



Using the “documentary method” to analyse qualitative data in logistics research

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Abstract

Purpose – This paper aims to examine the use of a qualitative data analysis technique, the documentary method, in the development of knowledge in logistics. The value of the method is illustrated through an example of its application in a study of in-store logistics processes at six leading European retail stores.

Design/methodology/approach – Extant literature is outlined regarding philosophical underpinnings of the documentary method and is followed by an explanation of the method and its application. Finally, an illustration is provided of its adaptation and use in a logistics research project.

Findings – Drawing on a social constructionist approach, the documentary method can add to the development of logistics research by providing rich descriptions of actual practice, problems and issues in logistic processes – compared with the stated goals of such processes.

Research limitations/implications – The documentary method is not suitable for all areas of logistics research and will need certain adaptations and adjustments when transferred into particular research contexts. In addition, the research question, philosophical stance, and knowledge of qualitative methodologies will ultimately determine the appropriateness of the technique.

Originality/value – The paper presents the first application of the documentary method in the field of logistics.

Keywords Qualitative research, Social constructionism, Documentary method, Interview analysis, Distribution management, Research methods, Information management

Paper type Conceptual paper

Introduction

Acceptance of qualitative methods in logistics research has increased in recent years despite the dominance of quantitative methods. However, their application is still in its infancy and the wide range of available qualitative methods still relatively underexplored compared to other disciplines. Accordingly, this special issue is devoted to understanding and exploring how qualitative techniques can contribute to logistics research. To this end, this paper introduces a qualitative data analysis technique based on a social constructionist perspective – the “documentary method” – that originates from educational sciences. The paper discusses how this qualitative method can enrich our knowledge of the practical issues involved in logistics processes. The structure of the paper is as follows: First, extant literature is outlined



regarding the philosophical underpinnings of this method, followed by a positioning and explanation of the documentary method. Third, the paper discusses how data can be collected and analysed using this method through an example from a logistics research project, and finally, draws conclusions about its value to logistics research. We argue that the nature of the documentary method enables researchers to capture rich details of the micropractices of logistic processes while also providing an analytical protocol that draws generalisable principles from unique cases. It can therefore supplement a logistic researcher's methods toolkit.

Overview of qualitative research in logistics

According to Mentzer and Kahn (1995) the logistics discipline is dominated by quantitative and positivist research, perhaps arising from the nature of logistics as an applied science with strong engineering roots. In addition, Stock (1997, p. 515) argued that as a comparatively young discipline, logistics does not have a rich methodological heritage and therefore relies “on the usage of concepts, definitions, theories, rules and principles from other disciplines”. Stock (1990, p. 4) also called for more involvement with other disciplines to broaden the horizon of logistics research and enable a logistics researcher “to escape the traditional perspective of the discipline”. Since then this horizon has broadened, with qualitative research perhaps entering a more established stage as evidenced by Sachan and Datta's (2005) analysis of almost 450 articles from three leading logistics journals published between 1999 and 2003. They demonstrated that while the majority of publications still use quantitative methods, there is a shift towards more qualitative techniques. They concluded such increased acceptance might be caused by the growing maturity of the discipline and the focus on more “why” and “how” questions; consistent with the “boundary-spanning” issues represented in Kent and Flint's (1997) sixth era in the development of logistics research. The discipline's move towards other areas of the supply chain, rather than just goods flow and technical operations, is perhaps a response to the positivist focus on structural issues which often ignores those parts of the supply chain where human factors and interaction are an integral part of the process. This move is international, as Arlbjørn *et al.*'s (2008) analysis of Nordic PhD research in logistics demonstrates. They found researchers gravitating towards theory development rather than theory testing, and using more qualitative case-based approaches as identified earlier by Vafidis (2007).

