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What have we learned so far? The development and application of an organisational learning narrative

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Abstract

The use of narratives and stories has been growing in popularity in the field of knowledge management. Narratives may be used as useful vehicles for several knowledge-based activities within organisational (and other) contexts. These include acquiring and sharing knowledge in the form of personal experiences; the storage of explicit knowledge; and significantly, the development of personal knowledge and understanding through the use of narratives for sense-making. This paper presents research into the development and application of a method for the construction of a ‘learning narrative’: an organisational narrative developed for the specific purpose of sharing experiential knowledge. The paper presents a rationale for the use of narratives within knowledge management; details a methodological approach for the development of learning narratives; and highlights a number of benefits of the use of learning narratives, notably their use in sustaining and enhancing the quality of project-based work.

Keywords: narrative approaches; sensemaking; knowledge sharing; learning.

Introduction

This paper presents the methodological approach developed and utilised with a research project, the aim of which was to develop and apply an adapted form of learning history (entitled a 'learning narrative') within the context of a case study organisation, a multi-national energy company. The purpose of developing this technique was to explore the potential for the application of such a tool both by researchers seeking to apply narrative techniques for data capture, analysis and presentation, and by practitioners in the field of action research who may benefit through the use of a novel method of structuring and sharing narrative knowledge.

The role of narratives in knowledge management

Over the last ten years or so, there has been a growing body of work examining the relationships and importance of narratives and knowledge management. Work in this area acknowledges the importance of enabling individuals to share knowledge in the form of narratives, and also the role of narratives as sense making tools for complex contexts (e.g. Denning, 2000; Boje, 2001; Snowden, 2001; Friedman and Prusak, 2008). The reason for this interest may be closely related to the move from highly technological to more socially embedded knowledge-based perspectives and practices, as Lang suggests 'the social construction of knowledge occurs largely through narrative' (p.55, 2001). In addition to this, narratives present an important opportunity for generative learning within organisations '…where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together' (Senge, 1990, p.13). Clearly, narratives are key tools for supporting knowledge-based activities (notably knowledge sharing). However, a critical issue which this research seeks to acknowledge (which is not considered in detail in the knowledge management canon of research) is, how can multiple perspectives be unified within a narrative context? This research suggests that one such method may be to construct learning narratives by adapting learning history methodology.

The Learning History

Introduction

The learning history genre of narrative research was originally developed at the Massachusetts Institute of Technology Centre for Organizational Learning in the 1990s (Amidon, 2007). Roth defines it thus: 'Learning Histories are typically 50 to 100 pages long, providing a jointly told, retrospective account of significant events in an organisation's recent past' (Roth, 2000, p. 71).

The aim of learning histories is to use first hand stories (told by participants and accompanied by researcher commentary) to document past experiences of specific projects or initiatives in order to inform their future direction. A key element in their use is that no one person or group of people dominates the telling of the story: all views are assessed on their own merit for inclusion in the learning history (Kleiner & Roth, 1996), and thus present a valuable opportunity to unify multiple perspectives, placing the voice of the participants on centre stage. When reviewing the literature of narrative in psychotherapy Riesmann & Speedy (2007) found examples where little or no use was made of direct quotes from participants: the learning history method is the opposite of this, where the voice of participants is central to the presentation of the research.

Methodology

From its beginnings in the 1990s, learning history methodology has evolved and has been adapted by researchers with the number of steps in the methodology varying between four (Bradbury & Mainemelis, 2011) and nine (Roth, 2000). In his analysis of twelve learning histories created by a range of researchers in various organisational disciplines, Amidon (2008, p.465) identifies six common steps:

- Stage 1: Planning
- Stage 2: Data collection
- Stage 3: Data distillation
- Stage 4: Validation
- Stage 5: Revision
- Stage 6: Dissemination

These six stages are used as the methodological framework applied within this research. The activities required in each step are documented in the 'Methodology in practice' section below.

Presentation

Of the twelve learning histories analysed by Amidon (2007), seven used the presentation format of the 'jointly-told tales in multiple narratives' described by Roth (1996, p.16). The core of this format is a two column section.

