Case study: calling for a more open approach

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Aims:
- Disentangle case study as an open approach in where different methods fit.
- Explore the implications of the researcher in case study research considering postructuralist issues.
- Expose the main issues of case study approach through an example of a multiple case study research in the field of education.

Abstract: The purpose of this paper is to expose the different implications involving the use of case study in a research about the emotions in professionals of education. Concerns such as the subjectivities of the researcher, construction of the cases and possibilities of generalisation, serve to open a discussion about the possibilities of case study as an approach.

Keyword: case study, qualitative research, social sciences methodology

Introduction

Case study is one of the most employed and accepted methods in qualitative education research; a proof of this affirmation is the large body of publications referring to the topic. However, is it in fact a method or an approach?

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Defending the idea of case study as an approach, this paper attempts to establish the basis for it uses in a research study that explores the emotional involvement of professionals working with special need education students, taking into account postructuralist issues such as power, knowledge and subjectivity. This redefinition of case study pays special attention to the position of the researcher as a subject embedded in a complex social world that cannot be dismissed or reduced to the assumptions of the extremely forced experimental interpretations. The researcher is not just a “Sherlock Holmes” assembling the various facts (Cheek & Gough 2005: 304). What is more, we should take into consideration that the researcher is not arbitrary with matters such as the selection of cases, interpretations or methodological decisions, therefore his/her voice should not be the only one we listen to. To consider other realities different to those lived by the researcher, the literature proposes the use of triangulation to provide a diversity of perceptions as a way to open the interpretations (Stake 2005: 454). Other forms of research take into account different points of view by contrasting, through member check, the perceptions of the researcher with the subjects involved in the research (St. Pierre 1999). Both of them are essential if we are looking for a new perspective in case study research, while considering that they are still not free of criticism and difficulties.

The definition of “quintain”- object, phenomenon or condition to be studied-, settle the bounds of the case or cases and the formulation of research questions, each and everyone have an important function for the study (Stake 2006: 6). In the example exposed is explained how these three issues together with the philosophical framework must interact to give sense and robustness to the research.

Nevertheless, we cannot forget that behind every research exists a prevalent philosophy or system of thought that guides the research and influence the methodological choices.

Stereotypically, case study research in education is seen as an empirical method where data collection is primarily carried out by direct observations along with interviews. This idea is flawed and out of fashion because case study research must be opened to other forms (Yin 1989: 22), especially in the social sciences (to know more about naturalistic approach see Hammersley and Atkinson, 1995). The creation of new spaces within a case study approach allows the researcher to make use of other methods such as life histories, diaries, and letters etc., all of them often called “documents of life” (Plummer 1983). Diary is the research method utilized for the case study research
referred to here. It is presented as an alternative tool to collect information about the phenomena of interest during the daily life (Corty, 1993). Moreover, another way to further open the approach is proposed through giving significance to the concerns of ‘writing as a method of inquiry’, always present in every research. (Richardson & St Pierre, 2005)

One of the striking points of case study approach is the generalization of the result obtained. The discussion about generalization from the single or group of cases is an epistemological option that must be in agreement with the theoretical framework sustained by the researcher during the entire study. Whereas, in traditional research generalisation is an achievable goal because regularities in the social world exist, in a more contemporary epistemology it is a more debatable issue to be reconceptualized (Donmoyer, 1990:176; Ward Schofield 1990: 202).

**Previous reflections for a research based on case study**

This study is composed of three apparently independent case studies, where each one acts as a “bounded system” (Fals Borda, 1998). A relationship between them is created, although Stake (2006) prefers the use of the term recognized. However, the use of this expression denotes the existence of a fixed reality rather than one constructed and fragmented that is the ontological standpoint supporting this research. As a result of the creation of this connection, links appear acting as bridges and walls between cases with the function of producing nexus and boundaries. A new amalgamated mean emerges under the idea of preserving at the same time their individual representations.