A number of researchers have suggested that logistics research can be enriched by the use of inputs from other disciplines and by qualitative methods such as case studies and action research (Näslund, 2002; Näslund *et al.*, 2010). Yet at least two issues remain controversial in terms of their effect on the credibility of research: the “methodological soundness” and “rigour” of qualitative approaches (Halldórsson and Aastrup, 2003). Some researchers promote rigour through methodological triangulation and a combination of qualitative and quantitative, or inductive and deductive methods (Mangan *et al.*, 2004). Within the broader and more established discipline of the sociology of knowledge, scholars acknowledge that rigour is based on being consistent in terms of using methods of data collection, analysis and theorising appropriate to a particular research paradigm (Cunliffe, 2010a). The paper draws on this premise to explain how the documentary method enriches understanding of how human perceptions and behaviours influence the operation and effectiveness of the logistics process.

Research paradigms and philosophical underpinnings

The paradigm debate, which addresses the philosophical underpinnings of various approaches to research, foreshadows the quantitative-qualitative question by claiming that the first question researchers should ask is not what method to use, but what paradigm to work from (Morgan and Smircich, 1980). A paradigm is “an entire constellation of beliefs, values and techniques, and so on, shared by the members of a given community” (Kuhn, 1996, p. 175), and paradigms change when an old *Weltanschauung* (“worldview”) cannot explain anomalies and research results. New paradigms can assist in highlighting new problems and looking at old problems from a different perspective, but can take time to become accepted by the research community as researchers tend to remain in paradigms that best match their personal *Weltanschauung* and contest new paradigms as being “non-rigorous”. At the most basic level, the two extremes are objectivism and subjectivism; with objectivism often being equated with quantitative and subjectivism with qualitative methodologies.

The objectivist end of the continuum assumes there is an external reality into which humans are socialized that can be studied in a neutral way from an outsider/expert perspective. Researchers study structures, systems and processes as concrete realities (the “what” of social reality), and often use methods such as surveys, coded structured interviews, protocol analysis, grounded theory and realist-based ethnography to generate quantifiable and/or categorized data that can be generalized across contexts. Subjectivist researchers view realities as socially constructed and maintained in everyday interactions, and that people are reflective and intentional actors. They study culturally-situated meanings – participants’ perceptions and understanding of a situation – by using methods such as narrative analysis, participative action research, autoethnography and interpretive ethnography (Cunliffe, 2010b) to generate qualitative data. While their research focus lies on “how” realities are constructed by actors in a particular context, subjectivist researchers believe that an understanding of practical experience, issues and problems in one context offers insights of relevance to other contexts.

There are many other positions that researchers can take between these two extremes (see Cunliffe (2010a) for a more in-depth explication), and continuing debate lies around the issues of the relevance and rigour of research conducted from the various paradigms. If, as subjectivist researchers believe, they are part of the process of meaning-making and therefore cannot be neutral observers, then how can their research be rigorous and trustworthy? This issue will be addressed later in the paper in relation to the documentary method.

Broadening the field: the documentary method

This paper suggests that a qualitative data analysis technique currently used in educational studies – the documentary method – has value for logistics research because it can offer insights into how human perceptions and actions influence the implementation and effectiveness of logistics processes. This method falls into Kent and Flint’s (1997, p. 26) “boundary-spanning” era because it focuses on understanding behavioural issues including “inter-functional cooperation and coordination”. Developed by Bohnsack (1989), initially to research the evolution of biographies in youth cultures in Germany, the documentary method is situated towards the subjectivist end of the continuum. It broadly falls within a social constructionist perspective

(Cunliffe, 2008), being based on the premise that our sense of what is real is a practical accomplishment, achieved through the contextual, embodied, ongoing interpretive work of people (Garfinkel, 1967) rather than in objective structures and systems. Based on the work of Bourdieu (1977) and Schwandt (2003), its philosophical roots lie in continental philosophy, in particular the Frankfurt School. Bohnsack developed the method as a way of accessing human action and the “system of meanings to which it belongs” (Schwandt, 2003, p. 296) and representing the actors’ explicit and tacit interpretations of their world by presenting “types” or patterns of meaning.

