

THE ROLES OF CASE STUDIES IN THE EDUCATIONAL FIELD

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Abstract

This paper briefly describes several types of case studies found in the field of education and their more common roles or uses.

KEY WORDS: Education, scenario-based case studies, teacher certification, case writing

INTRODUCTION

The field of education has a long history of using the case study (beginning as early as the 1920's), perhaps as John Dewey's philosophy of "real world" application of content became more prevalent. However, the use of case studies has become of increasing interest to those in many areas of education and educational research since the 1980's. Conceivably, one reason that the case study has become prominent as a teaching tool in more recent times is that it's use agrees with the most current philosophy of learning in education—constructivism. Many educators find that learner-centered cases offer a much more constructivist way of teaching, in which instructors do not simply transfer knowledge to education students but help them build their own knowledge in a contextual, social, and interactive setting. The process of using cases may also aid in students' abilities to generate multiple pathways for certain circumstances and in the understanding that there may be multiple, acceptable decisions for particular situations. Thus, participating in cases may help to create more questioning and reflective educators. Cases also connect to motivation theory in that they are often seen as having direct and concrete application to the career chosen by students. Yet another reason for the spread of case study usage is the increased acceptance of qualitative research in the field of education in the past few decades, where researchers realize that valuable information can be gained through rich anecdotal study--particularly when experimentation or other quantitative methods are not possible or desired.

Because working in schools has always been demanding (with an extensive range of needed skills and activities), the case study has offered a number of ways to address those complexities found in the educational field, including areas such as teaching and learning, administration, educational psychology, multicultural studies, special education, content areas, and so forth. The use of the case study may range from extended case projects, theses, and dissertations with in-depth research on schools, programs, types of students, etc., to much briefer decision sets, scenarios, simulations, or vignettes with short critical incidents designed to illustrate a specific example of an instructional or behavioral situation. Simple and complex interactive videos may also be included as cases.

The following discussion gives a brief description of the some of the major roles various types of case studies perform in the educational field.

SUPPLIMENTAL SCENARIO-BASED CASE STUDIES

In the past decade, those involved in education have become increasingly aware that teachers who are ill-prepared for the ambiguity of real-life classrooms often leave the teaching profession quickly or fall

back upon less current, reflective, or theoretical practice. The burden of teacher turnover is heavy—both financially and in losing experienced, reflective teachers of high quality [National Commission on Teaching and America's Future, 2003]. Thus, those in many education programs have supported the benefits of early field experience in schools so that education students will be more prepared for the realities of schools before they enter their own classrooms as teachers-of-record. However, these experiences are not always what professors want for education students to observe and experience. Many colleges of education, for example, want to prepare students for urban experiences or to focus upon precise situations, but available placements in the field may not support these exact circumstances or concepts under consideration--nor can a shared experience or frame of reference for a group or class be guaranteed in field placements. However, the scenario-based case study can be designed to pinpoint a specific purpose. Educators, therefore, have increasingly begun to author short (1-5 page) "clips" that quickly involve the reader into a real or constructed (but "true-to-life"), highly specific situation. These scenario cases are often followed by a limited number of discussion/reflection questions that ask education students or inservice teachers to consider the facts and feelings in the situation and apply effective, educated, thoughtful decisions. This allows the author and/or the user to "control" a specific concept or illustrate an exact example.

This type of case study is currently found in most new texts in various education fields (often as an introduction to a chapter or as a part of closing activities in a chapter), on many supporting Web sites for these texts, and also as video clip cases on some of these Web sites.

There are also a limited number of texts written with these types of scenario-based case studies for various educational purposes such as *Learning from Cases: Unraveling the Complexities of Elementary Science Teaching* [Tippins, Koballa, & Payne, B., 2002], *Case Studies about Children and Adolescents with Special Needs* [Halmhuber & Beauvais, 2002], *Teaching in Today's Classrooms: Cases from Middle and Secondary School* [Redman, 1999], *Case Studies in Adapted Physical Education: Empowering Critical Thinking* [Hodge, Murata, Block, & Lieberman, 2000] and *Case Studies, Applying Educational Psychology* [Jackson & Ormrod, 1998]. Other texts include cases for adult education, art education, teacher problem solving, music education, and so forth. Some of these types of books and/or cases come with a *brief* instructor's manual that most often gives anticipated responses and conclusions or generalizations that might develop from the cases.

