EDUCATION STUDENTS LEARN ABOUT CASE STUDIES AND ACTION RESEARCH

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Abstract

This study investigates how explicit instruction about case studies and experience in developing case studies impacted graduate students’ understanding and appreciation of this methodology as teachers and as action researchers. Action research is completed by teachers in their settings rather than by researchers. At the beginning of a graduate level education course, students responded to a questionnaire about their knowledge and perceptions of the use of case studies in education. Following their open-ended responses, 40 graduate students participated in instruction on the case study writing process and completed an action research case study. Thirty-three of the students responded to the same post questionnaire.

KEY WORDS: Education Case Study, Action Research

INTRODUCTION

The masters program at the University – Downtown has as its primary purpose training instructional leaders—that is, those teachers who will stay in the classroom rather than move to administration or into research positions. During the fall of 2003, students in this program (who were all classroom teachers) enrolled in a “practicum” course. They examined various classroom-relevant issues and explored different approaches to solving problems that they had experienced or in which they were currently involved. One of the main thrusts during this practicum instruction and in the masters program was action research. A significant amount of time was assigned to in-class reflection. Shon, as cited by Waxman and Walberg [1991], notes that “reflective practices can initiate an intention to change, which appears to be an essential ingredient for improvement of teaching” [p.232].

Action research has been touted as an excellent way for teachers to become more reflective as they engage in resolving dilemmas in their own classroom or school. Action research is completed by teachers in their settings rather than by formal researchers. The advantages of pairing case study research with action research are many. A teacher becomes motivated to engage in research when s/he is exposed to areas of concern or develops personal interest in an area. A teacher may become intensely involved in data collection to gain multiple perspectives on problems to be solved or in increasing his/her professional knowledge. A teacher is often asked to justify decisions with support from the professional literature. In situations where the researcher is also a participant, it is important for the researcher to develop the skill of seeing beyond what s/he is accustomed to seeing [Crabtree & Miller, 1992]. Case studies also demonstrate that there are multiple realities, and that the interpretation of each is important for understanding [Merriam, 1988]. It is for these reasons that case study methodology is included in this masters level practicum course.
The idea of introducing combined case studies and action research was developed in 2001 when this practicum course was created. Largely based on prior research findings [Nath & Cohen, 2002], the course and the use of case studies in the course was refined. As a result, students developed individual case studies rather than collaborative ones. Students engaged in the analysis and evaluation of case studies after they had discussed the content of the studies. In other words, the process and product are defined separately. Other aspects of this course were also strengthened. For example, the collaborative fine-tuning of drafts of the studies was a major aspect of the course. Students were encouraged to select case topics, which could be further developed for their action research final masters projects.

The purpose of this study was to examine changes in students’ thinking as a result of participation in developing, presenting, and the discussing of case studies in a large group setting. These changes (from pre- to post) would provide information so that there could be improvements in the way in which case studies would be used in future practicum courses.

THE STUDY

Forty graduate students in two classes entered a practicum course in the fall of 2003. Each class represented a cohort group in their second semester. At the beginning of the semester, each student was asked to answer the following three open-ended questions (pre-questionnaire): (1) What is a case study? (2) How can a case study be used by people in education? and (3) Why would the case study process be of value to me as a teacher? Students participated in instruction on case study writing throughout the semester. Four weeks into the semester, students were asked to select, and present to their instructor for approval, a topic for a report they were required to write. Case studies were to be presented to and discussed by the entire class to share perspectives, gain ideas, and receive feedback from the course instructor and fellow students. Students were offered opportunities to ask questions and seek direction on their individual case studies throughout the semester. In weeks 11 and 12, students presented a summary of their case studies to the entire class. Webb and Glesene [1992] suggest that when teaching qualitative research, students be invited to bring some part of their data to class so that everyone can help work out a problem. Following the presentation, class members gave feedback, including alternative perspective solutions and any other suggestions to improve the case. The case studies were collected in week 13. Students were again asked to answer the three open-ended questions they answered at the beginning of the course (post-questionnaire).

Researchers found that all seven-to-nine page action research case studies were written about situations of major interest or concern to the writers. The cases were well developed, and many included elements suggested by Naumes and Naumes [1999]. Most case studies were about a particular student with whom the teacher was experiencing difficulties (16 cases) or where the teacher had encountered unresolved questions (22 cases). The participants also researched and wrote case studies on dismissing a destructive teacher, solving administrative problems, and on programs in their schools (particularly in special education). Most case reports included a compelling introduction, questions, exhibits, alternatives, outcomes (if available), and resources.