In the right hand column, the verbatim comments of participants are listed along with some indication of their identity – this is often not done explicitly, using instead something such as job title or first name to offer a degree of anonymity to the speaker. This is an important consideration, especially when sensitive or even personal material may be presented within the learning history. Indeed, Andrews (2007) considers the dilemmas faced when deciding on the use or non-use of real names, and the external constraints that may limit the choice. Where possible, comments by different participants are shown allowing either support or contradiction of a statement.

The left hand column contains comments made by the researcher relating to the participant content. This may include items such as questions posed, clarifications, interpretation, generalizations and context, among others (Roth, 1996). An example of the described format is shown in Figure 1. Full width text may be used at certain points in the learning history, particularly to provide introductory and/or concluding statements to each section of two column text. The learning history genre does not prescribe the format, but the two columns encourage readers to view the information presented in new ways (Roth, 1996).

Amidon (2007) points out that all but one of the twelve learning histories examined include a section that describes the purpose and use of a learning history for readers who are likely to be unfamiliar with the format. A useful example of this can be seen in the following statement by Househower (1999, p. v): "The learning history is designed to spark constructive conversation by presenting first-hand interview and review comments on the same page and in two columns".

CHAPTER TITLE	
Introduction to this chapter – this may include a link from the previous chapter.	
Researcher commentary	[Participant Identifier] Verbatim comment from participant 1.
Researcher commentary	[Participant Identifier] Verbatim comment from participant 2.
Concluding remarks – this may include a link to the following chapter.	

Figure 1. The Two Column Format

Study background

The researchers were approached by a global company (referred to here as The Client) to document the story of the worldwide development and deployment of a major new (and ongoing) IT project. Other international divisions of The Client had previously engaged researchers to create learning histories so there was an existing familiarity with the genre within the company. In order to achieve the aim, three objectives (developed in collaboration with The Client) were set for the research:

- To capture relevant and accurate stories about the IT project using an appropriate methodological approach.
- To derive lessons learned from those stories.
- To develop a set of guidelines which could be used to expand the learning history as the IT project continues to be rolled out over the next few years.

Methodology in practice

Planning

Planning activities were of necessity shared between the researchers and employees of The Client. The researchers had four tasks, the first of which was to perform a review of the relevant literature. This stage was intended to identify, select and review prior research relating to the development and application of learning histories. This stage was used to inform the production of the learning narrative and guidelines, ensuring prior knowledge and experience had been used where appropriate. While this revealed useful background information on learning histories, surprisingly little material was found about how to actually conduct one (with the notable exception of a field manual written by Kleiner & Roth, 1996).

The second task was to create a project plan and Gantt chart to fit the study steps into the time available. The third task was to obtain resources required in order to perform the participant interviews, in particular recording devices (two were used to ensure capture in case of the failure of one) and the availability of a transcription service to create a written record of the interviews. Finally, interview questions were devised using a semi-structured interview schedule to allow for the capture of additional relevant data (Robson, 2011). These had to be rather general due to the lack of background information available to the researchers about the IT project.

The main planning tasks undertaken by client employees were to identify suitable interviewees, arrange times for them to be available, and organise venues for the interviews to take place. Due to the seniority of some participants and the many demands on their time this proved to be a more challenging task than initially anticipated.

Data collection

Within the context of social science, narratives are increasingly being viewed as valuable sources of qualitative data (Elliott, 2005). The data used as the basis of the learning history was collected through interviews with client employees who had a significant involvement with the project. Around 15 potential interviewees were identified (including several ex-employees of The Client), of whom nine were interviewed. Of the nine, four were interviewed face to face, three by video conference, and two by telephone. Seven of the participants were in the UK at the time of their interview, one in the USA, and one in Azerbaijan. As stated above, while a semi-structured interview schedule was developed, it became apparent as the interviews progressed that in fact the interviewees were able to recount their role in the project in narrative form. Thus, interviewees were asked to explain what the IT project was, and their role within it. The interviews were captured on digital voice recorders and professionally transcribed. The returned written transcripts were checked against the original recordings to correct any errors and fill in any missing text.

