

# CLASSROOM ACTION RESEARCH (CAR): Preparing Future Teachers *in Action*

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**Abstract:** Preparing English language teachers should involve more than providing techniques, recipes, and tips. Classroom Action Research (CAR) is useful not only in preparing future teachers but for all teachers to continue to grow and develop as reflective practitioners. This article presents an overview of the components of classroom action research (selecting an issue, refining the research question, and undertaking data collection, analyzing multiple forms of data, developing and implementing new instructional strategies, and making the research findings public). An example of an action research project on giving feedback on student writing is used to illuminate these steps. For teachers to develop their practice after finishing formal preparation, they must be able to question and improve their teaching practices in response to changing conditions and experiences (Richards & Lockhart, 1994). Not only can action research be integrated into teacher preparation programs so future teachers can try out teaching methods and approaches, but it is also a useful way for current teachers to investigate issues in their teaching.

**Key words:** Classroom Action Research (CAR), teachers, practitioners

## 1. What is Classroom Action Research?

Classroom Action Research is a method of finding out what works best in your own classroom so that you can improve student learning. We know a great deal about good teaching in general (e.g. McKeachie, 1999; Chickering and Gamson, 1987; Weimer, 1996), but every teaching situation is unique in terms of content, level, student skills and learning styles, teacher skills and teaching styles, and many other factors. To maximize student learning, a teacher must find out what works best in a particular situation. There are many ways to improve knowledge about teaching.

Action research has grown in popularity throughout the past two decades. It is becoming a more accepted tool for teachers to assess their own teaching strategies and reflect upon their effectiveness. Many teachers practice personal reflection on teaching, others conduct formal empirical studies on teaching and learning. Classroom Action Research is more systematic than personal reflection but it is more informal and personal than formal educational research.

Classroom action research becomes popular movement in educational research that encourages teachers to be reflective of their own practices in order to enhance the quality of education for themselves and their students. Action research is a form of self-reflective inquiry that can be used in school-based curriculum development, professional development, and school-improvement schemes. Schmuck (1997) extended on teacher self-reflection

and stated that "when educators strive to reflect on their past, present, and future actions and engage in solitary dialogue, their perspectives of work mature" (p. 8). McNiff concluded that action research actively involves teachers as participants in their own educational improvement.

The goal of Classroom Action Research is to improve your own teaching in your own classroom, department, or school. While there is no requirement that the findings be generalized to other situations the results can add to knowledge base. Classroom Action Research goes beyond personal reflection to use informal research practices such as a brief literature review, group comparisons, and data collection and analysis. Validity is achieved through the triangulation of data. The focus is on the practical significance of findings, rather than statistical or theoretical significance.

There are many ways to improve knowledge about teaching. Many teachers practice personal reflection on teaching; that is, they look back at what has worked and has not worked in the classroom and think about how they can change their teaching strategies to enhance learning. (Hole and McEntee (1999) provide useful steps for enhancing such reflection. A few teachers (most notably Education professors) conduct formal empirical studies on teaching and learning, adding to our knowledge base. CAR fits in the center of a continuum ranging from personal reflection at one end to formal educational research at the other. CAR is more systematic and data-based than personal reflection, but it is more informal and personal than formal educational research.

In CAR, a teacher focuses attention on a problem or question about his or her own classroom. For example, does role-playing help students understand course concepts more completely than lecture methods? Action research consists of investigations initiated by teachers who want to improve their teaching practice by understanding it more fully. An action researcher may undertake a solo project in his or her classroom, or involve colleagues in investigating a question of shared interest. One principle of action research is that the end goal of any investigation of one's teaching is change which may lead to future investigations about the effects of such change. The action research cycle includes the crucial final step of making public one's research findings so that others may benefit from new knowledge. The action research cycle consists of six steps, beginning with finding a starting point—identifying an issue, problem, or situation in one's teaching to investigate. Looking at the teaching and research literature can also help us understand how others have approached the issue and provide ideas on how to investigate it.

## 2. Why do Classroom Action Research?

First and foremost, classroom action research is a very effective way of improving your teaching. Assessing student understanding at mid-term helps you plan the most effective strategies for the rest of the semester. Comparing the student learning outcomes of different teaching strategies helps you discover which teaching techniques work best in a particular situation. Because you are researching the impact of your own teaching, you automatically take into account your own teaching strengths and weaknesses, the typical skill level of your students, etc. Your findings have immediate practical significance in terms of teaching decisions.

Second, CAR provides a means of documenting your teaching effectiveness. The brief reports and presentations resulting from CAR can be included in teaching portfolios, tenure dossiers, and other reports at the teacher or school level. This information can also help meet the increasing requirements of the assessment movement that we document student learning.