Each single case is identified as an education professional working with Special Education Need students. Therefore, we have three different cases constituted by three different SNE professionals working in three educational centres but sharing something in common. The point in which every case converges and the responsibility of maintaining the cohesion are the same, furthermore, without the second one, the first is not possible. This concord or point of encounter is constituted by the researcher as a producer of knowledge that is also exposed to diverse mechanism of power (Gitlin 1994, Bishop 2005). Traditionally it was ignored by the dominant approach in which the role of researchers was to interpret a fixed reality as an impartial trained observer. Nevertheless, as is explained later, in this project all that is related to the subject in charge of the research and his/her belief system is considered a necessary pillar to
understand the methodological preferences and in fact, the whole project (Krauss 2005). Researchers, as well as all the subjects, are embedded in a complex social world that cannot be dismissed or reduced to the assumptions of the extremely forced experimental interpretations. Therefore, we should bear in mind that the researcher is not arbitrary with things like the selection of cases or his /her interpretations (Stark & Torrance 2005). It is claimed the necessity to deconstruct the researcher as a subject, taking into consideration the crisis of representation as a reference to challenge the previous ideas about the researcher narrative (Ellis & Bochner 2000 and Jackson & Mazzei 2008).

Once the cases are introduced along with the new implications of the researcher, it is time to talk about the third piece of this puzzle. This last item is the concern of the research; it answers the question about what we are looking for throughout the cases and also operates as a production of the researcher to create the links that bring the cases. As can be deduced from the title of this project, the emotional issues of the professionals described through the study of three cases are the main focus of interest. The literature with reference to case study states the importance of making a clear differentiation between the object of study and the definition of the cases borders (Denscombe 2003, Stake 2006); hence it is an essential point to cover in the next pages.

According to the main concerns of the ontological and epistemological trends prevalent in this research project, this research applies case study as an approach to researching the emotional issues in SNE professionals through the study of “a document of life”-diary- (Bulmer 1983), complemented with other quantitative methods-interviews and observations-. A better understanding of their experience requires a direct contact with the phenomenon of study (Lincoln & Guba 1985), a direct contact with the field entering in the situation of interest to make “collective sociological sense” (Clarke 2005, p 110). In other words, to be an active spectator to savor what is happening first hand.

We should not forget that case study is one of the most common ways to do qualitative inquiry; a large body of literature referred to the topic can be found (Creswell 1998). A striking fact is that every outstanding handbook specialized in qualitative studies allocates a part reserved to talk about case studies (see for example Abel & Lederman 2006, Somekh & Lewin 2005, Denzin & Lincoln 2005, Silverman 2005, Glesne 2006). Nevertheless, a review of the bibliography about case studies can lead us to confusion when it comes to be cataloged. In the next point is discussed the
problematic of a short definition of case study and how it can be understood in a more open form.

**Case study: method, approach or strategy**

Rather than try to elucidate a restricted definition of what case study is, it can be understood through this explanation:

> *In general, case studies are the preferred strategy when “how” or “why” questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context.* (Yin 1989:13)

This quote comes from one of the key authors with reference to case study research. It is useful to represent an open definition that avoids hermetic methodological choices and the perception of a hierarchical strategy that identifies methods with research moments (Yin 1989: 15). It is also understood as a support for methodological pluralism as opposed to the methodological exclusivism. (Roth 1987). For this reason the first point to clarify is how this “method” fits into this research, whether it is seen as a method or approach. As Hamel, Dufour and Fortin point out, case study must be recognised as an approach because it employs various methods reconstructing and analysing a case from a sociological perspective (1993: 1).

Methodology is linked with the philosophy or system of thoughts prevalent in a research. A groundless incoherence between these two aspects supposes problems with the consistency or credibility of the research. This particular research is carried out from a qualitative standpoint in which the consistency between methodology and the theoretical framework- prevalent philosophy- is supported through the analysis of the relation between systems of representations, power relations and breaks in the unity, in order that the continuous fractures are accepted as a sign of consistency.¹

¹ Consistency is a term used traditionally in Aristotelian logic to demonstrate a relation of true under some interpretation between two or more statements (Jevons 1870). Even thought the term initially was related with semantic, nowadays it is also associated with the field of Mathematics in the form of statistics and hence with quantitative research. A study of this connection between logic and mathematic can be found in the work of H. D. Ebbinghaus, J. Flum and W. Thomas (1994). The use of the term in the text is an attempt to expand its meaning and uses.
To sum up this discussion, dealing with case study as an approach is a more consistent term according to the qualitative poststructuralist idea present in this project. In short we are talking about a deconstruction of what we know as case study method for the construction of a case study approach. As a consequence an opening, expansion and complexification of what is known as case study research will be expected. In other words, it is an expansion of meaning in the way that Derrida expose in the lines below.