During the analysis, seven participants were dropped from the study because they had not submitted either pre- or post-responses. Pre-and-post-responses to each of the three questions were subjected to a content analysis by one researcher. Two other researchers reviewed the responses to validate the content analysis categories and create a frequency distribution. A single response could be coded in more than one category. Hence, the total number of responses does not equal the sample size for this study. Additionally, the researchers (authors) reviewed individual student responses to rate the quantity of change in responses from pre-to-post into three categories: No or Minimal Change, Moderate Change, and Substantial Change.

RESULTS

The following three tables present the pre-and-post frequency distribution of student responses, based on content analysis categories derived from an initial review of the answers.
TABLE 1
CONTENT ANALYSIS OF PRE- AND POST RESPONSES TO THE QUESTION “WHAT IS A CASE STUDY?”

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-test Frequency</th>
<th>Post-test Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on individual or problem</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Research method</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Extended period of time</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Specific focus (goal, plan, hypothesis)</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Only observation mentioned as data collection method</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Experimentation/Intervention</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>In-depth</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Planful/systematic</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Theory validation</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Variety of methods of data collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(wealth of information)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Focuses on real life</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Decision-making for solutions to everyday problems</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Problem-solving tool</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Natural or specific context (ethnographic)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Documentation/Transcription</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Generalization to other cases</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Conducted by outside researcher</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Conducted by teacher-researcher</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Program improvement tool</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Learning tool</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Involves critical thinking</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Funded by special interest groups</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Limited generalizability</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Formulation of problem linked to past/future research</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Discussion tool</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Captures the complexity of a situation/problem</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Factual content</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Focuses on an ethical/moral dilemma</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

The following sample remarks came from the pre-questionnaire, in answer to “What is a case study?”

- In a case study you investigate the causes of a problem and find solutions to eliminate or fix what is wrong.
- In a case study you study a person or group over time to watch for certain things or situations. Records and journals are kept as findings.
- A case study involves one child or a group of children and investigates factors that influence learning. These factors may include: the teacher, teaching style, learning style, availability of resource, home life.
- A case study is ethnographic, involves observation, transcription, analysis, and interpretation.
- A case study can help you attain information with “real” answers.
- A case study looks into a certain aspect of the life of an individual or individuals. The observer follows the daily lives of the observed, looking for specific findings associated with a problem.
- You choose a topic you are interested in and you research the topic.
- A case study is a process by which given subjects are monitored for targeted behaviors over a period of time.
• A case study is an experiment whose subjects may be a student or a group of people. The results are intended to be used for the benefit of the subject or the society.
• A case study is in-depth research done on a particular subject. Often case studies are funded by special interest groups and research is done over an extended period of time and scenarios.
• In a case study a group is observed for a particular reason. The subjects may be manipulated to see how change occurs. A case study is done over time.

The same question (What is a case study?) was asked in the post questionnaire. The following responses are representative of these answers.

• A case study is a real-life situation that is analyzed, and potential problem-solving responses may result.
• A case study is an in-depth focus on a problem. It involves analyzing the problem to know all possible criteria. You prove what caused the problem, discuss possible solutions, and make recommendations.
• A case study is a realistic scenario, which presents a dilemma. It must be authentic and real to capture and compel the reader. It studies and presents a situation in depth—developing real people in real situations. The case study must present the complexities of the situation, the related choices and possibilities, the various concerns of all stakeholders (to some degree), and the ethical dilemma(s) faced by the main players.
• A case study is like a poem. It is an experience reflected on when one is in a safer place. It is a close observation and reflection upon a problem; an attempt to see it from all sides and every angle.

| TABLE 2 |
| CONTENT ANALYSIS OF PRE-AND-POST-RESPONSES TO THE QUESTION “HOW CAN A CASE STUDY BE USED BY PEOPLE IN EDUCATION?” |
| Category | Pre-test Frequency | Post-test Frequency |
| Focus on a single problem or subject | 12 | 8 |
| Critically analyze a situation/problem | 10 | 12 |
| Lends a scientific/objective slant to studying a problem (research) | 6 | 10 |
| Decision Making | | |
| Instructional decisions | 7 | 0 |
| Textbook-selection decisions | 1 | 0 |
| Funding, program decisions | 2 | 1 |
| Curriculum modification decisions | 4 | 1 |
| Classroom management/discipline decisions | 2 | 1 |
| Student placement decisions | 1 | 0 |
| More valid decisions | 2 | 2 |
| View decision-making process from beginning to end | 0 | 1 |
| Make decisions about what has worked elsewhere | 2 | 0 |
| General | 4 | 8 |
| Examine processes (e.g., how does something work?) | 4 | 2 |
| Program evaluation | | |
| (includes investigate impact of policies/interventions) | 4 | 0 |
| Learning/Training/communication tool | 4 | 2 |
| General | | |
| By using a variety of approaches to gather information | 1 | 0 |
| Become better educators, | 4 | 7 |
| Serve needs of students | 4 | 8 |
| Variety of perspectives | 3 | 4 |
| Offer information not otherwise available | 3 | 4 |
| Solve problems | | |
The second question asked students, “How can a case study be used by people in education?” The summarized responses below are typical of the pre-questionnaire answers.