Data distillation

A grounded theory based approach (Corbin & Strauss, 2008) was used to analyse the data, with open and axial coding employed to produce the final version. While the actual process of distilling the data was quite iterative and non-linear, six discrete steps were identified, which are briefly described here by way of guidance:

1. Each transcript was examined to identify and note the main themes raised by the interviewees. Themes common to multiple participants were identified as being of particular interest.
2. The identified themes were refined down to a manageable number (between four and twelve was considered to be appropriate, depending on the number of interviews conducted), combining sub-themes into a higher level one where necessary. A total of six high level themes were identified and used as chapter headings in the learning history. Sub-themes were used in step 6 to assist in deciding the order of extracts.
3. Passages were marked in each transcript to show where a theme had been used, noting that a passage may contain more than one theme. Colour coding was used in this step for ease of subsequent identification of the various themes.
4. Relevant passages were copied into a separate document for each theme, retaining the identity of the interviewees. If appropriate, questions asked by the researcher (these were highlighted by the use of italics and a different colour to the interviewee text) were also included.
5. The raw text was re-examined in the thematic documents to identify the key parts relating to the theme, and these were extracted into separate documents.
6. The extracts were placed into a suitable order in the column on the right, where possible ending on a positive note. While this was not an objective set for the project, the researchers felt that as the IT project was still ongoing, that the narrative should be encouraging and positive in the message it conveyed to readers, without being disingenuous.

Once the participant data was placed into the learning history format, researcher comments were added in the left hand column at appropriate points. An introductory statement was produced for each chapter. As explained below, the standard presentation format was extended to address client requirements, thus adapting the learning history into a learning narrative. It should be noted that Kleiner & Roth (1996, p. 1-10) list “Writing: production of a transitional object” as a separate methodological step between Distillation and Validation, although Amidon (2008) includes writing as part of the distillation process.

Validation

Validation of learning histories is generally a two part process (Roth & Kleiner, 1998). First, individual contributions were returned to the participants to allow them to confirm that what had been written was indeed what they said, and to correct any errors. The second part of this stage was to have a draft of the document reviewed by representatives of the organisation. This part was conducted to achieve an early determination of the effect the learning narrative was likely to have, and allowed for further amendments if necessary. It should be noted that the revision step presented below should ideally take place after both part one and part two of the validation stage.

Revision

Following each part of validation the researchers made changes arising from the reviews, and repeated the second part of the validation (review by representatives of the organisation) to ensure the amendments were now correct. The first part of the validation process was omitted due to time constraints.

Dissemination

In many respects the conduct of this step was determined largely by The Client, as it had the necessary infrastructure to make the learning history available to employees (and potentially others outside the organisation), and made the decision as to who the audience of the learning narrative would be. Before commencing the research there was discussion with the Client as to the appropriateness of various dissemination vehicles. It was decided that the learning narrative would initially be distributed via email to the participants, and made available to other relevant groups of employees via The Client's intranet.

Extension of the Standard Presentation

Extending the methodological steps beyond those identified by Amidon (2008), this step was critical in the transformation of the learning history into a learning narrative. In order to meet the requirements of The Client and embed opportunities for learning and sense making within the document, the two column jointly-told tale format was extended to include a third column to the right of the participant narrative. This was used to place a marker indicating that the participant text alongside it contained a 'learning point'. The specific text was underlined to show its location. The inclusion of learning points within the learning narrative makes an explicit link to existing knowledge-based processes (notably knowledge acquisition and sense making), by highlighting opportunities for readers of the learning narrative to build on existing knowledge within the organisation. Furthermore, the inclusion of learning points sought to continually improve the ongoing quality of the project by avoiding previously encountered problems, and aid in the recognition of potential and actual solutions.

Garon (2006, p.103) suggests that ‘Lessons learned (LLs) are a key element of knowledge management.’ However, before lessons may be learned they must be identified. Learning points are parts of the learning narrative text which identify key areas for learning within the project’s history. The learning points identified in the document were indicative rather than exhaustive, and readers were encouraged to add their own as appropriate, as each reader will inevitably identify personal sets of learning points determined by their subject area, seniority, etc. This extension to the methodology helped to ensure that the learning narrative was not simply a historical document (hence the change of title from ‘learning history’ to ‘learning narrative’) which was critical given this was a ‘live’ IT project, but would instead continue to be a useful source of insight for the project participants as well as other readers.

