Employing Case Study Methodology in Special Educational Settings

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Abstract

In general, case studies are a 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, 2009). This article will examine the advantages and disadvantages of employing case study methodology in special educational settings. The appropriateness of a case study design will be evaluated when designing a study regarding special education programming.

Employing Case Study Methodology in Special Educational Settings

According to Creswell (2007), a case study is an “in-depth exploration of an actual case.” Additionally, case studies allow for observation of the day-to-day activities that provide the data need to explain the phenomena under study. Case studies also allow for identification of common themes in the daily activities, interactions, feelings and beliefs of the group being studied (Creswell, 2007).

Case studies provide an important perspective when trying to decipher human conditions, especially in school settings where respondents may not be willing or able to actively participate in the research (Popil, 2011). Case studies by design should measure true and natural results and not be disruptive to the environment researchers are exploring, both of which are intricate challenges when designing a case study. This paper will explore the history of case studies, the advantages, and disadvantages of employing case study methodology in special educational settings, as well as the human component involved when a researcher interprets it findings. Case studies are valuable tools in understanding the human condition. They are a notably, less definitive yet essential approach to understanding how our educational system both meets and fail the needs of special education students. A case study is a reliable way of conducting research in an education setting especially in special education. It has been used effectively acknowledging and assessing the needs of students in education. A case study is the best methodology when holistic, in-depth research is needed. It is an exhaustive study of a group, a level of human condition, an occurrence, or a community (Popil, 2011).

The French mostly used first used case study as a research methodology in Europe (Amy et al., 2008). In the United States, case studies were associated with the University of Chicago’s department of Sociology from early 1900's to 1935 (Amy et al., 2008). The Chicago school was the best in the field of case studies because it had a great deal of literature and opportunity for new observation as it was the period of immigration (Amy et al., 2008). Professors and scholars there studied the various aspects of immigration such as unemployment, education, poverty, and other conditions related to immigration (Amy et al., 2008). Scholars there acknowledged that a
case study is conducted by considering totality in observation, restoration, and analysis of the cases under study. A case study is conducted in a way that integrates the views of the interviewer in the case under study (Amy et al., 2008).

The field of sociology is mainly related with case study research. During the 1900s, researchers raised concerns about the research process, in doing so, refined its process to be more scientific (Amy et al., 2008). Given that the Chicago School was best known for case study methodology, there were harsh attacks on their dominance (Amy et al., 2008). This led to the defamation of case studies as a methodology. Professors at Columbia University raised differences of opinion, and campaigned for their own scientific techniques (Amy et al., 2008). They “won” their campaign that contributed to the decline in research using pre-existing case study methodologies (Amy et al., 2008).

As the use of quantitative techniques became highly developed, the decline of the case study accelerated. Conversely, researchers were becoming apprehensive about the restrictions of quantitative techniques. For this reason, there was an improved significance in case study methodologies. Researchers developed new concepts and improved case study techniques (Amy et al., 2008). However, case study methodologies faced a recurrent disapproval by relying on a unit case that was often times unable to provide a simplified conclusion. That is, case studies generally lack an adequate quantity of consistent cases. Therefore, researchers learned that the objectives of the study should set up the factor, and they should be functional to all research. In that, a unit case is regarded as long as objectives and goals are developed (Bergen et al., 2008).

One useful tool in instances in case study is triangulation, which is the process of ensuring that a researcher carries out a study with accuracy and justifications. Triangulation can transpire with data, researchers, theories, and even methodologies. It can be a data source where the researcher collects information that remains the same in various circumstances. There are multiple ways to hone in and study a particular question. One way is investigator triangulation. This method is used when various researchers study the same subject. Theory triangulation is another method which researchers with varying opinions deduce the same outcome. Methodological triangulation uses different methods to increase strength in the analysis of the study (Karten, 2010).

Case study methodologies have been comprehensively used, predominantly in educational settings and in evaluative conditions such as efficiency of special education initiatives. One major disadvantage to case study in special education is in both areas of research, quantitative techniques have a tendency to obscure useful information that the researchers are required to reveal (McIntosh et al., 2013).