_Every time you try to stabilize the meaning of a thing, to fix it in its
missionary position, the thing itself, if there is anything at all to it,
slip away._ (1997: 31)

It means an expanding of the term “method” into a more permeable term such as “approach”, which although it is a mode of encapsulating a thing into words, it is a more spacious form to do it once the possibility of keep an ideal meaning in a closet space such a term is abandoned.

Following those explanations, the choice of a case study approach is understood assuming a relation between the different aspects present in the research, giving to the study an unique personal character (Denscombe 2003: 30). What is more, Stake stresses importance in seeing the choice of case study as a choice of what is to be studied rather than a methodological choice. Thus the importance falls on the case, instead on the method. It opens the research to different methodological process.

_We could study it analytically or holistically, entirely by repeated
measures or hermeneutically, organically or culturally, and by mixed
methods- but we concentrate at least, for the time being on the case._
(Stake 2003: 134)

However, an opposition to the idea of case studies as an approach is also defended by other authors. One of them is Andrew Bennett, who is in agreement with the proposal of case study as a research design rather than an approach to the collection or analysis of data (Bennet 2001).

Basically both trends are talking about the same thing although with different appearances. Both pretend to undo the idea of a restricted number of methods whether to collect or to interpret data. What became clear at this point is the fact, that for this
research, the philosophical basis supports the idea of diversity in a wide sense, whether we call it case study approach or case study method.

Case study research is not thus limited to the use of classical data collection techniques and their consequent forms of analysis. In this research, data collection is carried out through diaries, interviews and observations in a form that all of them are overlap, are complementary and open to different interactions with other ways of perceiving the reality. At the same time the data analysis through discourse analysis supposes a continuous return to the subjects of study and also a glance through what is constructing their selves. It is for this reason that calling it an approach confers a better sense because it relates to a more opener process, rather than to a method which is a reminder of a close definition associated with the validation of rules, close to a modern scientific model that does not fit into a renewed idea about social sciences.

**Why Case study?**

The arguments to answer this question have been partially responded in the preceding lines. In brief, the main reason is because case study is not limited to be methodological tool where the instruments are predetermined since it is open to the use of different ways of research. What is limited in this approach is the object of study that is something different to the aim of study. This possibility of combining different methods is one of the arguments for the choice of case study for this research.

Next point discusses different aspects of the unit called “case”. Nevertheless, this research is composed for more than one case so diverse questions have to be clarified with regard to the selection, limits and connections between cases.

**The researcher decisions: Points of pressure, influences and considerations.**

Traditionally choosing a case was a way to restrict the study of a topic. Before choosing the unity of analysis it is necessary to clarify the questions through a literature review since they will provide the researcher with important clues about the strategy to be used (Yin, 1989). If we ignore this point we would be misunderstanding the concept of case study as an approach driven by the focus of study. Unfortunately, within research practice, this happens more often than is desirable.

A piece of research is a complex process exposed to many social factors that on some occasions can force and manipulate the use of some methods. During the development
of a research we are playing with the construction of knowledge as truth and like Foucault argues, we can find the presence of mechanisms of power influencing these outcomes. Institutions, funds, policies etc. are some of these influences. In addition Foucault also says that where influences of power are present also exist ways of resistance that can serve as a way to manipulate this production and therefore the methodological choices (Foucault 1984).

It means that in the part of the research process in where questions and methods are determined, the researcher should bear in mind the idea exposed in the previous paragraph without forgetting that this matter will be present during all the research. Before talking about the questions on my research project it is necessary to consider some concerns. The first one is the reason for this research, it is a research project carried out to obtain the grade of Doctor in Education from the institute of “Education and Social Research” within the Manchester Metropolitan University.

Therefore, the first element of pressure comes from a higher education institution where the qualitative research issues have more weight than quantitative. Actually, institutions are embedded in an intricate social apparatus not easy to analyze (Foucault; 1991).

