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The didactics of case studies

Abstract

Initially, the origins, history and evolution of didactics as a subject are debated which concludes into the current meaning of the formulate. Later, case studies and associated theory linked to the topic are reviewed in order to establish the ultimate and correct way to execute these. The significance concerning teachers ability about knowing what to teach and how to teach is brought upon while it's concluded that case studies includes a number of vital fragments that needs to be recognized. Finally, the importance of combining general knowledge of didactics and understanding of case studies are discussed.

Introduction

Case studies is a ordinarily used method in order to acquire data due to it's ability to attain advanced information about a specific subject. Thereby, the didactics of case studies is important in order to assure that the method is understood and used in a correct way. The question then becomes how the didactics of case studies is performed and if this is the ultimate and correct way.

Method

The method used regarding how this science article is constructed was initiated by a review of the topic as a whole, giving a clear and distinct depiction concerning the meaning of *didactics* and *case studies*. Secondarily, different literature was researched via the Internet and books. This resulted in attaining concrete sources of information which enabled the completion of the theory section and gaining overall knowledge about the subjects.

After collecting theory from various sources, a satisfying amount of information was acquired in order to commence the analyzing part. In this section, the theory collected was compared, in order to exploit similarities and differences between these. After making an analysis based on the theory composed, a conclusion concerning the didactics of case studies were able to be

completed. After coming to this inference, future studies regarding the subject of matter are mentioned.

Key words and didactics as a subject

The word *didactics* originates from the Greek word *Didaskein*, which basically can be translated into "to teach" or "to educate". The meaning of the expression can also be linked to having the ability to teach or to the individuals that encompass this specific skill. Didactics may as well refer to teaching aids, the content taught, how the teacher includes different methods and media or the classroom and school where the learning takes place (Gundem, 1998).

The substances this particular formulate cover can be viewed as broad based on it's possible different meanings. The tenor have changed over time and according to research done by Bo Steffensen, University of Education in Copenhagen, the expression can be divided into two different main category's. According to Steffensen's study's, made on teacher students, the phrase is mainly understood as the method of teaching (Steffensen, 2003).

On the other hand, several didactical theoreticians argue that didactics is not a issue of method. Their case of matter consider didactics to be more about the discipline concerning what to tutor and why to teach it. This group is further divided into two segments, one which argues that these questions is common for all subjects and one that argues with the purpose of that these varies with the nature of the content (Steffensen, 2003).

The word *case* originates from the Latin word *casus* and clarifies the importance of the single object of study. The terminology therefore explains that the research is focused about only one or a few items. Presumably because there only exists one or a few objects or for the reason that there only are one or a few objects available to the researcher. The main objective is usually to go at depth with a specific, particular case and then present a complete analysis (Andersen, 1997).

The definition of a *case study* can be described as an examination where the object of study is limited within time and space. The item of study can for example be an organization or a particular event. It can either be an intensive configuration with refers to investigate deep into an subject with the purpose to show as many variables as possible. It can also be an extensive study which means that you examine wide and explore many units which often results in not getting that many variables (Jacobsen, 2000).

As previously noted and mentioned by Andersen, the word *didactics* derives from the ancient Greece. The current understanding of didactics as a subject is more or less founded on the nineteenth-century teacher-schooling from Germany and surrounding territories, especially the Nordic countries. This interpretation of didactics is based on the history on the field, from Plato and Aristotle long time ago, all the way to Niemeyer in the 18th century (Landsheere, 1998).

As noted by Hopmann, the first recorded assemblage of didactics as a knowledge of is own was in the middle of this time frame, around 1120 A.D. by a German monk teaching in Paris. His name was Hugh of Saint Victor and he argued, like Dewey later did in 1916, that the core of didactics as a discipline had three different types, discipline as order of knowledge,

discipline as order of teaching and discipline as a precondition of students approach to learning (Dewey, 1916).

Hugh discussed the essential difference about the learning by schooling and the learning from day by day life. He mentioned how the best way of teaching may differentiate from the order of knowledge foundation because this understanding often emerges a while later in time. An additional important aspect to Hugh's view of didactics was the students preparatory and commitment for their learning process (Hopmann, 2007).