Unit or multiple-case designs are two ways case studies are conducted. Multiple designs follow a reproduction rather than sampling logic. However, in studies where no other cases are obtainable for duplication, the researcher is restricted to a unit case plan. Yin (2009) urges that an overview of outcome, from either a unit or multiple designs, “is made to theory and not to populations.” Multiple cases reinforce the consequences by duplicating the pattern, hence increasing assurance in the strength of the theory (McIntosh et al., 2013).
Educators want suitable and consequential methods to capture time-framed assessments of students or aggregates. This method may be interpreted as a single unit or combined features. Of great importance is that the research has to be responsible to provide evidence and facts that can be easily understood by the readers, (Bergen et al., 2008). Many educational institutions have appreciated the reliability of case studies as they provide proof and illustration with which many educators can easily identify (Bergen et al., 2008).

**Case Selection**

The researcher often uses information oriented sampling when choosing a case for the study because the sampling does not have enough information to emerge with viable outcomes (Bergen et al., 2008).

**Requirements for Case Studies**

There is one essential prerequisite that the researcher has to possess when reporting case studies; that is, the obligation and commitment for the researcher to conduct the case study in a way that the outcome can be understood by the reader. However, various repercussions come with such responsibilities. Foremost, the reader must be capable of establishing the nature of the problem, question, or argument, and method of obtaining a conclusion. Next, the reader must also be proficient enough to determine the factual nature of the case and how the case study was developed. The proof must be credible, and, when presenting the case study, the researcher must avoid using opinion (Bergen et al., 2008).

**Types of Case Study Methodologies**

Three types of case studies are as follows: descriptive, exploratory, and explanatory

*Descriptive Case Study*

Detailing the research is the beginning of the actual research. This method is most suitable in the study of special education because it lists who or what particular aspects of special education that will be researched. Foremost one has to form premise of the association between the causes and effects (Bergen et al., 2008).

*Exploratory Case Study*

An exploratory case study involves the collection of data before the definition of research questions and hypothesis. It is suitable for social research. Pilot studies are very important in determining the ultimate procedure that will be used in these cases. Assessment questions are based on the results of the pilot study. In this type of case study, selecting cases is hard and the choice presents the chance to exploit what can be learned. For this reason, the cases that are chosen should be simple and agreeable issues (Mott, 2009).

*Explanatory Case Study*

An explanatory case study is most appropriate for doing casual studies that involves the use of pattern techniques such as the multiple cases. This type of study relies on theories such as knowledge-driven, problem solving and social-interaction (McIntosh et al., 2013). Knowledge-driven theory is involves the ideas and facts that are discovered from the research to become commercial products. Problem-solving theory tracks the same the trial but the only difference is
that they originate from an external source. The social-interaction theory asserts that researchers and consumers belong to the same professional networks and are in common communication (Mott, 2009).

**Uses of Case Study Methodology**

Case study methodologies have widely been used in special education. Case studies have been applied to widen critical and creative thinking. This has been mainly helpful to students by expanding their knowledge and perspective, and helpful to teachers to provide a general line of expectations, guidelines, and a “norm” for their particular set of circumstances (Mott, 2009).

To elucidate complex links in real-life interventions, as for instance in special education, the research is able to determine causes and effects in special education. This provides a baseline springboard for educators, school administrators, and researchers to formulate effective programming for special needs pupils. It also allows opportunity to implement changes to ensure that facilities in special education programming are adequate and sufficient (Alberto et al., 2008).

**Designing Case Studies**

**Study's Questions**

Study’s questions are mainly the "how and why" questions. Therefore, the first thing the researcher has to consider is defining them. The use of these questions causes the research to be explanatory. For instance, in these cases: (a) why are disabled students secluded in special schools? (b) How can the facilities in special schools improve to ensure their quick recovery? and, (c) what are the benefits of integrating special students with mainstream students?

