

Learning Logs: Assessment or Research Method?

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Abstract: Learning logs are an increasingly popular mode assessment. They record learning, experience and reflection. This paper considers learning logs as a research method, where researchers wish to gain a deep understanding of the processes of learning, reflection and experience as they occur in individuals over a period of time. Techniques are offered for implementing logs as a research method, analysing the data and interpreting results.

Keywords: Learning logs, research method, reflection, learning, experiential learning, experience.

1. Introduction

A learning log is a vehicle that is used to assess learning from experience. Logs are an increasingly popular tool, often used in conjunction with work placements, work-based learning or courses that are underpinned by a philosophy that action learning is a pedagogical approach that best achieves learning outcomes. Learning logs are viewed firmly as an assessment. They are ideal for encouraging learners to reflect on learning, and they have a structure that is quite different to traditional assessments such as essays and reports. However they are also a source of reflective data. So for example, if one has 10 learning logs from 10 students that record learning over 10 weeks of work with 10 different companies, not only do you have 10 assessments, but also 10 case studies with very rich reflective data. From this perspective there is the potential to consider learning logs as not only an assessment but also as a research method. This paper evaluates the proposition that logs are a research method. It initially considers learning logs as an assessment and examines the nature and value of reflection. Then the structures of logs as both mode of assessment and research method are compared. An experiment using logs as a research method is described. Here data capture is discussed, and an integrated approach for interpreting the data is re-introduced (Friesner and Hart 2005). Finally the nature of reality and learning logs is examined, based upon Bannister 2005, before conclusions are made.

progress files and portfolios, and presentations. This paper and the research experiment that it includes focus mainly on logs and journals, which for the purposes of this work are called *learning logs* or simply *logs*.

Learning logs are structured in many ways, often dependant upon the topic being studied, the level of a qualification, and the length of time over which the logging continues. Essentially there is usually an audit, for example a SWOT analysis or a skills analysis. The student then decides on which weaknesses to overcome, and which strengths to develop further. Objectives are set that conform to the acronym SMART (Specific, Measurable, Achievable, Realistic, and Timed). The logs themselves contain action points and plans that are designed to meet the objectives. Students begin their experience and record it in their logs. Logs can be done weekly, or when a significant event occurs. However, one must appreciate that learning logs are a formative assessment i.e. they are built overtime. To write a log at the end of an experience defeats one of its key uses, since logs capture cycles of learning that occur as a student develops. In each entry the student reflects on the extent to which their learning objective has been achieved. They may find that it has been achieved quickly, and then set a new, more substantial one. They may find that it has been partially achieved and set new action points. On the other hand, the student may find that the objective has not been achieved in any way, and have to change their action plan substantially, or modify the original objective. It is all part of the learning experience. At the end of the experience, students often reflect on the whole learning process and the degree to which objectives have been realised. It is a synthetic reflection (Cottrell 2003) that allows a student to

2. Learning logs as an assessment

Reflective assessment takes a number of forms. Cottrell (2003) summarises some of them as logs and journals, personal statements, position papers, reflective essays,

appreciate the linkages between their recent personal experiences and the bigger picture. Finally new objectives are set, in relation to life-long-learning and personal goals.

2.1 What is reflection?

Reflection is a type of thinking. It is associated with deep thought aimed at better understanding.
(Cottrell 2003 p171)

Reflection is recorded in all aspects of the learning log. Reflection itself is not a commonly understood term. Schon (1983, 1987) pioneered work in reflective practice. Higher Education is embracing reflection with Personal Development Planning (PDP), as well as including it as an innovative and progressive way to deliver curricula (Brockbank and McGill (1998), Barnett (1997) and Cowan (1998).

Often a metaphor is used whereby an individual reflects on learning in the same way as they would reflect upon their physical presence using a mirror. To paraphrase Stella Cottrell's popular view of reflection as an art, reflection helps us to make sense of learning from experience. It allows us to stand back and get a different view of experience. Reflection allows us to repeatedly go over an experience in our own mind, and allows for honesty. By undertaking reflection we weigh up aspects of our experiences and make judgements, and we may see our learning more clearly (i.e. in a mirror). It opens up the opportunity for deeper learning and understanding, allowing the learner to draw final conclusions.

Reflection can viewed as part of a more complex learning process in relation to action learning (Revans 1978) and experiential learning (Kolb 1984). For Revans (1978) action learning, or 'Learning (L)' was the addition of Programmed Knowledge (P) plus Questioning Insight (Q) i.e. $L = P + Q$, where Questioning Insight contains some of the properties of reflection.