The types of cases contained in books of case studies mentioned above, or within text chapters, are most often used as (1) whole-class discussion openers, (2) supplemental assignments for individual students, or (3) small group discussion activities. These types of cases are used both in preservice and graduate, education-related classrooms but may also serve as a resource for inservice teacher professional development.

These types of vignettes can also be essential to offering vicarious experiences for those who are teaching distance courses in education where there is no face-to-face interaction between the professor and the students. CaseNEX www.casenex.com, for example, offers online professional development by delivering a case-based approach to teacher training. The Bilingual/ESL Endorsement through Distance Education site www.beede.byu.edu/about.php also offers video-anchored cases about inclusion of special needs populations, teaching of second languages, formal and informal assessment, and so forth. IN TIME www.intime.uni.edu gives step-by-step instructions on how to assemble a video case study for the classroom or for use in distance education courses.

TESTING PRACTICES

So great is the need for education students to be able to apply good decisions to real-world situations that some state certification exams have moved from recall and comprehension questions to a type of "case study" on scenario-based items in which the test-taker is immersed in a short vignette and must make sound decisions throughout a course of events. In these types of tests, each item may present a very compact scenario, after which the student is given multiple choice answers. The "scenario" may also be used as a writing prompt along with documentation that the test-taker must also analyze. There may also be "Decision Sets" included in which several pages of a scenario or a case unfold with typically four to ten questions embedded in the set. Certification examinations in Texas have an average of four extensive "Decision Set" types of items. Each of these tests in various certification fields range in total from 80-120 items, so a goodly portion of these tests are written in this extended vignette format.

The following example is an item from *Case Studies in Preparation for the California Reading Competency Reading Test* [Rossi & Schipper, 2003]

Carmen is a second grade non-English speaker (NEP). She attends an ESL class for an hour each day. In her regular classroom, she tends to be shy but will risk giving some answers. When she is around one other child who also speaks Spanish but has more control of English (Limited English Proficiency or LEP), Carmen is bubbly, outgoing and can carry on a conversation in her native language with ease. When speaking in the ESL class she can use some basic English. Carmen has some concepts of print and some knowledge of the alphabet. She was unable to attempt a phonemic awareness test in English. She is able to write her name and draw a simple picture of a person. On the following page there are some sample assessments from Carmen. Together with this background and the assessments, tell what kinds of strategies you would use with Carmen and why you think these strategies would be effective. [p. 13].

USING CASES AS RESEARCH

Research case studies help inform those who work in various educational areas through intensive qualitative description. Multidimensional data is collected through site visits, observations, interviews or self reports, protocols, tests results and records, video or audiotapes, and/or other artifacts, as appropriate. This type of case provides a very detailed picture of an individual, an organization, a particular program, a school, or other entity. The emphasis is to obtain as complete a picture as possible for study (rather than to generalize findings to other settings). These types of in-depth cases can: (a) be illustrative of a particular example of interest in some aspect of education, (b) be a pilot or exploratory study, (c) represent a collection with several applicable example cases, or (d) be a critical issue study. The study should be guided by research questions and well supported by theory--learning theory, organizational theory, or social theory with a detailed review of the literature. In addition, the data is normally analyzed through coding or through holistic analysis. Coding helps detect patterns that may result in meaning-making. In examining the data, questions are often generated for future research—which may be answered through further qualitative or quantitative methodology. Research cases in education are most often written by college of education professors, graduate students for theses or dissertations, by school districts interested in particular programs, and so forth. Some examples might be the implementation of *No Child Left Behind* in a particular school or district, use of distance education by a particular college, gang activity at a particular middle school, a migrant child, an adult education program, the impact of education in a developing area of Indonesia, and many, many others.

USING CASE STUDY WRITING AS A LEARNING TOOL

Many colleges of education employ writing a research case study (as a graduate project, thesis or a dissertation) as a common practice, and researchers often submit these studies for publication. However, some colleges of education are encouraging this practice as a type of action research for teachers in graduate programs to encourage classroom teachers to become more reflective and more thorough problem solvers. Action research is research conducted in the teacher's school or classroom that arises from a teacher's personal need rather than research completed by those from the outside (university researchers, etc.). For educators *and* teachers, this is seen as very valuable and empowering for many reasons [Nath, Sikka, & Cohen, 2005]:

- teachers are investigating problems of intense personal interest,
- they often are able to apply instruction more specifically,
- they gain deeper insight through their research of the overall problem and often have success in problem resolution,
- they are able to generate and evaluate numerous possible solutions,
- they feel that it gives legitimacy and support to their ideas,
- they rarely have the magic *n* of 30 for quantitative research,
- they are often the only adult in the room to be able to observe, and
- they become more reflective in their practice.