Third, CAR can provide a renewed sense of excitement about teaching. After many years, teaching can become routine and even boring. Learning CAR methodology provides a new challenge, and the results of CAR projects often prompt teachers to change their current strategies. CAR projects done as teams have the added benefit of increasing peer discussion of teaching issues.

## 3. How to Conduct the CAR?

Classroom action research follows the same steps as the general scientific model, although in a more informal manner. CAR methods also recognize that the researcher is, first and foremost, the classroom teacher and that the research cannot be allowed to take precedence over student learning. The CAR process can be conceptualized as a seven-step process. (For more detailed information about conducting CAR research, see authors such as Bell, 1993; Sagor, 2000; and Hubbard and Power, 1993)

**Step one:** *Identify a question or problem.* This question should be something related to student learning in your classroom. For example, would a different type of assignment enhance student understanding? Would a strict attendance policy result in better test scores? Would more time spent in cooperative learning groups help students understand concepts at a higher level? The general model might be "what is the effect of X on student learning?" Since the goal of CAR is to inform decision-making, the question or problem should look at something under teacher control, such as teaching strategies, student assignments, and classroom activities. The problem should also be an area in which you are willing to change. There is no point in conducting a CAR project if you have no intention of acting on your findings. Larger institutional questions might be tackled, if the institution is committed to change.

Finally, the question or problem should be feasible in terms of time, effort and resources. In general, this means to think small--to look at one aspect of teaching in a single course. Angelo and Cross (1993) suggest that you NOT start with your "problem class" but rather start with a class that is progressing fairly well.

**Step two:** *Review Literature* You need to gather two types of information, background literature and data. The literature review may be much less extensive than traditional research, and the use of secondary sources is sufficient. Sources such as Cross and Steadman (1996) or Woolfolk (2000) will often provide background information on learning, motivation, and classroom management topics. Another source is the Educational Resources Information Center (ERIC) database, which contains references to a huge number of published and unpublished manuscripts. You can search the ERIC database at <http://ericir.syr.edu/> Your campus' teaching and learning center should also have many useful resources.

**Step three:** *Plan a research strategy.* The research design of a CAR study may take many forms, ranging from a pretest-posttest design to a comparison of similar classes to a descriptive case study of a single class or student. Both quantitative and qualitative methods are appropriate. The tightly controlled experimental designs

of traditional research are rarely possible in a natural classroom setting, so CAR relies on the triangulation of data to provide validity. To triangulate, collect at least three types of data (such as student test scores, teacher evaluations, and observations of student behavior). If all data point to the same conclusions, you have some assurance of validity.

**Step four: Gather data.** CAR tends to rely heavily on existing data such as test scores, teacher evaluations, and final course grades. You might also want to collect other data. See Angelo and Cross (1993) for a wonderful array of classroom assessment techniques.

**Step five: Make sense of the data.** Analyze your data, looking for findings with practical significance. Simple statistical analyses of quantitative data, such as simple t-tests and correlations, are usually sufficient. Tables or graphs are often very helpful. Qualitative data can be analyzed for recurring themes, citing supporting evidence. Practical significance, rather than statistical significance, is the goal.

**Step six: Take action.** Use your findings to make decisions about your teaching strategies. Sometimes you will find that one strategy is clearly more effective, leading to an obvious choice. Other times, strategies may prove to be equally effective. In that situation, you may choose the strategy that you prefer or the one that your students prefer.

**Step seven: Share your findings.** You can share your findings with peers in many ways. You may submit your report to JoSoTL, which has a special section for CAR reports. These articles will typically be from 4 to 8 pages--shorter than the typical traditional research report. Most CAR reports are appropriate for submission to the ERIC database (instructions for submission can be found on the ERIC website. You might also share your work at conferences such as the International Conference for Teacher-Researchers ( <http://www.educ.ubc.ca/ictr2001/> ) or at regional conferences for your discipline. Most disciplines sponsor a journal on teaching, although CAR may be too informal to meet publication requirements.

## 4. Reflection in Teacher Research

Reflection is a significant component of self-study and action research as it is a powerful way to know about the self in research and practice as well as to unpack the very self in teaching practice. Reflective practice in teacher education allows teacher educators to explore how teachers learn by including “I” in an epistemology of reflective practice. \

Reflective pedagogy helps teachers closely examine current practice and spearhead changes as teacher leaders. In other words, self-study means studying one’s own practice in its simple term, but its definition varies according to role, practice, and purpose a process that lends itself to qualitative inquiry which uses narrative, descriptive approaches to data collection and analysis.