- It can be used by people in education to understand why some children have problems or difficulty in learning with certain teaching methods.
- It could be used to support funding in some areas based on the outcome of the case study.
- A case study can be used in education by people who support or oppose a particular trend in the education arena. Case studies have been used in many cases and have shaped procedures in school districts, state, and federal education agencies.
- An example of a case study’s educational use(s) would be to follow a small sampling of student who were taught using the phonics approach and compare them to the general population who learned by the whole language approach. One could then generalize benefits or drawbacks from your control group.
- People in education can use case studies to retrieve information to be used in the classroom. Many teachers like to know how others feel about new products before they use it. Case studies can provide more information than the introduction did. Research is always good to have.
- We can use it to fix problems in our classrooms, schools, and districts.
- A case study is useful for educators because we can all learn from prior experiences, our own or others. I believe one of the best ways to learn is to see and hear from others.

Post-questionnaire responses for Question (2) How can a case study be used by people in education? included:

- People in education can use a case study to further research a topic/subject of interest. It will make them delve more into the subject. This will help them have a better understanding and maybe come up with solutions or assistance for their subjects.
- Creating a case study would help me in devising solutions to my posed problem/situation. Case studies give a real/actual account of how similar educational problems can be solved.
- Case studies can help teachers make more valid decisions. It can also give them resources and more ideas to use as interventions in their classrooms. It also gives teacher documentation on students as they study behavior patterns.
- Case studies are great for educators to really focus intensely on a problem, whether it be in their classroom, their school, their district, or state. The educator can really get a feel for what is going on and take a better look at the entire researched picture—not just the facts right in front of him/her.
- People in education can use case studies to think about problems and solutions to scenarios based on teaching. They can use it as a vehicle to consider philosophical positions and ethical questions weighed out against the realities and absurdities of actual practice.
- They can be used to train new teachers. They give a sense of shared experience as well as providing a wealth of information to novices. They can be used in retrospect to identify where the wrong step may have been taken. If the same situation were to occur in the future, the educator
would have analyzed the previous situation and have answers. Perhaps the process could be internalized.

- We can see what worked for others and what didn’t and avoid pitfalls if possible.
- Case studies reflect on what are and are not the best actions on a particular topic. Educators can see different points of view and use what they learned in their own decision-making.

**TABLE 3**

**CONTENT ANALYSIS OF PRE-AND-POST RESPONSES TO THE QUESTION “WHY WOULD THE CASE STUDY PROCESS BE OF VALUE TO ME AS A TEACHER?”**

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-test Frequency</th>
<th>Post-test Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan and provide instruction better</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Understand students better (personal, be more empathetic)</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Determine effectiveness of my teaching (or other intervention)</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Tool to draw from research</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Make decisions in a more informed way</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Reflect/evaluate my own practices better</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Gain general understanding/information</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Learn from what has been done in the past (be prepared)</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Gives me different perspectives on situations I encounter</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Solve problems better (in their complexity, too)</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Makes me a better teacher (general)</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Discussion tool (for gathering others’ perspective)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Deconstruct failure/success</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Understand myself better</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Gives me more detailed information (specific focus)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Understand causes of student behavior</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Allows me to test intuitive ideas</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Organize/manage classroom better</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Understand the problem-solving process better</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Show proof/documentation to people who have questions</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Prevent problems arising from lack of understanding</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Allows me to test theory</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Create awareness of unintended results of my interventions</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Pre-responses to the third question included:

- I would specifically use it to figure how my kids learn, what motivates them, how I can help them at school, and how their parents can help them at home.
- It really depends on what you are observing. If you are doing a case study on parental involvement, interviewing could be used. Information that is gathered can be used to implement change or could also start an intervention program.
- It is hard to answer this question without examples of what a case study can be focused on. I am sure they would be valuable to change the way I might do certain instruction.
- I think it would help me better understand a question or problem I have. This would also make it possible for me to find a way to better the situation.