Bohnsack (2010) considers that there are two levels of knowledge: the reflexive or theoretical knowledge and the practical or incorporated knowledge. The latter knowledge is also called “atheoretical knowledge” by Mannheim (1984) or “tacit knowledge” by Polanyi (1967) and assumes that there is an underlying mental structure in actions. This knowledge is “owned” by the research participants or actors and thus differs from an objectivist stance where the researcher alone has a privileged access to this knowledge. The documentary method spans the boundaries of these two levels of knowledge by tapping into the practical tacit knowledge of actors, which may even be outside the awareness of the participants themselves, as a means of extrapolating more general theoretical knowledge. It does so by focusing on the following (Bohnsack, 2010):

- Practice – what are the common experiences, meanings, and routine practices that emerge and are maintained in the interactions of people around logistic processes?
- On answering the question “how are logistics processes enacted in everyday interactions?”
- On obtaining data based on actors’ experiential knowledge and interpreting, reconstructing and explicating the actors’ tacit meanings.
- On the researcher constructing types from these meanings. The researcher should not try and remove all prejudgements, but rather take them into consideration as part of the process of making sense of others’ experience.
- On participants’ language and ‘frames of orientation’ as a means of making actions and events understandable to others. Participants express themselves in a way that includes information about their perception of reality without necessarily explicitly mentioning or even defining such understanding. The researcher extracts this underlying knowledge from actors’ stories and language.

Based on the above, the documentary method offers a way of bridging the relevance and rigour gap (Kieser and Leiner, 2009) – the claim that research cannot be both relevant (having practical value) and rigorous (building robust theory through controlled research design protocols). It focuses on relevance by exploring participant meaning, and rigour by providing a protocol for developing generalized types in a systematic way. Bohnsack addresses the issue of rigour arguing that actors’ subjective interpretations have to be transformed into an objective mode before they can be analysed. He uses a “reconstructive methodology” in which actors’ constructs are disassembled and the researcher interprets and reconstructs the constructs in three stages: telling, interaction and discourse. Hence, reconstruction considers not only subjectively intended meanings, but also has to consider the objective structure of meaning (Wagner, 1999).

In this way, the documentary method bridges the gap between purely interpretive methods (e.g. some narrative methods, autoethnography, interpretive ethnography,

hermeneutic analysis) which focus only on participant meanings and more positivist methods (e.g. surveys, coded interviews, boundary/object analysis) which take abstract generalizations from the data based on the researcher's preconceived framework. This is particularly relevant to logistics where the focus often lies on the system and its elements and "how" the system is enacted in practice is often ignored. From a social constructionist perspective, systems are created, maintained and changed in the interpretations, tacit understandings and interactions of people. The documentary method provides a way of reconstructing tacit knowledge into atheoretical knowledge that can be generalized to other logistics contexts. By addressing rigour and relevance, the documentary method could be appropriately used as part of ethnographic, case study and grounded theory methodologies.

The documentary method generates data from narrative interviews with organizational members. The narrative interview aims to collect data from open communication, which gives opportunities to participants to describe their everyday interactions and practices, their views and perceptions. This does not mean that data collection happens in a totally unstructured way, but that the interviewee responds to an initial narrative generating question, followed by the researcher probing certain aspects (Nohl, 2006).

From a social constructionist perspective participants' knowledge lies within their discourse and therefore data analysis uses interview transcripts to extract issues arising from the participants' responses. Specifically, the analysis focuses on narrative pieces of the transcripts which are particularly rich (Nohl, 2006). From a qualitative perspective every narrative, and therefore also those derived through interviews, consists of two meaningful aspects: what is said, and how it is said (Fontana and Frey, 2003):

Each narrative has two parts; a story and a discourse. The story is the content, or chain of events. The story is the 'what' in a narrative, the discourse is the 'how'. The discourse is rather like a plot, how the reader becomes aware of what happened, the order of appearance of the events (Sarup, 1996, p. 17).