The second pressure point talks about the funding of the research that also comes from the University, thus this institution is present in a second stance. Moreover funds are also associated with financial resources. This is an important issue in research that can condition some aspects. For example, financial resources can be used to encourage people to participate in a piece of research or can make possible the displacement to another place to observe an interesting case. In addition, financial factors can also make an effect on the life of the researcher when it forms part of his/her stipend. In what concerns to this research, we might say that the resources are sufficient to guaranty the standards of freedom necessary.

The third point focuses on the researcher as a subject morally and ethically constructed who is immerse in a world of discourses that shape her/himself into an undefined direction. We should take into consideration the importance of the Discourses because “worlds the world” (Lather, 1993: 675). The researcher must consider these personal aspects because although he/she tries to ignore or cover them up, they will be always present in the research. They are part of the process since the first moment, even later, at the termination of the project. Following the mention of Foucault an exhaustive
analysis and my efforts trying to explain my position as a researcher can be found through the pages of this work

*A subject could not have access to the truth if he did not first operate upon himself a certain work which would make him susceptible to knowing the truth—a work of purification, conversion of the soul by contemplation of the soul itself.* (Foucault, 1984: 371)

We can always find an extension of the analysis of oneself position through the work of Judith Butler who makes an attempt to study the links between the identity and the social and moral norms. The acceptance of the limits of our responsibility supposes the acceptance of the ethical legacy from others, therefore, the recognition of our connections with other positions as a “*predicament of the human community*” (2005:83). In other words, the researcher as a subject is not an isolated island; it is more a peninsula since we always can find connections with other lands.

Finally, the fourth point is concerning the importance of see the writing not only as a way to communicate the thoughts, rather than, they should be seen as tied to knowledge systems.

*Writing is also a way of knowing, a method of discovery and analysis* (Richardson & St. Pierre, 2005).

Writing is seen as a hidden method that all the time is present but rarely appreciated. Actually speech is privileged over writing because it is seen as more immediate than writing. Derrida denounces this binary opposition and how it is supported on the basis of the presence/absence of meaning giving to the speech a position closer to the truth. (Derrida 1976; Schrift 1995). This point will be of special interest at the moment of writing the final report that act as a conclusion of the research. Nevertheless writing as a way of knowing is present during all the research in the form of research diary, also known as log books, journals, field notes or lab books. The use of this type of “external memories” lets the researcher make the possibility of a multiple reappropriation of his/her own knowledge that could otherwise be lost. (Altricher & Holly 2005). Language is not transparent, is not neutral and is not just a vehicle of knowledge so must be treat as something to be aware and necessarily criticized. We were advised of this by Nietzsche, Saussure, Levinas, Heidegger and many others philosophers considered precursors of a new way of thought. Is in this line of thinking in which this
research is sustained, subsequently matters as writing, speak and language are taken into consideration even what is not written or say in view of the “problematic of silence”. (Mazzei 2007)

Generally a form of concern for these issues is present, unconscious when the main language used for the research is not the mother tongue, given that this circumstance forces him/her to think more about the use of the language, this is my case.

**Formulating the Research Question**

Once the previous ideas are clarified we are in a position to engage in the formulation of the research questions, considering the issues explained previously. The query of this research is to draw a picture of the emotional involvement of professionals of education working with special needs students. Questions presented in this research are formulated in the form of how rather than what. This is because the interest is centered in knowing the process of the emotions involved rather than a fixed explanation or classification that would be obtained through a statement based in a what clause. When researchers have these type of questions - How or Why-, case study is recommended because such questions

> deal with operational links needing to be traced over time, rather than mere frequencies or incidence (Yin 1989).