Kolb (1984) offered a more detailed view of experiential learning, that includes reflection (or Reflective Observation) as an element of a more extensive learning cycle. Experiential learning is very much founded upon the Concept of Experiential Learning which explores the cyclical pattern of all learning from experience through reflection and conceptualising to action and on to further experience (Kolb 1984).

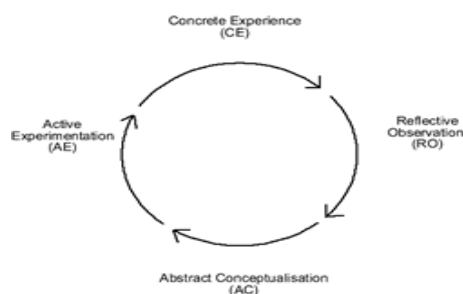


Figure 1: The experiential learning cycle (Kolb 1984)

Which brings us back to learning log structure and how it collects data on reflection. The log itself represents a series of cycles that indicate that learning may or may not have taken place. On the other hand, by requiring a student to use a prescribed structure perhaps they are being forced through a learning cycle that is no real indicator of anything i.e. students are simply going through the motions. It is a recognised argument, and one that can be used to criticise learning logs as a mode of assessment in favour of a more traditional one such as an essay. However this point is not wholly accepted by this paper, since logs do have many benefits in terms of life long learning, as well as personal and professional development. Tables 1 and 2 below represent the close relationship between the structure or design of a learning log assessment in comparison with a learning log research method.

Table 1: Preparation Phase – a comparison between the application of a learning log structure to both assessment and research method

Learning Log Assessment	Learning Log Research Method (Marketing Planning)
Summarise your learning and development to date (e.g. from Personal Development Plan (PDP))	Summarise how you conduct marketing planning:
Summarise your current skills, strengths and weakness (in relation to subject under study) Complete a SWOT analysis State personal aim(s) for the logging period Decide upon strategies for achieving personal aim(s)	Summarise your current marketing activity: Complete a SWOT analysis Summarise your organisation's aim(s) for the next 12 months Summarise the key marketing strategies of your organisation Summarise the main marketing tactics of your organisation

Table 2: Action Plan Phase – a comparison between the application of a learning log structure to both assessment and research method

Learning Assessment	Log	Learning Log Research Method (Marketing Planning)
The Reflective Journal considers: The aim(s) that you wish to achieve The Learning that takes place as log entries develop A series of reflective journal entries		The Marketing Planning Reflective Journal considers: The aim(s) that you wish to achieve Marketing planning and decision making Carry out and complete one journal entry per week, or on the occurrence of a 'significant event.'
The Reflective Journal include: The aim(s) that the student wishes to achieve Actions taken to achieve them Evaluation on their success or failure Next steps (based on a, b and c)		Each log entry should include: The aim(s) of your organisation (from Preparation Phase above) Action taken to achieve aim(s) Evaluation of performance so far Next steps (based on a, b and c)

Both approaches use audits at the outset. Objectives or aims are set and action points are put into place. Reflection is undertaken in log entries, and conclusions are drawn. Depending on the success or otherwise of the actions taken so far, new or adapted action points are put into place.

3. Learning logs as a research method

Having considered logs as an assessment, and then comparing a typical assessment structure with a log research method structure, the next section will consider the logging research method in more detail. An experiment is recounted that used a logging approach to gather the reflections of a group of marketing managers as they undertook a marketing planning process. Then consideration is given to the ways in which reflective data from logs can be analysed (Friesner and Hart 2005), and then nature of reality presented in logs is evaluated (Bannister 2005). Of course, any application of logs as a research method should take into account its suitability in comparison with other methods that may be better suited to the research problem faced or the questions posed. Really the research questions themselves should be seeking some reflection by individuals on learning and/or experience.

3.1 Research gathering data

An experiment was set up to help to answer research questions that were based upon learning, reflection and experience (Friesner and Hart 2005). Seven marketing managers from seven British theatres were recruited to participate in the learning log research experiment. Six ultimately completed. The research programme ran over an eight week period where marketing managers recorded marketing planning activities in a learning log that conformed to the same, pre-advised format. The research had two distinct phases (see Tables 1 and 2). Phase one was a preparation phase, and it was conducted prior to the commencement of logging. It required respondents to summarise their current marketing planning activities, by conducting a simple SWOT analysis, stating organisational aims for the next 12 month planning period, summarising strategies and tactics as they envisaged them over that period. This was a scene setting exercise that assisted participants to focus on the activity that lay before them. The second phase was the logging, or action phase. Each log entry began with the aim that the participant wanted to achieve in each weekly log entry. The entry continued with reflection upon the aim and action that had been undertaken to achieve it. The entry evaluated performance so far, and stated the next steps to realise the aim. This continued for 8 weeks, and then each marketing manager undertook a final reflection. The final reflection allowed respondents to reflect on not only the marketing planning that they had undertaken, but also their own individual learning and experience. The completed logs were 3,000 to 5,000 words. With the contextual data gathered at the outset of the experiment, the documentary evidence in its entirety closely resembled six case studies.