**Propositions of the Study (Objectives)**

The study propositions are useful since they help define the study objectives and goals. The propositions are drawn from "how and why" questions. For example, in the area of special education, students with disabilities should integrate with mainstream students to help them learn and improve social interactions. Since they interact with general education students on a daily basis, this increases their confidence and helps them continue their formation of social relationships (Alberto et al., 2008).

**Conduct the Case Study**

Conducting research involves data collecting, distributing questionnaires, and conducting the interview.

**Data Collecting**

Data collection generally involves how data should to be gathered and the tools and techniques for collecting the data. Certification, archival reports, opinion polls, direct examination, participant observation, as well as physical artifacts are techniques used in the data collecting process (Alberto et al., 2008).

**Distribute Questionnaire**

Distributing questionnaires involves considering the people that would be involved in the special education program. They include teachers, parents, and students. Child study team members and special education administrators may also be included because they are the group that is directly
concerned with special education (Friend et al., 2012). These people may all offer viable information that could possibly be useful in the study (Alberto et al., 2008).

**Conduct Interviews**
Conducting interviews is how the researcher is going to carry out the interviews. The interviewer has to schedule a time to ask questions during working hours when teachers are at school and can function with minimal outside interference. The researcher has to consider how many interviews she is doing when constructing the case study (Mott, 2009).

**Design the Case Study Protocol**
Case study protocols are developed by the researcher. The development of case study procedures requires the researcher to determine the required skills and review the procedures. As far as identifying the skills, the researcher has to be capable of asking questions, interpreting the responses, and be attentive and in charge. For example, researchers in special education must be well conversant within the subject matter and be unbiased by predetermined notions (Mott, 2009).

**Case Study Questions**
Case study questions are the questions that the researcher will use as he or she collects information from various stakeholders. It is important that they remain consistent and do not contain any biased undertones. The order in which the questions are presented can also be important, as they should follow some semblance of order or logic (Mott, 2009).

**Qualities of a Case Study**
All researchers, in spite of their beliefs about case study completion, must disclose the steps they followed so that others can identify the qualities of the fulfilled work. In order for these to happen, the reader has to be certain that case studies have value, and he or she needs to be capable of identifying the relationship between case and proof. Using the best practice strategy should help the reader define these purposes (Farrell et al., 2009).

**Advantages and Disadvantages of Using Case Studies**
Case studies rely on participant-observer interactions and techniques. They are mainly expressive assessments, usually used in large schools and universities. The researcher uses available documents, holds informal and formal interviews with participants, observes enduring activities, and develops a study of both individual and group findings (Farrell, 2010).

In the theoretical study, case studies of the expertise of participants from different schools could be carried out. Selection of participants could be based upon types of students in school grouped together by a common factor (i.e., age, gender, or disability), experience, and training of teachers, or differences in institutional environment/supports (Gargiulo et al., 2010). Case studies can offer connecting, factual discovery of a project or its uses as it develops in a real-world setting. Researchers must be sensitive of these factors, as case studies are a difficult task that cannot be done through irregular brief site visits (Wnek et al., 2009). A Case study is an important method of research, with unique characteristics that make it best to answer questions for which there are no laboratory-controlled variables.
Direct Observations
An observational method is where an individual or individuals collect immediate data on the program or behaviors under study. They provide a researcher with a chance to gather data on a wide range program or behaviors and to investigate the assessment topic. By observing openly, the researcher can widen a holistic opinion, that is a thoughtful perspective regarding how the project will function. Observational techniques also allow the researcher to learn about facts the participants may not know (Gargiulo et al., 2010). Observations are important both in the formative and cumulative phases of research. Observation in the special education setting can be used to determine the extent to which participants understand the true concept of individualize special education which could provide important insights (McIntosh et al., 2013).