The post-responses of the third question (Why would the case study be of value to me as a teacher?) included the following:

- The process of doing the study helped me focus in on my students’ needs. I found myself more attentive and aware of what he was doing. I also developed a better understanding of difficulties students had and to be more compassionate.
• As a teacher, I now know how to better document issues in the classroom and at school. It also allowed me to search out more resources for my classroom. In the end, case studies benefit my students.

• The case study process is valuable because it forces me to recognize how theory, philosophy, and practice must acknowledge real-life circumstances. Great ideas are worthless in real time experience if they cannot be adapted to meet the demands of the real world. This process can also be a tool to help me do just that to consider and reflect on how my ideas and beliefs can be applied in the real world.

• Just the process of doing the case study allowed me the opportunity to learn things I never thought of before.

• The case study process forces us to seriously reflect on the many angles of a situation and to continually evaluate what’s working and what is not. We can explore different theories and try various applications. It can help us see many paradigms and become better problem-solvers.

• The case study process is valuable to me as a teacher because I recognize the importance of examining all sides of an issue, including background. Case studies are a good research exercise.

• In writing my case study, I found research to support my practices in the classroom. I also found research that may be helpful in changing some of my misconceptions about the (2-way immersion) program I studied. I hope to continue this study to find answers to other questions. The time and research I put into preparing my case study will not only help me on this case, but also in future studies. I really got a lot out of this project!

• I can learn from the experiences of other students, analyze my own actions and reflect on my actions and practice to become a teacher. The case study made me see that action is important for change. I am responsible for my students and I can make changes if I am successful in finding better ways.

• The case study process gives me a decision-making framework to help me overcome obstacles I might face during my career in teaching. I would feel more comfortable with a decision I’ve made if I’d gone through the process.

DISCUSSION

Most responders, although not all, demonstrated through their answers to the questions in the pre-questionnaire that they had a fairly good idea of what a case study was. The cohort group had previously taken a course on various types of research. On the pre-questionnaire most students defined case studies in terms of an individual student or a problem. They also considered case studies to be conducted over an extended period of time. From the answers collected at the end of the practicum, it appears that some students changed or refined their definitions. Only on the pre-questionnaire did several students refer to a case study as experimental methodology. Furthermore, the answers to question (1) in the post-questionnaire seemed to be much more focused, due to the students’ experience in writing, presenting, and discussing case studies in the classroom. Specifically, students tended to see case studies as being problem-solving and decision-making tools, when at the beginning of the practicum they did not.

Responses to the second question on case study usage were more varied. In the pre-questionnaire responses some students gave vague and incorrect descriptions of the use of case studies. Most students focused on the idea of problem-solving in some manner. In the vast majority of post-responses, however, the answers focused upon the real-life, problem-solving aspect of case studies. Specifically, students referred to the systematic nature of case study investigations. Further positive change developments items related to their having become more effective teachers. Responses to the third question were more focused a well. This question directly addressed the case study activities during the semester. The post-answers for the third question showed an added depth which might have been the result of intellectual growth. Areas of positive change included being able to see a problem in its complexity and giving the teacher better perspectives on situations that s/he encountered. Positive change was noted also in seeing case studies as reflective practice and as a research tool. The authors believe that some of these changes resulted from the focus on group discussion during the writing process of the study and from following the class presentation of the case studies. Student responses in
this category may have been more directed to the discussion than to the process of developing a case study. Students continued to see the value of the case study process in assisting in problem-solving. In general, students’ views of the nature and the value of case studies changed. As a result the students gained an appreciation for the process of organized problem-solving. The experience allowed them to better understand and address the needs of the members of their own classrooms. In some cases, students found the case study process to be a learning tool.

**IMPLICATIONS**

The purpose of the study was to investigate how explicit instruction on case studies and experience in developing case studies impacted graduate students’ understanding and appreciation of this methodology as teachers and as action researchers. The authors believe that they succeeded in improving the students’ understanding of the nature and purpose of the case study method as it applies to education. They also believe that the use of the case study method in a context of action research was also highly beneficial to the students understanding. As a result, the authors suggest that teacher educators consider the use of case study methodology as a viable approach in assisting teachers in solving problems they encounter in the classroom. The approach should include structured learning opportunities such as text reading, supervised hands-on experience in using case study methodology, group discussions, and reflection to enhance the experience.

**REFERENCES**