This view of didactics can be linked to Pertti Kansanen´s and Matti Meri´s description of the understanding of subject didactics. The author's argue that there's a three-way relationship within the exercise of didactics, the ones between teacher-student, student-content and content-teacher. In the article, they describe that the teaching-studying-learning process must have a purpose, with aims and goals that are clearly defined (Peterssen, 1983).

This has lead to didactics becoming what it is today, with the main subject of the discipline being about the teachers understanding about how to teach and what to teach. This normative self-concept have been fundamental for the subject from the late 19th century to the beginning of the 20th century and have had an crucial impact on the building of the current school supremacy in continental Europe (Künzli, 1988).

Didactics is now at main focus at most teacher and teaching schools in continental European but at the same time not as much in the spotlight in the English speaking world where the centre of attention is more directed towards the Anglo-American concept. For example, ask any teacher in Germany about why he or she uses a specific method or practice and they'll come up with an answer linked to their own education in didactics as a subject of learning (Hopmann, 2007).

Case studies and how they're executed

Case studies may be separated into two segments, quantitative and qualitative. While quantitative case studies often is used to examine various hypothesis and draw statistical conclusions (Jackson, 2008), qualitative research primarily focus on understanding the basis of the problem instead of using geometric procedures or other quantities methods (Strauss & Corbin, 1994).

The objective regarding qualitative case studies is to extract deep level of knowledge from a single unit with the intention to increase the perceptive concerning a larger number of units (Gerring, 2004), resulting in a prospect for the investigator to achieve a deeper understanding of the research problem (Baxter & Jack, 2008).

Apart from being commonly used within the academia (Stake, 1978), this research technique is furthermore a popular instrument for organisational didactics and evaluation. Although this method is frequently used, qualitative case studies are not well comprehended (Barratt, Choi & Li, 2011). The danger associated with using this research technique for case studies is that any misinterpretations regarding the intent or execution may cause noteworthy negative outcome on the subject of study. Mistakes in this phase of the studies may result in the entire project becoming void due to the wrongly implantation (Merton, 1940) and as consequents a lot of time and money wasted (GAO, 1990). Although, if executed correctly, the method

enables the researcher to explore individuals or organizations with a complex but distinctive approach (Yin, 2003).

The planning phase concerning case studies contains identification regarding research questions and additional aspects including choice of case study method and discovering strengths or limitations (Yin, 2009). Furthermore, the most essential step is perhaps to distinctly define the research problem. On the base of this, each case study should start with a pervading literature examination and a cautious reflection regarding the research questions and study objectives (Rawitch & Riggan, 2011). During the literature review, it's indispensable to recognize significant gaps and connect these to the research questions (Darke, Shanks & Broadbent, 1998) in order to ensure the validity of the study as a whole (Dooley, 2002).

The selection of examination method is set by a numerous of circumstances, including the sort of research question and whether how contemporary the object of study is (Yin, 2009). The course of action should as well highlight the principal research concept, whether it being positivist or post positivist and critical or post-modern (Gephart, 2004). In general, critical realism is viewed as the ideal paradigm for case study research (Easton, 2010).

Taking the characteristics mentioned above into consideration, case studies may be quite complicated to execute in a satisfying and correct way. Thereby, the view of the subject as a matter differ from the conventional idea, being that case studies are soft research. Compared to controlled experiments in simulated environments, case studies may seem limited assumed on the amount of data points. However, case studies typically contain more variables of importance and rely on several verifications. Because the comparative immense quantity of variables, case studies may not be the optimal method for established and well-understood questions but is described as the favoured research technique when questions of the type *why* and *how* are explored (Leonard-Barton, 1990)(Yin, 2009). Case studies have been described as tailor-made in order to investigate new behaviour or processes (Hartley, 1994).

A challenge acknowledged among case studies is that the research method may be very expensive and time-consuming. Other difficulties regarding case studies might be to figure out an appropriate method for the examination and to collate and integrate outcomes from several cases when the results in one divides from another (GAO, 1990).

The design of a case study should focus on defining the unit of analysis along with the expected cases investigated. It should also comprise different theories or suggestions, strive to identify potential complications regarding the study and enlarge procedures to ensure the quality of the research (Yin, 2009).

Research design can be described as a blueprint for the entire research assignment. Consequently, the design should attempt to link the together the project from beginning until the end, including everything from hypothesis and question design to data analysis and conclusion. The logic should furthermore guarantee that applicable and accurate data is gathered during the data collection phase (GAO, 1990). In addition to this, it's essential to define the unit of analysis concerning the case study, whether it may be a process, an individual or a group (Yin, 2009). Numerous case studies published are unsuccessful at distinctly identifying the unit of analysis (Dubé & Paré, 2003).