Consequently, data analysis takes the existence of these two levels into account. This differs from other qualitative methods such as conversation analysis and discourse analysis because the former focuses on the "how" – the mechanics of a conversation (e.g. the organization and sequencing of talk, turn taking), while the latter focuses on the "what" – the language and the structures of meaning. Thus, the documentary method is for researchers interested in exploring how 'reality is shaped by respondents and what that reality might be. The narrative interview is analyzed and reconstructed in order to reveal the meanings expressed by the respondent, drawing on the "what" and the "how" of the interpretive process.

This occurs as the researcher differentiates between respondents' intrinsic understandings and those that emerge after probing. This is done by explicating common and uncommon expressions, phrases and language, rather than using positivist methods such as coded interviews and word counts (Meuser, 2006). Bohnsack differentiates between participants' immanent (i.e. inherent) meaning and the documentary meaning, which is the researcher's explication of meaning from the text. Thus, the interpretation has to take place in three steps as shown in Figure 1: the rephrasing interpretation of immanent meanings; the researcher's reflective interpretation and reconstruction of meanings, topics, and their connection back to

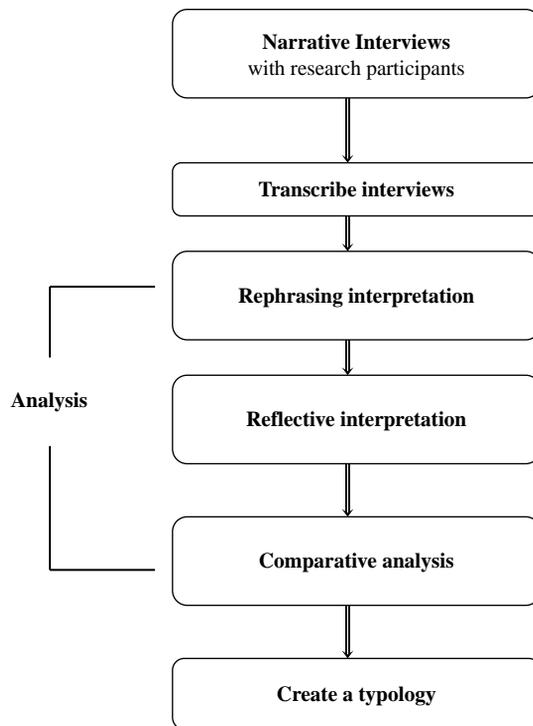


Figure 1.
Mapping the documentary
method

the context and the research aim; and a comparative analysis. Only in the reflective interpretation is the development of discourse and reality analysed (Wagner, 1999).

Specifically, in the rephrasing interpretation (“what” is said in the interview), the researcher looks for topic changes and rephrases the text. By rephrasing the interview, the documentary method reveals different and more generalizable meanings that objectify processes within the data (Berger and Luckmann, 1966). The rephrasing interpretation is then followed by the reflective interpretation of “how” the topic is treated and how reality is constructed. To gain this insight, the researcher reconstructs the frame in which reality is created (Nohl, 2006). This frame is then used in the third step, the comparative analysis. The comparative analysis looks at how the interviewees responded to certain questions, the way they tackled the problem or the issue and in which sequence they constructed their response.

Rigour is addressed by conducting sufficient interviews to include all aspects and dimensions of knowledge that are necessary for the comparison of interview content and the analytical development of relevant concepts and categories. This will depend on the topic under study and the organizational context. The aim is “conceptual representativity” (Przyborski and Wohlrab-Sahr, 2008) (having a range of views, job positions and perspectives, etc.) rather than an accurate representation of an objective reality.