The Role of the Observer
There are several ways of collecting observational data depending on the type of the research. The most primary distinction between various observational approaches is the degree to which the observer will be a participant. The participant observer is entirely occupied in experiencing the project setting while at the same time understanding the setting through personal understanding, relations, and negotiations with other participants (Bergen et al., 2008).

Recording Observational Data
To carry out observation data the research means to follow a set of procedures and instructions. The observer goal is to obtain accurate information. Observations are normally guided by procedures that can take a variety of forms. The use of procedures guarantees that what the observer is doing is relevant. For instance, an observational approach is selected to collect data on special education, the process used would clearly guide the observer to scrutinize the participants’ activities, duties of trainers, and materials provided and used (Bergen et al., 2008).

Advantages
Using a case study in special education research offers advantages. One advantage is that case studies provide open data about the behaviors of individuals and groups under study. It allows the research to enter into and understand the framework or condition of the area of study and the participants. It also provides a chance for identifying unexpected results that can be studied even further. Most of all, it is unstructured, and in a flexible setting, making for a unique and somewhat unpredictable experience each time, unlike the results of repeated testing in a controlled laboratory setting (Bergen et al., 2008).

Disadvantages
There are disadvantages when utilizing case studies in special education research. One disadvantage is its use of labor. Observation is expensive and time consuming as the observer has to spend many hours preparing and observing for each case and keenly take notes on all of the important events. Each case study presents a different set of variables so it is an ever-changing task of creating a new format and constantly re-locating the researcher.

Case study observation requires well-qualified, highly trained observers who can perform the duties with accuracy and objectivity. Human interpretation can be subjective and may not create an accurate baseline for the participants. Additionally, unlike lab work where science can be
measured by objective machinery, when a researcher has a bad day or clashes with the personalities of others, it may indirectly effect the results of the study (McIntosh et al., 2013).

Discriminatory perception by the observer may lead to changes in data because observers are selected as per their experience and often not screened for background indicators that would make them biased data collectors. Since the principal researcher has no control over the situation, the outcome might not be true. The behaviors or set of behaviors they observe may be different; making it difficult for the researcher to come up with viable results and therefore, may provide inaccurate conclusions (McIntosh et al., 2013).

Next, is the disadvantage of observing children who are ever-changing and sensitive people. Oftentimes, people modify their behaviors once they realize they are being observed, especially when they know their behaviors are being scrutinized (McIntosh et al., 2013).

**Interviews**

Interviews allow the researcher and his or her team to gather the perspective of project participants. There are various forms of interviews; open ended, focused, and structured. In open-ended interviews, the interviewer asks about the common events and can suggest solutions or provide insights into measures. However, the research should avoid dependence on one interviewer but rather seek information from as many people as possible to verify its accuracy (Yin, 2009). In cases where the respondent is to be interviewed a short time this type of interview is used. The focused interview is mainly employed where the respondent is to be interviewed for a short period. The aim here is to verify information gathered from other sources (McIntosh et al., 2013). The structured interview, also known as a survey, is used to collect information from neighborhood studies. The questions that are detailed in general interviews can be used in gathering adequate and sufficient information on special education. For instance, by the responses the researcher is getting, she can deduce whether these schools operate in the best way possible in reaching out to the students with disabilities. She may conclude the program is not adequate, does not meet or barely meets minimum requirements, is structured to look better than it performs, or simply benefits the management and not the students (Yin, 2009).

**Advantages**

Generally, the information gathered is detailed and specific, though the emergence of new or unanticipated events that can be discovered and studied further. Since the interview process allows face-to-face contact with the respondents, the researcher has an opportunity of understanding how her respondents feel about the issues at hand. Interviewing provides a chance to explore topics on a deeper level, which allows the information obtained to be further applied in other associated areas. The researcher is also able to identify whether the respondents understand the questions and in cases where they do not understand, he or she can clarify the question, thereby increasing the accuracy of the answers. Conducting interviews also allows the researcher to be flexible in carrying out the interview to meet a particular individual’s needs (McIntosh et al., 2013).