While engaging in self-study, teachers examine and problematize their own teaching by reflecting on their practice. Fairbanks and LaGrone (2006) examined the ways in which the teachers constructed knowledge through the discourse of a teacher research group and found that teachers’ learning and teaching is transformed through the talk about theory and practice to support their research efforts. Action research is becoming a popular approach to studying complex social situations such as those found in educational settings, where the focus is on simultaneous into practice and action to improve situations (e.g. designing new curricula or learning activities”).

Through this self-directed inquiry, the teacher will (1) “ask essential questions, gather data and necessary information, and analyze and interpret the information to answer their questions” and (2) engage in critical and reflective thinking through self-directed exploration to self-evaluate current practice.

The wave of interest in teacher research is grounded in the involvement of teachers in research and their examination of learning and teaching rather than on the knowledge produced and transmitted by university researchers and policy makers <sup>[4]</sup>. The former views teachers as “expert knowers” about their students and classrooms and suggests that teachers are “promising researchers” on educational practice. This perspective allows much productive discussions on practicality and epistemological challenges of teacher research <sup>[4]</sup>. Furthermore, this lens views teachers as capable of generating knowledge valuable to enhance learning and teaching, based on the careful and critical examination of their own professional practice.

Many educators concerned with how and what teacher candidates learn in and beyond the university classrooms <sup>[5]</sup> suggest that knowledge is not passed down from one person with authority to another or a group of people with less power and limited knowledge, instead knowledge is acquired through social interaction within a particular learning community. In this context, self-study research can help to create a better understanding of what constitutes professional knowledge. Zeichner (2007) provides an overview of the issues of accumulating knowledge across self-studies and highlights the need for more direct implications for teacher education <sup>[4]</sup>.

There is a clearly identifiable body of self-study work on case pedagogy in teacher education where researchers consciously build on previous studies. Much of the self-study literature in teacher education is not situated in this way. Although discussing the personal implications of the research for teacher educators and their students and colleagues at the local level, many self-studies do not speak directly back to the teacher education community in ways that could more directly influence policies and practice<sup>[4]</sup>.

## 5. Ethical Considerations

It is crucial to abide by certain ethical tenets while conducting action research. The researcher should keep in mind the power relations existing in the classroom and avoid abusing one's authority as a teacher for the sake of investigating an interesting question.

To this end, students should not be asked to engage in activities that do not help them or are not part of a legitimate curriculum. If students are asked to do additional work or give out personal information, it should be optional. Students' information should be confidential: published or reported discussions of the research should use pseudonyms for students and possibly the institution. Also, most curriculum in schools and many higher education institutions have strict rules about getting permission from students or their families if the research design goes beyond instructional variation. It may be wise (or required) to have students sign permission forms that explain the research question and project and note that findings may be disseminated publicly.

It is important to make plans for the research well in advance, inform participants and others who need to know or approve the project, stick to the arrangements that have been made, and verify findings (interpretations) with participants, if appropriate—their responses can also be data. Last but not least, thanking everyone who has participated and helped and sending copies of one's research findings, if appropriate, are important courtesies.

In preparing my students to do action research, I hope to provide them with a professional development resource that will serve them throughout their careers. Some students have kept their investigations going as they continue to teach reflectively. The principles of action research allow teachers at any level to undertake small-scale but often highly effective research projects that will enable them to improve their teaching practice indefinitely.

## 6. Conclusion

Classroom Action Research fits comfortably under the umbrella of Scholarship of Teaching and Learning. Along with traditional educational research and course portfolios, CAR is a way of systematically examining teaching to gain new insights. One can certainly be an excellent teacher without engaging in CAR (or other types of SoTL), but participation in some version of SoTL enhances one's knowledge of the profession of teaching.

CAR is a rather simple set of ideas and techniques that can introduce you to the power of systematic reflection on your practice. Our basic assumption is that you have within you the power to meet all the challenges of the teaching profession. Furthermore, you can meet these challenges without wearing yourself down to a nub.

The secret of success in the profession of teaching is to continually grow and learn. Action research is a way for you to continue to grow and learn by making use of your own experiences. The only theories involved are the ideas that you already use to make sense of your experience. Action research literally starts where you are and will take you as far as you want to go.

CAR is very attractive to faculty at all types of institutions. Those at primarily research institutions may welcome the opportunity to look at teaching with the same scholarly eye that they use for disciplinary research. Those at primarily teaching institutions (including vocational tech and community colleges) usually lack support for disciplinary research. They may find that their institutions provide a rich source of CAR data and that administrators appreciate these research endeavors.

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