Different types are based on differences and commonalities of the characteristics and variables of an object can be extracted through them (Nohl, 2006). The researcher then creates a typology by grouping types together. Within one typology elements should be as similar to each other as possible and therefore one looks for similarities

and aims for a high internal homogeneity; while at the same time aiming for external heterogeneity (Kluge, 1999). The aim for external heterogeneity proliferates the suitability for exploratory studies as it requires a wider coverage of different research objects/subjects.

Adaptation of the documentary method to logistics: an illustrative case

Having explained the philosophical origin and the process of the documentary method, it should not be forgotten that the method was developed for a research study about youth cultures in the social sciences, using open interviews for the data collection. Such an open interview structure might not be chosen by logistics researchers for practical reasons of access and the time available at the research site.

The authors want to present an adaptation of the documentary method to the field of logistics, which puts more importance on the rephrasing interpretation and less on the discourse compared to Bohnsack's (1989) original method. The adaptation was made in this case because the researchers were interested in the logistics processes themselves, which need the "what" facts from the rephrasing interpretation, as well as the tacit knowledge carried by logistics employees. Therefore, rephrasing interpretation and reflective interpretation became more interwoven in this study than suggested by Bohnsack. This highlights two advantages of the documentary method: it is adaptable to the specific research question and focus, and it is of particular benefit if the focus lies on practice – in particular the relationship between employees and logistic processes (i.e. relevance). A brief description of the study follows, bearing in mind that it is used purely for illustrative purposes: as a context from which to explicate the application, adaptation and value of the method.

Two illustrative examples are drawn from a larger exploratory study of in-store logistics processes in retail companies. The aim of the study was to investigate how employees in a retail setting understand and interact with replenishment processes to improve on-shelf availability and reduce out-of-stocks. The documentary method was particularly appropriate to this research as it combined an interpretation of employees' tacit knowledge with the ability to draw more generalizable insights about logistics systems and processes. Data was collected in 30 interviews with employees involved in-store replenishment across hierarchical levels from shop floor to senior management at six market-leading retailers, operating in four different retail sectors in three different European countries. The selection of interviewees was based on the criterion that they were informed and experienced respondents, which in this case means they were directly involved in the design or execution of in-store replenishment, and as such included store managers, head office merchandise managers or customer service assistants. Six companies were chosen to give a heterogeneous sample of retailers. While the documentary method originally calls for open interviews to allow respondents to express themselves fully and to set the flow of the interview, such a fully open interview was considered infeasible for this study. Negotiating access for interviews at retail companies was difficult enough, and one had to consider that participating companies would not accept the long interview durations usually anticipated with open interviews. This can be a disadvantage of the method, but one open to adaptation.

Further, retail stores usually have a very hands-on operational work mentality, and the level of trust that would be needed for a fully open and deep interview seemed to be not achievable within such a short time frame. Also, after discussion with research

stakeholders, a sample size of 30 interviews was agreed and the conduct of in-depth interviews would have generated an unmanageable amount of data for the research project. Under these limitations, the study amended the research approach to using semi-structured interviews. The interviews were structured around three main topics derived from literature. Within these topic areas the flow was dominated by the participant and the researcher only used probes where appropriate and applicable. To give the respondents the freedom to express their own views and to make them lead the interview direction, the questions were open and rather general.

The interviews were audio recorded and transcribed. Although the analysis of the full study takes the environment and interview situation into consideration, for the purposes of this paper the main focus is on the interview transcripts. For the analysis story-telling pieces are particularly valuable. These can be identified by certain narrative structures, such as the progression of events, for example connected through expressions such as “and then [...]”. The rephrasing part of the analysis looks at “what” the interviewee said without changing its meaning.