**Disadvantages**

The disadvantages of such are that they require additional time and funding to carry out interviews. Since the research has to cover travel costs to remote locations to afford the
researcher to observe in the natural environment, it can add expense to the process. It also requires highly qualified and well-trained personnel to carry out interviews. These activities require people who are amiable and personable so they can draw trust and honest responses from their subjects and interviewees (McIntosh et al., 2013). Chances of distorting the information are high because the researcher can easily misinterpret the respondents. When the volume of information is large, there is likely the problem that when reducing the data it will lead to results that get “lost in translation” and thereby produce an insufficient outcome (McIntosh et al., 2013).

**Focus Groups**

Focus groups provide a combination of both interviewing and observation. The focus group session is an interview and not a discussion group (McIntosh et al., 2013). It stresses group dynamics with the aim of gathering data. For instance, in special education, the stakeholders in the educational sector can form focus groups. They can include the local leaders, religious leaders, school administrators, and parents. This group can reveal their opinions about special education and how it is functioning today; express their views on experiences, present conditions, and future options. Focus groups also gives an opportunity for people to intermingle and work from each other’s suggestions, including outside observations such as what people may have seen or observed in media, research, or other school districts that would be a benefit or detriment to their programming (McIntosh et al., 2013).

Focus groups are useful in classifying and defining problems in project implementation and identifying project strengths, weaknesses, and recommendations. It also allows researchers in assisting with understanding of quantitative results, achieving insights of project results and generating new ideas that can be used for further learning (McIntosh et al., 2013).

**Document Studies**

Documents are any written or recorded material not documented for the intention of the assessment. They include letters, memoranda, agendas, administrative documents, or newspaper articles. Documents can be either public or personal. Unrestricted repository is artifacts that have been made and stored for purposes of presenting a report of an occurrence that offers answerability. Public records are also useful when they pertain to the study. For the educational setting, significant internal records can be used to obtain important baseline information such as school operating procedures, students’ transcripts and school records, annual reports, broad or specific results of standardized testing, and budgetary boundaries. They are certainly important in recounting institutional facades such as backdrops as well as the academic performance of learners, in determining and institution’s potency as well as its weaknesses. From these documents, the researcher can understand the school’s resources, mission, and visions (McIntosh et al., 2013). Historical or school documents reveal personal actions and experiences. Life documents can also help fill in the blanks and therefore it is important to consider externally recorded clues such as diaries, portfolios, photographs, artwork, or schedules. Personal records can help the research know her participant and help her formulate questions and challenges to the current norm, as well as help her devise the method(s) in which he or she wants to communicate (Deng et al., 2009).
Advantages
There are several advantages for using documents in a case study research. Documents are locally available to everyone; therefore, acquiring them is not difficult. Documents are not expensive as compared to other sources like questionnaires. They are invaluable for determining the thoughts, ideas, setting, opinion, or historical sequences. Documents also provide a chance for study of tendency over time (Hess et al., 2007).

Disadvantages
Utilizing documents may also provide disadvantages. Some of the documents may be in incomplete or “pencil-whipped” (filled in haphazardly or recklessly by the person recording the data), making it difficult for the researcher to rely on the information as accurate when conducting the study. Documents may not be accurate, forcing the researcher to look for other sources to acquire authenticity. Obtaining the appropriate documentation may be difficult and time consuming (Hess et al., 2007).

Key Informant
The key informant is the person that has a professional knowledge of distinct skill within the issue discussed. The person can also be someone who can capture the fundamental nature of what the respondents say and do. They aid in the evaluation to help the research group comprehend the issues at hand. They can offer knowledge beyond the research team. They are also very functional at assisting with the assessment of curriculum and related educational tools and materials (Cushing et al., 2009). Informants may be inspected or interrogated through focus groups or on an individual basis (Deng et al., 2009). Key informants in the theoretical project can help with developing student assessment questions, and answering formative and comprehensive questionnaires.