The centre of attention concerning the preparation phase of a case study includes attaining the required skills needed as an investigator, obtaining eventual approvals and elaborating a case study protocol (Yin 2009). The preparation phase must also aspire to discover any significant problems or restrictions concerning data collection or team composition (Dubé & Paré, 2003). It's also imperative for the researchers to get familiar with the unit of analysis and to comprehend the major theoretical concepts regarding the item of study (Yin, 2009).

The collection phase of a case study need to involve the utilization of numerous sources, establishing of a case study database, maintaining of verifications, and following of the case study protocol (Yin, 2009). In addition, it's also necessary to be capable to clarify how any conclusions have been made (Miles & Huberman, 1994).

The analyzing part concerning case studies involves to deliberate and utilize various methodical techniques by the use of different strategies and in that way extract and present data separately from interpretations (Yin, 2009). The most complicated part regarding the case study procedure have been described as the qualitative analysis (Eisenhardt, 1989). Qualitative research studies attempt to construct an analytical generalisation in contrast to the statistical simplification usually endeavoured with quantitative research (Yin, 2013).

It's central to acknowledge that even entirely quantities studies contain some qualitative information. If this wouldn't be the case, the quantitative data would be completely insignificant. For that reason, quantitative researches should attempt to connect to theoretical fundamentals and consequently eventually be applicable to other case studies (Meredith, 1998). At this point, statistical generalisation aspire to make a conclusion about the population as a whole based on the observed data collected in the assortment. In contrast, analytical generalisation uses previous developed theory to compare with the outcome of the empirical case study. Hence that analytical generalisation refers to theory, this theories can be additionally starched by the execution of cross-case comparisons (Yin, 1981).

The main assignation during the sharing phase regarding case studies is to initially define the audience interested concerning the topic. After accomplishing this, the task becomes to compile a well written document displaying the evidence gathered through text and visual materials (Yin, 2009). It's important to exhibit actual cases in order to verify the legitimacy of the studies (GAO, 1990) and to present all collected data in order to avoid any possible overgeneralization or misinterpretation made by the writer (Gerring, 2004). Furthermore, it's also significant to incorporate eventual unaltered citations from main informants in order to support the main figures presented (Eisenhardt & Graebner, 2007). Finally, the findings should aspire to narrate back into literature (Dooley, 2002) as well as into the historical and societal background of the research scenery (Klein & Myers, 1999).

Analysis

The implication on the subject of didactics may be about the ability to teach and knowing what to teach (Gundem, 1998). Didactics can also be interpreted as the method of teaching (Steffensen, 2003). This can be linked to the didactic triangle which describes a three-way relationship within the learning process, taking into account the contributions made by teachers, students and content used into the procedure (Peterssen, 1983). The lecturer needs to have knowledge about learning as a topic but also needs to know which content to use and how to integrate the students in the best possible way for them to learn (Gundem, 1998).

Another way to interpret the subjects of didactics is it being more about what to teach and why to teach it. This way of thinking usually focus more on the content and why it's important rather than highlighting the human aspect or the explicit method of the learning process. Within this view of didactics, it's further discussed however this is common for all subjects or if it varies among different subjects (Steffensen, 2003).

Case studies can be described as a course of action to construct a research with the intent of going at depth with a particular topic and afterwards presenting a complete analysis regarding the subject (Andersen, 1997). The object of study must be limited within time and space. The case study can either be an more intensive study with the intention of going deep at the subject or an extensive research which aims to investigate more broadly inside the subject of study (Jacobsen, 2000).

A case study may be completed in two different ways, either in a quantitative or a qualitative conduct. Quantitative studies are usually used to make statistical conclusions via examining hypothesis (Jackson, 2008) while qualitative case studies strive to comprehend the basics of the problem through numerical measures (Strauss & Corbin, 1994). If the research is immense and the purpose with the case study is to attain qualified data, a qualitative research is the suggested execution in order to complete the objective (Gerring, 2004)(Baxter & Jack, 2008).