The following example is cut out of a 70 lines response from a head office project manager at a British grocery retailer to the initial interview question: “What’s happening to a product from the point when it arrives at a store?” It provides a short example of rich description in that it offers a detailed comprehensible story of experience and events:

So whoever is receiving it should check the high value against the delivery note and really check it off line by line. [...] And then you’ll have seen the back-door book, where they receive everything. So if it’s temperature checked, they’ll attempt to check it and just log it all down, all the driver’s details, his van details, time of delivery, temperature and who signed for it, that’s in the book. And then from there it depends on what replenishment activities you’ve got on. So whether generally in a big store, I’d say we replenish at a night, so when we’ve not got that many customers in. In a smaller store, I think it’s just load it in at backdoor, load it straight out onto shop floor and start merchandising. Rules are you bring your old stock forward and replenish to the back. [...] We have rules for presentation levels of what should you have on at all times in terms of presentation. And then you just replenish from the back. Bring the old stuff forward and put it to the back. And then we have the daily disciplines, that you’ve probably seen in store, like the gap checking or other reports, we have like low stock reports, high stock reports.

At the rephrasing analysis this translates into: “High value deliveries should be compared against the delivery sheet. All delivery details need to be put down in the back-door book. At a large store, replenishment happens at night, when fewer customers are in the store. At smaller stores the delivery is brought directly into the shop floor for replenishment. Rules exist for the presentation levels and to fill up from the back. Daily tasks are stock checks and gap checks”.

Not only does the rephrasing analysis compress the content; it also forces the researcher to think about what the interviewee is really saying. What the interviewee is really saying can sometimes be debatable and the researcher might want to discuss the analysis with other researchers that are involved in the project. As an illustration the text piece “we have the daily disciplines” is considered. A standard dictionary would describe “disciplines” as “rules”. However, how binding rules are would depend on the way they are enforced. Therefore, the meaning of “disciplines” can vary between an order that must be adhered to and a recommendation. In this case the researcher chose to use it as “tasks” as the central organisation wanted stores to perform these checks, but in another

part of the interview the respondent actually states that the organisation has no control whether the stores do it. Thus, the rephrasing into “tasks” was chosen.

Through the rephrasing analysis the research finds out about the content or the “what” of the interview. Afterwards, the reflective analysis looks at the “how” level of the same text sample:

{a} So whoever is receiving it should check the high value against the delivery note and really check it off line by line. [...] And then you’ll have seen the back-doorbook, where they receive everything. So if it’s temperature checked, they’ll attempt to check it and just log it all down, all the driver’s details, his van details, time of delivery, temperature and who signed for it, that’s in the book. {b} And then from there it depends on what replenishment activities you’ve got on. So whether generally in a big store, I’d say we replenish at a night, so when we’ve not got that many customers in. In a smaller store, I think it’s just load it in at backdoor, load it straight out onto shop floor and start merchandising. Rules are you bring your old stock forward and replenish to the back. [...] {c} We have rules for presentation levels of what should you have on at all times in terms of presentation. And then you just replenish from the back. Bring the old stuff forward and put it to the back. And then we have the daily disciplines, that you’ve probably seen in store, like the gap checking or other reports, we have like low stock reports, high stock reports.

Looking at the sample text above, we have divided it based on content into three parts: the store receives a delivery; replenishment; and product availability on-shelf. Throughout the response the matter of control is one issue that arises. Words that express control are underlined in the above text sample; expressions that signal ambiguity or qualification are italicised. Parts {a} and {c} are dominated by control; whereas part shows more expressions of vagueness. This analysis is based on the researchers’ perception of the text and the situation; although the researchers could probe for the right understanding during the interview itself, it may be recommended to triangulate these perceptions in discussion with other researchers.

The researchers may therefore interpret that the organisation’s central office, which the interviewee belongs to, has less control over the structure of replenishment processes that are going on in the store than about other areas of the business. The point where and when products are delivered is strongly controlled, however the flow of the product in the store goes out of the central office’s control; it then regains control by putting control procedures and measures in at the shelf. However, as we know from the rephrasing analysis, these control measures may or may not be followed by the store.