Furthermore, interests in how clause is characteristic of a point of view which demand a line of research open to the variations, in that line qualitative research can provide a more significant picture than quantitative research (Marshall & Rossman 2006). Modern quantitative methods can take a case study approach but if we compare it with the possibilities of case study in a type of postmodern qualitative research the potential is wider in the second one. The reason for this rejection of the quantitative methodology is the consequence of the restriction that supposes when it is into play. In addition, the philosophical trends supported by this research are incompatible with the mode of perceptions offered by this paradigm. A more critical approach means a break with the precedent ideas of uniformity and homogeneity, therefore is necessary to shift to a model focused on the understanding of the fragmentation where the modern homogeneity and uniformity are seen as manipulated conceptions. Is In that manner of diversity where the questions of how can fit more comfortable in the research.
Issues concerned with the research and the researcher are analyzed and questions formulated. Thus the next step is to choose the preferred methodology. Taking into consideration the explained before, a case study approach is excellent options given that exist coherent exist between the different aspects that encompass the research and the case study as a decision. Chose the case is a critical point that will condition the whole research (Hammel 1993; Yin 1989)

**What is my case?**

In view of the fact that a decision has been made to carry out a case study research, the next step is to specify what a case is or better than this “what is my case a case of?” (Ragin & Becker 1992). One of the ideas of this way of formulating the question is to avoid confusions between what we are going to consider case and the phenomenon to be researched also called “quintain” (Stake 2006). It is a way of setting the frontiers between both pieces.

The main question formulated for this research contains at the same time a mention of the phenomenon to be researched and the space where it takes place. Hence, on the one hand we have the objective of the research that is to describe the phenomenon of the emotional involvment of the professional working with Special Needs. As is mentioned previously, other factors apparently external to the research also interfere; in fact they are also part of the research. A parallel objective is to obtain the approval of a committee of evaluation to obtain the degree of Doctor. The research should satisfy a specialist audience thus this idea might come into conflict at some stages of the research. However a solution for this divergence consists of considering that the achievement of the objectives of the research will have as a consequence the approval of the committee. In other words, if we solve the first objective following the research standards provided by the literature, it will produce a successful outcome to the second objective.

On the other hand, the indications to locate cases also appear specifically in the research question- education professionals working with special needs-. At this point is required a type of deductive process to move from the general- professionals- to a specific proposition- case or cases. Cases are specific ones working as integrated systems rather than generalities (Stake 2003), consequently it is necessary to decide between the accessible cases that we have to fulfill the requirements’ of the research. In
other words, we may consider which cases are more appropriate and also the number of cases we are going to need from the assortments of cases that we are considering. Case study is not a sampling research and the focal point is to understand each case individually as an opportunity to learn (Stake 1995: 4).

The case is established by bottling an empirical context that permits the researcher to analyze the phenomenon of interest without getting lost in the complexity of the object examined. At that point we should bear in mind again the subjectivity and the theoretical framework followed by the project to determine what are interesting as cases. We must move from the general, where boundaries are especially blurred and difficult to set, to a fixed particular position in where the limits are negotiated. This process is a production made by the researcher as a subject capable of modifying and giving meaning to the objects and events, moreover this process is not outside of power influence. (Foucault 1984). Therefore the case is a theoretical construct serving to the interest of the investigator. Its selection is because according to the researcher values it is a representation of the phenomenon of study (Stake 2006:23). In general this research is represented by a shift from the whole social world to the education professionals working with special needs students. In the diagram below is described for this research the reductionist line covered from general to particular.

The return from the particular to the general -Generalization- is going to be discussed later seen as a focal point to take into consideration within case study approach.

The main criteria’s for selecting cases are exposed by Stake (2006) bellow
- Is the case relevant to the quintain?
- Does the case provide diversity across context?
- Does the case provide good opportunities to learn about complexity and context?

Whether a case is interesting for this research or not, can be decided according to what was exposed before. Additionally once we are working with a case it is frequent to evaluate the cases through triangulation, as a process of gaining assurances, and credibility at the same time as test the data sources (Denzin 1984, Stake 2003: 147, Stake 2005) This process is completed with member checking to contrast perceptions of the phenomena with the participants (St Pierre 1999).

An interesting case is the one where maximum cooperation is guaranteed from the participant –professional- and from his/her context being of special interest the space of work; school, college etc. By context is mean information about his/her background, culture, relations etc. Motivation is a factor that facilitates the relation between researcher, subject and research so it also must be considered.