USING EDUCATIONAL CASE STUDIES IN POLITICS

Many of those outside education depend on personal scenarios to support their belief in some aspect of education ("My neighbor had a teacher who...")—particularly in these days of accountability. Why should education not do the same? In fact, educators were encouraged to use short, illustrative cases in recent Texas legislative sessions in approaching representatives.

USING CASES WITH SCHOOL CHILDREN

The same positive rationales for using case studies with college students also exist for school-age children. Unfortunately, most case studies are written for teaching in college classrooms. Some cases for school-age children can be found on the Internet, although one must search diligently for them. Most of these are for use with high school students. Some of those available for college students can be modified for younger students, particularly those in high school. For example, cases for weather conditions on the Internet provide instant backup documentation for science students in the form of maps, tornado tracks, radar/velocity images, damage pictures, event record details, and so forth (www.comet.ucar.edu/resources/cases). Another site, Discovery Stories (www.nos.noaa.gov/education/stories/welcome.html) offers case studies in coastal and ocean science drawn from research conducted by the National Oceanic and Atmospheric Administration. Yet another site (www.portseattle.org/community/education/mid-aviation.shtml), offers case studies for use with middle and high school students interested in aviation careers. Many other cases for use with the sciences are offered at ublib.buffalo.edu/libraries/projects/cases/case.html, while ethics cases can be found at <http://ethics.sandiego.edu/resources/cases/HomeOverview.asp>.

Despite these listings, case studies for school-age children are not easy to find. A teacher would have to go through hundreds of sites to find cases that might be applicable for school-age children. However, Herreid [2005] writes that "case materials can be found prepackaged almost anywhere in newspapers, magazines, novels, cartoons, videos, and television dramas." He also suggests that movies such as "Jurassic Park," based on Michael Crichton's novel, are excellent cases for scientific responsibility and DNA technology. He believes that teachers need not necessarily spend much time dressing up the following in offering cases for school students: criminal trials reported in the press, plays such as "Inherit the Wind", advertisements for health foods, outrageous tabloid stories, medical cases from the *New England Journal of Medicine*, and even cartoons from Gary Larson's *The Far Side*.

One might easily argue that teaching with case studies or case study method could be considered a model of teaching (a learning structure in which most content area can be inserted; for example, cooperative grouping, concept attainment or role play). Models and strategies are a part of most teacher education programs or professional development for use by teachers in our schools, but it is difficult to find teacher education texts on teaching strategies (or texts that are solely about models of teaching) that mention case method at all. In *Strategies and Models for Teachers: Teaching Content and Thinking Skills* [2006], for example, case studies are only briefly mentioned in one paragraph as a way to assess student understanding in inquiry lessons. The authors state, "One of the most important goals of assessment in inquiry lessons is determining whether students can form hypotheses and relate data to explanations. Case studies provide one way of accomplishing this assessment goal. When case studies are used, students are given a problem and are asked to provide relevant hypotheses, data-gathering questions, and observations or data from the problem itself" [p. 276]. Major texts such as *Models of Teaching* [Joyce, Weil, & Calhoun, 2004], *Instructional Methods: Strategies for Teaching in a Diverse Society* [Lasley, Matczynski, & Rowley, 2002], and *Instruction: A Models Approach* [Gunter, Estes, & Schwab, 2003] contain scenarios illustrating the use of their models in classrooms, but do not "teach" the use of case studies as practice. *Instruction: A Models Approach* does offer more extensive cases ("A Kindergarten Case Study," "A Middle School Case Study", and "A High School Case Study") as vehicles to demonstrate other models contained within the text. This author includes case method as a model in her instructional strategies undergraduate and graduate courses to encourage the use of cases with school children.

THE FUTURE OF CASE STUDIES IN EDUCATION

(1) As technology and distance education continues to become a part of classrooms, it is almost assured that the use of interactive case studies will increase.

(2) Few case studies exist for teachers to use in elementary, middle, and high school classrooms. This is an area that is almost void in having offering school students exciting opportunities to learn. Many cases could be developed for schools-age children.

(3) Those who study in education will always need to learn in situations that provide a safe environment to discuss and reflect—the case study offers that.

(4) Those who research in education will have the need to study more than simply the numbers—that is, the details that are involved with *political, social, moral, and ethical issues*.

For these reasons, the use of case study and the case-based pedagogy in teacher education should be alive and well for many years to come and should be encouraged at all levels.

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