From this excerpt, one can say that the respondent who is at the retailer’s organisational centre does not have a sufficient overview of the replenishment process that is happening in the stores. The delivery reception, which is the boundary between

central organisation and the store, can still be controlled. After that the store is in charge and the central organisation can only obtain a final measure of results and is unable to control the process execution itself.

In order to identify typologies, one has to see the analysed data in contrast to other interviews. The second example text piece is therefore chosen from an interview with a head office store process manager at a Continental European do-it-yourself (DIY) retailer. The text piece is cut from his 51 lines answer to the same initial question as in the first example “What’s happening to a product from the point when it arrives at a store?”

[...] We separate into eight to twelve [...] logistics streams. Depending on which logistics stream the product belongs to, it is either detail checked at reception or it is brought into the store without further checks. [...] Using the supplier and the log stream, the receiver knows whether the product needs to be checked or not. If it does not get detail checked; it is only overseen whether the number of packs is correct, whether the packs are undamaged. Then the entire thing is ticked off in the system [...] Going into sale means that it is brought to the individual departments by the reception [...] Does an entire pallet go into the store, then it happens very often that it is a mixed pallet. For example, it contains not only items for the plumbing area; it can also contain five or six buckets of paint. [...] Then the pallet is brought to the area of the product that needs to be taken off the top first. [...] We work with different colours. So that every one of us knows, when there is a yellow writing, he knows precisely which area it is. [...] We have separated our sales area into modules. Every metre is modulised [...].

The rephrasing analysis results in: “The company has eight to 12 logistics streams. The logistics stream determines to which detail a product needs to be checked at the store. After the product is given free, it is brought to the shop floor by the goods reception. Mixed pallets are brought to the department to which the most upper product on the pallet belongs to. The replenishment system uses a company-wide colour coding and standardised modules for its shelf plans”. Again, the reflective analysis follows for this text sample:

[...] We separate into eight to twelve [...] logistics streams. Depending on which logistics stream the product belongs to, it is either detail checked at reception or it is brought into the store without further checks. [...] Using the supplier and the log stream, the receiver knows whether the product needs to be checked or not. If it does not get detail checked; it is only overseen whether the number of packs is correct, whether the packs are undamaged. Then the entire thing is ticked off in the system [...] Going into sale means that it is brought to the individual departments by the reception [...] Does an entire pallet go into the store, then it happens very often that it is a mixed pallet. For example, it contains not only items for the plumbing area; it can also contain five or six buckets of paint. [...] Then the pallet is brought to the area of the product that needs to be taken off the top first. [...] We work with different colours. So that every one of us knows, when there is a yellow writing, he knows precisely which area it is. [...] We have separated our sales area into modules. Every metre is modulised. [...]

Much like the first excerpt, this second piece also contains words of control. Nevertheless, the first step of control when the product arrives uses harder words such as check and control. The second cloud of control is more about standardisation and ownership, with words like “every” and “knows”. The words underlined with a straight line show variance in the processes, where things can go further in different ways. The bold expresses when the product is moved forward through the process.

In contrast to the first piece, the DIY interviewee showed that he is aware of all the different ways a product goes throughout the replenishment process and he explains in detail the processes that are applied in each case. This may be due to his position in the central office, where his main task is to monitor adherence to centrally given logistics processes in the stores and distribution centres. The interview response is structured in a way that the description of a product movement occurs with a cloud of words that express process separation. The step of potential process separation is then followed by words that suggest control/standardisation. Through this pattern of alternating movement options with process control, the company achieves standardisation and can afford variety in their processes without drifting into confusion.

The second piece also does not use any words of uncertainty, i.e. where the participant is not completely sure what happens. Thus, process ownership and central control is achieved very differently in the two examples. In example one, the grocery retailer tries to gain control by monitoring reports and by giving rules. The DIY retailer in example two instead gives employees a manual for a system in which they operate. The processes are organised and prepared in a way that the store employees handle them independently in accordance with process guidelines.