Results

Themes/chapter headings

The first two steps in the data distillation process resulted in the identification of six major themes, which were used as chapter headings in the learning history. Each of these themes was derived from the contributions of at least five participants, demonstrating their commonality across a range of job roles. The six themes and the chapter contents are listed in Table 1.

Theme	**Content description**

Standardisation	▪ Underlying need for the programme is the drive for global standardisation ▪ Examine origins of standardisation and efforts to define standards and the behavioural changes needed to meet them ▪ Business issues posed by standardisation and implementation concerns ▪ Benefits already seen and expected from standardisation
Change	▪ Historical perspective on the programme ▪ Analysis of need for business change ▪ Project team and business co-operative working ▪ Issues caused by change and opportunities arising
Leadership	▪ Events leading to leadership support ▪ Efforts made to ensure leadership remains throughout the life of the programme ▪ Problems caused by weak leadership ▪ Benefits of leadership engagement
Sharing	▪ Early recognition of the need to share ▪ Encouragement of collaborative effort ▪ Challenges and benefits of co-operation ▪ Review training requirements, successes and failures
Resourcing	▪ Problems in obtaining resources and managing their utilisation ▪ Impact of the programme on business resources
Deployment	▪ Examples of completed deployments and support methodologies developed ▪ Challenges in understanding deployment ▪ Help provided to business to make deployment easier ▪ Post-implementation issues and recommendations for approaches for technical and business support

Table 1. Major themes

Contributions

Each participant contributed to at least three of the themes, with several contributing to all six. The total number of passages of text selected for inclusion in the learning history was 145. A summary of the breakdown of contributions is shown in Table 2.

Major theme / **Participant**	**Standardisation**	**Change**	**Leadership**	**Sharing**	**Resourcing**	**Deployment**	**Total contributions**	**No. of themes**
1	4	9	-	3	1		17	4
2	4	1	4	-	-	2	11	4
3	6	2	-	3	2	9	22	5
4	1	1	4	11	1	3	21	6
5	2	4	-	4	1	3	14	5
6	2	10	2	3	1	6	24	6
7	1	4	3	3	5	3	19	6
8	1	-	2	2	2	-	7	4
9	1	3	-	-	-	6	10	3
No. of contributions	22	34	15	29	13	32	**145**	
No. of contributors	9	8	5	7	7	7		

Table 2. Summary of contributions

Learning History examples

In order to illustrate the type of contribution selected and the layout used one example from each chapter of the completed learning history has been chosen and reproduced here in Figures 2 – 7. Some minor changes have been made to protect the identity of The Client and individual participants.

It may be necessary to emphasise the acceptance of standards.	**[C1]** You have to be bold and make a decision and say “actually no, this is the way it has to be”, and “yeah I hear you, and yeah I hear it's going to cause you pain, *but*, the reality is I can't make it flexible, everybody has to be working the same way, doing the same things”.	

Figure 2. Example from Standardisation chapter

The business now understands the need for change… *…although this is an incomplete process which is still under way.*	**[C2]** The big change is that the business has caught up with what we've been trying to do, so now it's much easier. It’s still not easy because although the business has caught up with it in intent, and through the plans they're putting in place, it doesn’t mean that everybody’s behind it and works that way; you know change programmes at the level of the business we're trying to do will take years.	

Figure 3. Example from Change chapter

There is considerable benefit to the programme in making an effort to engage senior leadership and make their support know.	**[C3]** Senior Leader visibility, Vice-president visibility, really does make quite a difference, every time when we've done that we see that. So I think if you had a restricted amount of time and resource, you know where do you initially focus your energies, it's got to be at the Senior Leader level, because then, you know once there, they’ve demonstrated a change in beginning that will then hopefully filter down.	**LP15**

Figure 4. Example from Leadership chapter

Including the business leads to greater support	**[C4]** One of the key takeaways that I had – *don’t be frightened to ask the business*, 'cause	**LP23**

from them.	they're the people with the expertise that can really offer a lot of guidance, and it's also a good engagement opportunity. People like to feel involved in what's happening to them, and if they feel and say they've shaped that in any form then we found that they actually gave us quite a significant amount of support.