3.2 Analysing data from Learning logs

3.2.1 Content analysis, case study analysis and narrative and storytelling analysis

Since this kind of research had not been undertaken before, there was no precedent for ways in which the data should be analysed. A broad literature review was undertaken, and the most suitable approaches for analysing the data, in the view of the researchers, would be an amalgamation of content analysis, case study analysis, narrative and storytelling

analysis, or some combination of the three (Friesner and Hart 2005).

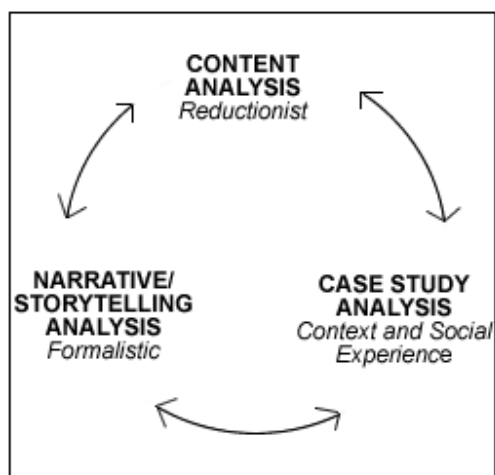


Figure 2: Three integrated approaches for interpreting data from learning logs

All three approaches were implemented. Firstly content analysis was applied to the learning log data based upon popular approaches as recorded in publications in the research methods literature (Roberts (2000), Neuendorf (2001), and Franzosi (2004)). Then a case study analysis was undertaken on the data recorded in the logs founded upon popular approaches (Kulthau (1988), Yin (2002), Stake (1995), Ragin and Becker (1992) and Jaunch et al (1980)). Finally narrative and storytelling analysis was used (Bruner (1987), Ryan (2004) and Miller (2004)). Learning log analysis has a number of advantages and disadvantages.

3.2.2 Advantages of logs as a research method:

- The logs record data directly from the participant, without being 'filtered' by the researcher at the recording stage. They are an interpretive approach to business research.
- Logs are a longitudinal research method that collect data over a period of time.
- As an assessor, one may read through logs and mark against assessment and grading criteria. As a research method logs can be analysed in a relatively objective way by employing the three aforementioned approaches.
- Logs can be recorded using Information Technology, which makes analysis with software quick and convenient.
- Logs can be analysed in parallel with each other adding robustness to findings.

3.2.3 Disadvantages of logs as a research method:

- A lot of effort and tenacity is needed to use logs as a research method.
- Replication and verifiability of findings is unlikely.
- Short, uncomplicated results are equally unlikely, since logs deliver rich data. Subtleties are not easily spotted in the data.
- There is an economic cost to managers that dedicate time to complete learning logs.

3.3 The nature of reality in learning log research

This section considers the nature of fact in interpretivist research. It is strongly influenced by a paper read to the 4th European Conference on Research Methods in Business and Management by Bannister (2005). The research experiment uses multiple case studies based upon surveys and learning log evidence, and issues relating to 'reality' and how it is represented by the data need some consideration. Bannister (2005) introduces the concepts of internal and then external reality, and the impact of a series of filters when examining multiple case studies. The external reality is what actually happened in the physical world, for example the timing of theatrical productions, or the way in which media was used to promote them. However internal reality or realities, represents the reflections of those respondents that completed the learning logs. The accounts are largely subjective and personal, and influenced by societal and political factors. Bannister (2005) stated that there are a number of predetermining filters, which he defines as *mental processes through which facts and reality pass in moving from stage to stage in the research process*. They are perceptual, contextual, linguistic, memory, sequence, personality, agenda, cognitive, methodological, and selection filters. It is recognised here that the ten filters are in evidence to a greater or lesser extent as the researcher interprets the data generated in the logs, and then goes on to consider findings and make conclusions. The researcher is reading the reflections of respondents based upon their perceptions of what happened. Perceptions may be loaded or biased, and may even be influenced by those around the marketing manager. Therefore, log entries tend to contain the perception of the authors, as they reflect upon events. The researcher is