Consultative Committee
A consultative committee is a method of collecting information from key informants. The key informant in a special education setting includes teachers, child study members, and parents. Each of these people can supply valid and cruel information to the researcher. Consultative committees can be called together to represent attitudes and ideals of the community they represent (Dettmer et al., 2009).

Advantages
Since Consultative committee members represent the people, they provide information concerning causes, reasons, and best practices from an insider’s point of view. Participant’s advice and feedback increases the reliability of study, which may have residual benefits to solidify the relations among the researchers, respondents and other stakeholders (Popil, 2011).

Disadvantages
It is time consuming selecting and obtaining committed informants. Relationships between researcher and informants may influence the type of data collected. For example, if two teachers or other staff members are not on good terms the informant is likely to give wrong information or hold information back that may lead to an inaccurate outcome. Informants may interpolate own biases and impressions. This may lead to differences among the parties involved leading to conflicts in research, outcome, and use of the final study (Yin, 2009).
**Performance Assessment**

Performance assessment emerges as the most popular technique in case studies because it gives emphasis to the advancement of evaluation tools that includes students in duties that are important. Such duties include critical and creative thinking skills and the harmonization of an expansive range of awareness. These assessments may entail qualitative activities such as interviews, group problem-solving skills, personal ability (poetry, artwork, stories) functional testing. A performance assessment in the theoretical project comprises of test techniques that require teachers to generate unit plans and evaluate students at various stages during training (Popil, 2011). This technique provides unusual prospects for gathering information that may cause some major troubles, For instance, observing a student with special needs can be difficult especially for a person who is not adequately trained in the field (Yin, 2009).

**Conclusion**

Through the study process, triangulation has been viewed as a conduit that warrants precision in substantiating research findings. Statistical data, hypothesis, as well as methodologies, have been established as key impetus that underpin triangulation. In special education for instance, case study is the best method in achieving a detailed research. Consequently, the case study comprises of a variety of functions that should be performed. These primarily incorporate interviews, questionnaire, focus groups, qualitative review, and observation. History shows that case studies have been widely employed in the previous century. The University of Chicago has been touted as the best institution that has widely published and documented social related issues though such methodology. Nevertheless, scattering attacks have been recorded against the case study protocols and results. Quantitative approaches were instead enhanced, as the case study was slowly being rebuffed.

This paper has delved into the viability, practicality, and pros and cons of case study research in the special needs school setting. Some might say that case studies are a valuable tool in evaluating how our educational systems meet or fail the needs of special education population. Others may see the fallibility of such studies and would proceed with caution and careful structure should they be a party to any case study research. Some value the debate that the researcher must unfold the perspective and expound upon how he or she have created validation through the research, and furthermore, how the published study must offer relevance, readability, integrity, and usefulness to its intended audience.

**References**


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**About the Author**

**Dr. Angelise M. Rouse** is an education writer and staunch special education advocate. Her interest focus is on creating a meaningful, lasting and empowering educational experience for students with disabilities. Her research examines the development of opportunities to learn in special education classrooms, and how these opportunities are negotiated differently by various groups of students.

Inspired by her doctoral dissertation topic, Dr. Rouse future research interests are in the overrepresentation of minorities in special education and the emotional development of African American young males. Dr. Rouse holds several educational certifications and has been thoroughly published on critical educational issues. She has worked in several educational arenas serving as a charter and public school teacher, school administrator and college faculty member. Her work ranges from all levels of education from middle school through college.
Dr. Rouse holds a Ph.D. in Special Education Leadership and received a Masters in Organizational Management and Special Education. Her first book, *Especially 4 Me: A Student’s Guide to Understanding the IEP*, was written to help promote self-advocacy for special education students. She is currently working on her next publication which will encourage and motivate young African-American males to succeed and navigate life’s challenges into adulthood.

Dr. Rouse believes everyone has captivating stories to tell and each story is as unique and individual as the strands on our heads. She believes that our personal insight gives substance and credence to our experiences and ideas to bring forth change. It’s time more educators position ourselves to make positive changes to educating all students on new levels.