Overall, the two different types evolving from these two cases are that the grocery retailer aims to control processes by controlling results, whilst the DIY retailer controls the processes by owning them and controlling that the processes are conducted properly. As this example is only based on two smaller pieces from interviews, the entire data set would have to be investigated to confirm this typology, however that is out of scope for the purposes of this paper.

Conclusions

This paper offers an example of a qualitative research method drawn from education studies – the documentary method – that can be adapted and used for logistics research. Based on a social constructionist perspective, the method combines a subjective and objective stance: “subjectivity” in terms of garnering and interpreting participants’ perceptions, comments and narratives and interpreting how they construct their realities and “objectivity” in terms of the researcher’s construction of types and comparative analysis of typifications that allows a degree of generalization.

The value of the method to logistics research is that it seeks to use the tacit knowledge of actors to help the researcher understand the complexities and operation of logistics processes. In other words, it directly addresses the issue of “relevance” to practice. The documentary method focuses not just on “what” the process or system is, or what it is intended to be – which is often the outcome of objectivist research, particularly when the researcher relies on observation and process documents – but also on “how” the process is constructed, perceived and enacted by those involved in the process. This offers a basis for identifying the issues and problems involved in the everyday operation of logistics. As demonstrated in the two examples, logistics

processes do not always operate as intended and control measures may or may not be followed by the store. The researchers gained an immanent perspective of those actors right at the centre of the process and could thus work with them to resolve problems.

Compared to surveys and structured interviews, which usually centres around concerns of the researcher rather than those of employees, the documentary method provides rich data of relevance to practice because it engages the tacit knowledge of actors. This can provide a way of unearthing issues, concerns and problems that otherwise may not be immediately obvious to the researcher. Instead of testing theory or researcher-based hypotheses, this method develops theory inductively and systematically, which leads to knowledge development in logistics by providing a basis upon which researchers can re-theorize and practitioners re-structure processes. The two examples illustrate how control is understood differently at the two retail companies (the grocery retailer looked at results as a measure of control; the DIY retailer controlled the adherence to process execution guidelines by monitoring the process execution itself). This can be used to theorize control from different perspectives.

Methodologically, the paper contributes to a call to use more qualitative methods in logistics research (Näslund, 2002; Mangan *et al.*, 2004), Stock's (1997) specific call for methodology knowledge transfers from other disciplines to the field of logistics, and represents research at the boundary-spanning era highlighted by Kent and Flint (1997). While the documentary method is not suitable for all research questions, particularly sheer mathematical problems in logistics, it is most suitable for exploratory research which focuses on answering the “how” and “why” questions. Further, this method suits social and human resources aspects in processes, which is becoming more important in research (Kent and Flint, 1997; Neumann and Dul, 2010).

The method may also be criticized, from a positivist perspective, as lacking in rigour or validity discussed by Mentzer and Flint (1997). However, from a subjectivist perspective rigour is judged in different ways; for example Golden-Biddle and Locke (1993) argue similarly to Halldórsson and Aastrup (2003) that the “rigour” or trustworthiness of ethnographic work is based on the three criteria of:

- (1) Authenticity – has the researcher provided enough detail to show they have been there and gathered and analysed data in a discipline way?
- (2) Plausibility – does the connection between the description/data and the conceptualization make sense?
- (3) Criticality – does the text cause the reader to see the situation differently?

These criteria can be applied as indicators of trustworthiness relating to the use of the documentary method, which offers rich description, a systematic analysis, and a development of types through a reconstructive methodology.

As cautioned above the appropriateness of a selected methodology and data analysis method very much depends on the research question. The two examples provided herein were used to illustrate how the documentary method may be adapted to the logistics discipline to offer different conceptualizations of practice. In contrast to more positivist methodologies, which are seen to be rigorous but not necessarily relevant, the documentary method bridges the rigour-relevance gap by systematically developing theory from practice. This paper aims to encourage the transfer and use of new methods as a means of widening the knowledge base and relevance of logistics research.

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Further reading

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