysis not only an evaluation of our four scenarios, along the lines of Steed and McDonnell (2003), but also what we, as a team of 'experts', regard as the essential qualities of an ideal eportfolio. In this sense we were using RGA as a design tool, in line with Herman and Kirkup (2006).

Constructs and Linking Mechanism
The RGA method consists of choosing sets of 3 elements in turn, at random. The three elements are then divided according to the question "What one thing is common to two of them, but distinguishes these two from the third?" This question lies at the heart of how RGA implements personal construct theory (Kelly, 1955). It enables respondents (in this case, ourselves) to begin to describe those qualities (constructs) we identify in the elements that are important to us – either because they unite two elements or because they distinguish them from another. Through ongoing discussion, respondents can

then explain their reasoning (itself a useful qualitative research approach) and rate, between 1 to 5, how close each element, including the two missing elements, is to either extreme. This rating process was our linking mechanism.

Completing the Grid

There were two parts to our RGA process – in the first part we discussed the elements A, B and C in the second part, A, B and D were contrasted and rated. In each part, once the constructs had been identified, ratings were calculated for all five elements to indicate how it is described in terms of each construct. This process generated a list of explicit and implicit constructs across the range of practice examined in the pilot and also showed by way of the linking mechanism i.e. rating the extent to which each element conformed to a particular construct.

After comparing sets of three elements and discussing pairs of constructs in this way, with several respondents, the resulting table – Figure 1 – was analysed.

Discussion

What we were trying to uncover is a perspective from current portfolio practitioners about what their process is trying to achieve, so that we can then follow that up with an exploration of how a movement to e-portfolios could support those objectives. From a visual analysis of the grid, some interesting constructs emerged.

For example, it helped the authors (who divided up into respondents and researchers) to identify their own concept of the 'ideal' e-portfolio – student owned, for a student audience (primarily) and with a relatively high impact (to take the first three rows alone). RGA enables us to capture this, possibly at the design stage, as described by Fallman (2006), or it can enable us to evaluate alternatives, as we did here, in order to refine an existing e-portfolio to incorporate more of the 'ideal' characteristics. It helped us to start to understand one another's sense making of the different portfolio purposes and confirmed our initial feeling that there are advantages to having different perspectives as these are linked inimitably to our personal constructions of what it is that the portfolio is doing. There may not be an 'ideal' portfolio but there maybe some interesting notions of what the processes can offer through analysis of such an eclectic range of elements.

Constructs that emerged during the RGA discussion included the importance of 'transforming identity' as opposed to simply 'recording identity' – we all considered this an important aspect of our 'ideal' – and this might conflict with, say, an approach that foregrounds the PDP/progress file/ Bologna aspects. (On the Bologna construct the feeling was one of neutrality, recognising its importance but clearly wary of the implications).

RGA also encourages us to look for patterns in the grid. For example, it emerged from visual inspection that the APEL and MA Portfolios were similar in many ways. This may not be surprising as both serve an education assessment purpose, but the additional insight given by RGA is to then compare these to the 'ideal' element, perhaps to see how they might be modified to provide additional features.

The BIT Portfolio element emerged as a 'compromise' candidate, perhaps for adoption as the preferred approach to the final year project. The QuickStart environment provides a variety of features (high in multimedia, interaction with staff) that were seen as very useful for engaging first year students.

A first, tentative conclusion by the group is that it is clear from our analysis that no single element provided all the constructs or qualities we would want to see in our 'ideal' e-Portfolio, even if this can ever exist. We are now moving increasingly towards a position that e-portfolios may need to individualised, by course, by level, or even personalised by each student. In this respect is it clear that working with Personal Construct Theory using tools such as Repertory Grid Analysis is likely to be very important in recording, focusing and understanding individual subjectivities.

Through this initial process we generated a set of constructs that can inform our research with staff and student users in shaping questions about the purpose of using e-portfolios in a specific context. The notion of a balance or tipping emerged from the ensuing discussions – how can an e-portfolio create enough demand or add sufficient value to transform practice? Are there qualities must it contain to align it to the 'ideal'?

In exploring these ideas further we have undertaken four case studies using RGA with academics working at London Metropolitan University investigating how e-related tools (the elements) used at work are construed. This gives us some insights into how staff are construing the tools that support their own personal development at work and potentially will allow us to examine the nature of the e-tools that might underpin the design of an e-portfolio. In order to generate our elements we asked the question 'How do you store information you use for your work-related development?'

A range of elements emerged that were common across all case studies: USB, email, websites, network drive. There were others that were common across three of the four including social networking sites, mobile, digital recordings, PC at home.

Interestingly all participants blurred the boundaries between storage and presentation, and between work and personal life providing some insights into how the interactions between storage, recording and presenting made possible by technology may be supporting the learning process across these traditional boundaries. There were also a variety of constructs present across the case studies that pointed to the way in which participants construed the tools as a means of dialogue such as:

Interaction
Communication
Social
Active
Dynamic

The issue of ownership also emerged as an important theme within the case studies.

These emergent themes combined with our RGA work on portfolio practices seem to suggest that rather than looking for the X factor(s), the value of an e-portfolio in terms of engagement with learning is very much contextualised in terms of how the designers are construing the purpose to which the process and the tools are put. To take these ideas further, we are currently involved in a number of pilots using web 2 tools to support the pdp process. These tools all offer different approaches to ownership, social interaction and dialogue and the potential for transformation and learning rather than simply recording learning. Initial indicators are that these pilots represent a shift amongst staff engaged with pdp towards e-technologies that could be seen as enabling a more nuanced and contextualised response to the process of supporting student learning (pdp) as opposed to simply meeting the requirement for PDP artefacts or 'reflection as national policy' Clegg and Bradley (2006:465).

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Figure 1 Findings of RGA results in relation to portfolio practice

Part 1: From APEL / MA / QuickStart element sorting

Element:	A APEL	B QuickStart	C MA	D BIT	E Ideal	
Explicit constructs (1)						**Implicit constructs(5)**
Student (audience)	3	1	5	2	2	Staff audience
Impact (low numbers)	1	5	2	3	4	Impact (high numbers)
Student owned	2	4	2	3	1	Staff Owned
In one institution	2	1	3	2	5	Cross institution
Outward looking	1	5	2	3	2.5	Inward looking
Less/low multimedia	2	5	1	2	4	High multimedia
Subject area	3	2	2	4	3	Sits outside subject area
Seeing things (self) differently	1	2	3	3	2	Conform to subject discipline
Transforming identify	1	1	4	3	1	Recording identity

Part 2: From APEL / BIT / QuickStart element sorting:

	A APEL	B QuickStart	C MA	D BIT	E Ideal	
Across levels of study	1	5	5	1	1	One level of study
Conform to university Framework	5	1	5	1	3	Non-conforming
Staff engagement compulsory	5	1	4	1	4	Goodwill
Easy to put artifacts onto an appropriate platform	4	2	3	3	2	Difficult
Responding to Dearing	5	2	5	2	3	Independent from Dearing
Not responding to Bologna	4	1	1	1	3	Responding to Bologna