also aware of contextual filters, since one has experience of marketing planning techniques. Therefore the researcher will be familiar with marketing planning vocabulary. Some respondents do not have a marketing planning vocabulary, and care should be taken to look for other evidence of the reality of marketing planning as the logs record it. The logs themselves contain the written word, and the researcher himself has to interpret the black and white page. The character of each individual, their confidence with the written word and indeed the quality of their written English may influence the way in which their personal reality is recorded. The way in which this researcher interprets the aforementioned words could distort the reality contained in the text. Indeed the interpretation of the accounts is then written up by this researcher, and again the nature of reality impacts upon the original intention of the respondents. Then the reader (you) read the précis of my interpretation, and will have your own interpretation of what occurred as marketing planning and learning were recorded in the logs. Therefore linguistic filters could warp reality. Respondents completed logs on a weekly basis, and therefore depended upon their memory to recall the events as they occurred during the previous week. Their records may contain mainly significant events, and leave out important details. They could also use the benefit of hindsight to adapt their interpretation of reality. In fact respondents were encouraged to reflect on why and how events occurred, and what actions should be taken to solve problems or achieve goals. Also as the interpreter of the reflective logs, the sequence in which the researcher reads them may also inform his view of the realities contained therein. So the researcher builds his own view as he reads each series of accounts, almost like reading a series of short stories – each with the same topic but written by different authors. The personality types of the respondents and that of the researcher may also taint any interpretations i.e. the way in which views are built and conclusions are drawn. Different respondents used different tones, and some logs began quite factual and became reflective as the respondent became au fait with the reflective approach to record keeping. In fact the mood of the respondents as they record their logs could distort the meaning within the text. At either a conscious or a sub-conscious level respondents may have their own agenda. Many comment on their staff and their managers, some containing more admiration than others. Respondents may be trying to shape an

agenda when writing their entries and here again there may be an alteration in the way in which facts and reality are reported. There may also be a tendency on the part of the researcher to be swayed by more persuasive responses, and there may be barriers to clear thought hidden below the surface, not least the expectation on the part of the researcher that the project would be completed on time with plenty of interesting data to analyse. One of the most important filters in terms of learning log research is the filter of methodology. One could ask the questions at this point, do learning logs record the process of learning? Do a series of logs force the respondent to structure responses in such a way that they are artificially driven into a process of learning? Such questions are difficult to tackle, but it is accepted that either one view or the other may be closest to reality. Finally the filter of selection is in evidence. One must be selective in the use of evidence since not all data or text can be used in any final write up of learning log research. That which is not used, is in a way filtered out. Therefore there exists the filter of selection, since the researcher uses only those extracts that he feels go some way to support or counteract central themes.

4. Conclusions and recommendations

Learning logs can be used as a research method. They collect data from reflection, learning and experience. They are a suitable research method where research objectives or problems relate to personal experiences in the absence of the researcher. They are recommended to those investigating the experiences of individuals over a span of time, since logs are a longitudinal mode of research. Logs should be considered an interpretive method, and any empirical data emanating from logs must be treated with tremendous caution. The similarities between logs as an assessment and logs as research methods are clear, for obvious reasons. Both modes contain a similar structure, which is easily adapted from situation to situation, to suit individual students or individual research scenarios. They include initial audits that set the context, and SMART objectives are generated. A series of log entries contain the bulk of the data, embedded in personal reflection. Finally, the formative process is reflected upon and closed, with a summative final reflection. One can measure the difference, or gap, between the initial contextualisation and the final outcomes, with reflection, learning and experience taking

place along the way. There will inevitably be a number of applications of learning logs as a method of research. However it is recognised here, that there is a potential for the approach to be understood in much more detail. Therefore the authors encourage potential future researchers to use the method and to share findings with the academic community. There are two clear areas for more research namely research into business and management disciplines, and research into higher education. Learning logs record reflection, experience and learning as it takes place in individuals, within organisations. So the fields of business and management could potentially employ logs as a research method. There is also a plenitude of rich and varied data available in the learning logs written by students for qualifications. It must be taken into account that permission should be obtained prior to any analysis, and that confidentiality is respected. Again researchers are encouraged to use interpretive techniques to gain insight into reflection, learning and experience. Any further research should also attempt to add to the interpretive techniques already advocated (Friesner and Hart 2005).

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