Many authors attempt to identify and classify the type of case study according to different factors like purpose, interest and criteria (Lincoln & Guba 1985, Ragin 1992 others…). However the diversity of classifications warns us about the risk of classifying our cases; although, on the other hand, it can be useful to obtain a better understanding of the characteristics of our cases. It makes possible to find other similar studies in the literacy that can enrich our experience. With that regard Stake offers a classification of three types of case study and a list of exemplifying studies according to each type (Stake 136: 2003). Analyses of other studies contribute to the improvement of the design and development of the research. A key reference study relating to this research is the one carried out by Zembylas in which the author engaged in case study approach through a postructuralist mode to identify aspects of teacher emotions that need further exploration (Zembylas 2005).

Another important factor at the time of choosing the cases and the number of them is the well known “principle of convenience sample” in our case the principle of convenience case. Nevertheless we should be aware that this principle is originally from quantitative research used on sampling. Moreover we should remember that one of the most important characteristics of the cases must be its significance.

The principle suggests that the relation between spend of research resources-financial, temporal etc- and the contribution to the research, must be inversely proportional. The best case according to this principle will be the one that requires few resources and provide with considerable valuable information about the quintain or the
one that in which both points are well balanced. In addition it also is an important factor to determine the number of cases to be studied although it is not the only one to decide if we are going to carry out more than one case study.

This research is a “multiple case study analysis” in where “the single case is of interest because it belongs to a particular collection of cases” and the selection of cases has been done as a representation of the phenomena (Stake 2006). It is a project of three years duration with three independent cases to study the same phenomena in different contexts. The contexts change but the common meaning stay in the quintain (Stake 2006: 23) and the researcher who should be able to integrate a holistic comprehension of every case. The number of cases to be carried out is determined by the resources and the possibility to obtain a significant picture about the phenomena, considering that all the research effort is carried out by only one person with the supervision of a supervisory team of the university. As a consequence the work covered is limited to the work performed by a novel researcher. According to the literature, the work with three cases fits in with the resources of this research and has the potential to obtain worthy conclusions. One of these examples is the study made by Lisa Smulyan with three principals (Smulyan 2000).

Conversely Schrank warns of the risk of work with a small amount of cases recommending maximizing leverage by increasing the number of cases to be studied (King, Keohane, & Verba in Schrank 2006: 22) what is more, Stake recommends restrict multicase study to a minimum of four and a maximum of ten, although he accepts case studies with fewer than four or more than ten when arguments are sufficient justified (2006: 22). The arguments for working with three cases in this project are based in the literature, given that good studies with this number of cases exist.

Generalisation?

One of the striking points of case study approach concerns to the generalization of conclusions obtained through the study. The discussion about generalization from the single or group of cases is an epistemological option that must be in agreement with the theoretical framework sustained by the researcher during the entire study. Whereas in traditional research generalization is possible because regularities in the social world exist, in a more contemporary epistemology it is a more arguable issue (Donmoyer
This research relies primarily on understanding the human action through the analysis of data with concern to narrative-quantitative methods- in new ways, hence it can be considered a qualitative research (Denzin & Lincoln 2005). The focus is to understand the emotional involvement of the professionals involved in the research. The interest is in drawing a picture of their emotional world not to understand the whole emotional world of all the professionals working in the same field. An understanding of their three pictures is useful to find relations between their worlds. Opening the cases to the experiences of the other cases are ways of appreciating their fragmentary relationship. Therefore generalization is not important since it is seen as not possible and what we are looking for through the study is not for general laws or universal meanings, but to obtain a sense of understanding of representations.

If we look for an understanding of human social phenomena that does not permit the formulation of laws and predictions-“impossibility arguments”- therefore we are doing another form of social sciences claiming for a new way of research (Roth 1987: 130).

In a more radical form, the search for generalizations based on the idea of universalisation of social phenomena can be seen as:

> Something violent and extraneous and has no substantial reality for human beings (Adorno 2001: 19).

Conclusions

This paper exposes the main issues of the use of case study in an open form as an approach. It permits the combination of different methods of research such as diaries, interview and observations to investigate the quintain- how the emotional involvement of a specific group of educators is-. There is as well explained, how the research question determines the characteristics of the cases and how the number is chosen according to the literature and the resources available. To conclude the article, the generalization of the research is rejected because, on the one hand it is incompatible with the philosophical tendency sustained by the research, and on the other hand because the interest is in the difference and variable rather than the static.

Finally, I would like to open a debate for future methodological considerations that enlighten a distinction or unification between case study and ethnography.
REFERENCES


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