Case studies enable researchers to study an object in a compound but at the same time distinguishing way (Yin, 2003). Considering this, the technique of case studies is a good method in order to examine new or complex processes or behaviours (Hartley 1994) within an organization for example (Yin, 2003). Simultaneously, while being a good method executed decorously, the difficulty and challenges concerning the technique needs to be acknowledged in order to avoid mistakes. Small errors during any phase of the process may cause big miscalculations and affect the entire study (Merton, 1940). The risk of this happening may be viewed as large considering that case studies are not often well understood (Barratt, Choi & Li, 2011).

Taking this into account, it's important for teachers and researchers to possess a great knowledge regarding the different phases and the practical execution of case studies (Barratt, Choi & Li, 2011)(Yin, 2009). During the preparation phase, it's important to define the research problem and selecting an appropriate examination method while understanding how these two affects and cooperates with one another (Rawitch & Riggan, 2011)(Yin, 2009). In order to accomplish this, a fundamental and critical literature review is needed to discover eventual gaps and becoming familiar with the problem (Darke, Shanks & Broadbent, 1998) (Rawitch & Riggan, 2011).

After implanting a proper plan for the case study as a whole, it's further necessary knowing how the design should be made. This stage strives to connect the entire case study from beginning until end and needs to incorporate the entire process (GAO, 1990)(Yin, 2009).

In order to prepare correctly before making a case study, the researcher must analyze any eventual problems or restrictions concerning the data collection. It's also important to assemble a suitable team for the assignment and acquire any eventual approvals in order to perform the gathering of information (Dubé & Paré, 2003)(Yin, 2009). When later collecting the data, it's necessary to save verifications (Yin, 2009) in order to explain how the conclusions have been completed (Miles & Huberman, 1994).

The most complex part to master within case studies have been said to be the qualitative analyzing of collected data (Eisenhardt, 1989). To complete this part, researchers or teachers need to enhance the knowledge of different techniques and strategies in order to righteous interpret the information acquired (Yin, 2009). After making an analysis and reaching a conclusion, it's fundamental to know how to display the final result of the case study in a impartial and correct way (Gerring, 2004)(Yin, 2009).

Conclusion

Case studies is a commonly used technique to acquire advanced information regarding a specific object of study. The utilization of case studies is generally recognized as one of the best methods to investigate new or limited explored processes and behaviours. The method of doing case studies is often practiced in order to answer the questions how and why.

Although this procedure as a method is familiar among the vast majority, it's not as usual that everyone understand or acknowledge the comprehensive extent of the subject as a matter. It's quite a complicated technique to perform all aspects concerning case studies in a correct and satisfying way.

The understanding of didactics as a subject is interpreted and understood in different ways. Considering this, it's more complicated to precisely pinpoint the main core of the area. Some consider the most important regarding the subject being method of teaching while some focus extra on involvement of content. Whether it's the actual content *used* or *how* it's used seem to vary.

However, it's possible to dissect some relative trends and connections within the subject. Multiple sources highlights the importance of linkage between teacher, students and contents, what's often referred to as the didactic triangle. A majority seem to agree that content involved within the teaching is a main factor inside didactics in some way.

Case studies as a research method is a distinct but complex method used in order to attain greater knowledge about a specific object. The technique may be performed in a more qualitative or quantitative way based on the purpose with the examination. Although being a good method, it quite complicated and requires a great knowledge in order to be understood and executed correctly.
The science regarding the interpretation of didactics divides more but the content used strives to be viewed as a significantly imperative aspect.

Subsequently, the didactics of case studies becomes a very important topic within learning, where the teacher needs to know how to perform a case study in a impeccable way, including the recognition of the different sections among the process of completing a case study. In this specific case, concerning the didactics of case studies, knowledge of content used is central.

Future Studies

Reviewing existing literature, the understanding of case studies as a subject seem like a well studied, interpreted and understood field. The process of doing case studies will presumably, like many other things, change more or less over time. Bearing this in mind, continues

research involving the field may be fruitful in order to gain awareness regarding improved or more effective ways to execute case studies.

Further studies regarding didactics may be rewarding due to the subject being quite different interpreted among different researches. Examinations regarding what currently *is* the main point/points of the subject and what *should* be at central may be aspects to consider considering how these opinions vary.

Studies concerning the didactics of case studies may as well be executed in order to gain awareness how the technique should and can be taught in the best possible way to thereby avoid any possible mistakes regarding the performance of these.

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