Figure 5. Example from Sharing chapter

There are concerns around a lack of certain types of resource.	**[C5]** We are in general short of really good delivery managers. It's a talent that we don't have much of, in part because it requires you to have time in the business and time in IT, and we don't necessarily have strong careers paths to create that, we've got people who've got there over time, but it's tough.

Figure 6. Example from Resourcing chapter

Use of regions that have already deployed to make the benefit case to partners can be helpful.	**[C6]** When we get to time that we talk to partners, we're probably going to enlist country A and probably going to enlist country B, to help us have that conversation, and for them to explain to the partners here the benefits that they have seen through the deployment, you know that are actually concrete benefits, so have a germane, sort of a compelling business case.

Figure 7. Example from Deployment chapter

Figure 8 shows an example of the full width text used in a chapter heading, in this case from Chapter One: Standardisation (again, minor changes have been made to maintain confidentiality).

The Learning Narrative of the IT programme begins by examining the underlying need for its existence: the drive for global standardisation. This

chapter illustrates the origins of standardisation and the efforts made by the programme to define standards and the behavioural changes required to meet those standards. It also examines some of the issues that standardisation poses to the business and the difficulties experienced by the programme in implementing them. Lastly, the chapter explores the benefits that standards have provided already and are expected to offer in the future.

Figure 8. Chapter One introductory text

Figures 4 and 5 demonstrate how learning points within the learning narrative were emphasised. A total of 52 learning points were identified. Learning point numbers varied between the different chapters, potentially indicating that the organisation's processes and procedures were less defined in those areas with more learning points. The distribution of learning points is shown in Table 3.

Chapter	**Learning Points**
Standardisation	7
Change	6
Leadership	6
Sharing	14
Resourcing	5
Deployment	14
Total	**52**

Table 3. Learning points

Discussion and Conclusions

This paper has described the methodological approach utilised in the development and application of an adapted form of learning history within the context of organisational knowledge management. Typically, the use of narratives from a methodological perspective has focussed on the analysis of written narratives, rather than how those narratives may be elicited (Lieblich et al, 1998). This may in part be due to the proliferation of narratives themselves as Riessman suggests: ‘Locating narratives of personal experience for analysis is not difficult. They are ubiquitous in everyday life. We can all think of a conversation when someone told in exquisite detail what she said, what he said, what happened next – a recapitulation of every nuance of a moment that had special meaning for her. (1993, p.2).

This research has shown how multiple perspectives may be unified into one narrative, and how the narrative may be further enriched for the purposes of sense making through the inclusion of learning points and additional researcher commentary. By extending the methodological approach beyond the scope of the learning history, the research has shown both the flexibility and appropriateness of the learning narrative technique, and the potential benefits of the inclusion of learning points within narratives for ongoing organisational initiatives.

In spite of the overall success of the project, a number of limitations to the research are noted. Understanding the reasons why these factors occurred and their impact may make it easier to either avoid them or make allowances for them in future related studies. Firstly, due to The Client’s desire to undertake the project in a limited timeframe, the research was started with little prior knowledge of the project or of the organisational structure and business activities of The Client. This meant that a significant proportion of the first few interviews was spent addressing this knowledge gap. Had it been possible to obtain background information from The Client before commencing the interview stage, more effort could have been focused in the early interviews on specific issues present within the learning narrative. Related to this issue was the use of acronyms and industry specific terms by employees of The Client. While initially a challenge to understanding, a glossary was drawn up, with the researchers able to identify some terms from information available on the internet, and additional information relating to terminology provided by The Client. Due to The Client’s other commitments, scheduling interviewees within the project timeframe was challenging, with this stage of the project running on in order to collate enough data to produce the learning narrative. The nature of action research means that pragmatic decisions must be taken to ensure a successful and timely completion to any project. In this case, while additional interviews would have been beneficial it was felt that a balance had to be struck between the quantity (and quality) of the data gathered, and the time spent on the project.

Technical issues were experienced during a number of the interviews conducted remotely. These included delays in starting video conferences and the late unavailability of video conference facilities resulting in an interview via telephone. As all interviews were conducted at client premises these issues were out of the control of the researchers. Recording of the interviews conducted remotely was an additional challenge, mainly due to the need to record the participant's voice from video conference speakers. The ability to record directly would have improved the quality of the recording.

The third objective agreed with The Client prior to starting the research - to provide a set of guidelines that could be used within the company to expand the learning history themselves - was unable to be fully satisfied. As the research was carried out it became clear that there could be no simple step-by-step guidance offered as the analysis of the data and synthesis of the learning history content was very much dependent on the data collected. An outline of the steps taken was provided, but unless the person using them had received training in qualitative research methods it is unlikely that they could be used effectively. The implication of this is that The Client (and other organisations wishing to employ the techniques described) would either need to invest in academic training for their staff or continue to engage with professional researchers who already have the necessary skills.

The limitations noted above are countered by a number of strengths of the project. Perhaps most importantly, the people selected by The Client to take part in the study were all keen to talk about their involvement in the project and to recount stories that were meaningful to them. By utilising a narrative methodology for data collection, this allows for a more 'natural' engagement with the interviewees rather than a more formalised semi-structured interview approach. Most participants had little awareness of the research before the start of the interview but despite this, were quickly able to provide useful material. Nearly everyone expressed a willingness to be contacted again should more information be needed, although this was not ultimately required. Interviewee participation was critical both to the overall success of the project, and ultimately to the development of a fit for purpose learning narrative. Without the participation of the interviewees the production of the learning narrative would not have been possible. Related to this point, the data collected during the study provided stories of a high quality once distillation to extract the relevant content had taken place. One of the most difficult parts of the process was deciding what material to leave out; the final document could easily have been considerably larger if all of the dialogue initially selected as useful had been included. However, the Validation and Revision stages provided a critical role in content filtering.

In relation to the scope for future research, several opportunities are evident. Specifically within the context of this research, the development and application of a novel methodology may allow for a greater depth of understanding of specific contexts within the energy sectors, and further may be applicable into other areas of organisational research. An expanded study with a larger group of interviewees could be conducted to build on the existing data set. Andrews (2008) discusses the benefits and pitfalls of secondary analysis of previously collected data, either by the original team or by new researchers. While there may be issues analysing data remotely from the context in which it was gathered, a fresh perspective may bring new insights. Reissman is quoted by Andrews (2008, p. 89): "I am not saying that my third reading is 'truer' than my first or second; they are, simply, different". The passage of time, and the events that happen during that period, allow data to be looked at in new and different ways. "I have argued that historical changes, as well as changes in our individual life circumstances, provide us with opportunities to see new layers of meaning in our data." (Andrews, 2008, p. 98). An alternative to transcribing the stories told in a study is to record the spoken words of participants in a narrative (or oral history) database (Snowden, 2004). This allows enquirers to build the elements of a story for themselves through searching by "archetypes, themes, intention, emotional level and perspective" (Snowden, 2004, p. 212). As part of its existing Knowledge Management work, The Client has a database in which lessons learned were captured from each of its projects. An addition to the tasks performed in this study would be to incorporate the learning points noted into the database, something that would have to be done collaboratively between the researchers and The Client. Each learning point would have to be assessed to determine the level at which it would be added to the database, as some lessons learned are deemed applicable at a local level while others are applied regionally or globally.

The ubiquity of stories and narratives is acknowledged by many writers in the field (e.g. Jameson, 1991; Lyotard, 1984) and is further emphasised by Barthes (1977, p 79): '...narrative is present in every age, in every place, in every society'. Although this may appear to be a somewhat trivial point, the ubiquity of the narrative is an indicating factor of its societal importance. Narrative then can be seen to be a tool in its own right which may help individuals and indeed groups of people (like organisations) to make sense of themselves in some way. Stories and narratives act as ways of making meaning within given and understood structures such as the IT project used within this research, and this paper has shown one example of how they may be usefully employed to support knowledge based activities such as the structuring and sharing of explicit knowledge.

Although this research is based on one case study organisation (and clearly more research into the use of the learning narrative methodology would be beneficial), it has shown the potential for the methodological approach, and has further emphasised the importance of narratives within knowledge management more generally. As the IT project is still ongoing, it is anticipated that additional findings relating to the ongoing use and potential benefits of the learning narrative methodology will be presented in future published works.

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