

SELF-STUDY RESEARCH FOR TEACHERS

ARTIST
Action Research To Innovate Science Teaching

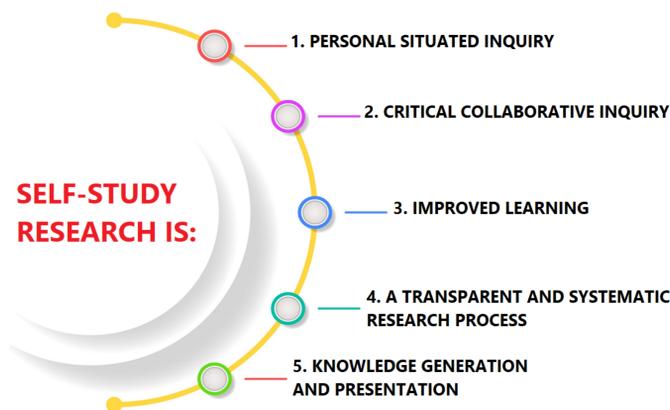
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What is Self-Study?

Dinkleman (2003) defined self-study as an “intentional and systematic inquiry into one's own practice” and he says self-study and action research although certainly not synonymous, these forms of inquiry are related in important ways. Self-study is a *personal, systematic* inquiry *situated* within one's own teaching context that requires *critical and collaborative reflection* in order to *generate knowledge*, as well as *inform the broader educational field* (Sell, 2009).

Peercy (2014) uses self-study as a mechanism for innovation and change within a framework of practice-based education in teacher education.

Self-Study Involves Five Foci



What Self-Study Research Is Not

According to Samaras (2011)

- Self-study is *not* about you studying others' personal inquiries.
- Self-study is *not* all about you and only about you.
- Self-study is *not* conducted alone.
- Self-study research is *not* merely reflection.
- Self-study is *not* only about personal knowledge.

Why should a Teacher Conduct a Self-Study Research?

Personal professional development



As teachers conduct self-study research projects, they are reminded about the important role they play, and *can* play, in addressing performance measures and improving the educational system.

Applicability



Self-study research can contribute to your professional development because it allows you to apply changes that you believe in.

Reforming in the First Person with Critical Friends



Teachers can, and will, benefit from challenging the doubts they have and constructing new understandings about their practice instead of being receivers of knowledge constructed by others.

Samples of Teacher Self-Study

A SELF-STUDY OF THE USE OF INTERACTIVE HISTORICAL VIGNETTES ENHANCED WITH CONCEPT CARTOONS IN TEACHING OF THE NATURE OF SCIENCE

Yücel-Dağ (2015) designed a research involves the classroom applications of interactive historical vignettes (IHV) enhanced with concept cartoons to develop middle school 5th-grade students' understanding of the NOS. The research was conducted with her own participation as a researcher, two science teachers, and their 77 5th grade students. She gathered the data through IHV documents, video recordings, questionnaires, journals, e-mails together with life stories, peer reviews, and photographs that are the requirements of self-study research. She analyzed my collected data through narrative technique. The findings revealed the importance of the researcher in classroom applications of IHV in the teaching of the nature of science. She observed that her experiences, values, and beliefs found reflections in the classroom environment and affected her communication with the students. Through this self-study, she found an opportunity to get to know herself better.

WHAT KIND OF A TEACHER AM I? MY SELF-STUDY ON MY STUDENTS' SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS (STEM) CAREER DEVELOPMENT

Dönmez (2018) has developed STEM applications which are enriched by STEM history to develop his students' understandings of career awareness in science, technology, engineering and mathematics (STEM). He conducted his research with the participation of 18 students, who voluntarily took the elective science applications course in 7th grade, at a public middle school in Ankara. Two science teachers also conducted the research with their 45 students in science applications course. In his research, he and the two participating teachers implemented five STEM applications for fourteen weeks. Data sources consisted of him and participant teachers' life stories, in-class video recordings, post-lesson journals, face-to-face interviews with students, word association tests, and representations drawn by students' about STEM fields. He used the Witkins hidden figures test to determine my students' cognitive styles, the Holland profession selection inventory to determine career choices, and the Kahoot practice to determine levels of STEM characters that he introduced in STEM practice. He analyzed the data by narration and content analysis. As a result of his research, he has developed himself on the field of gesture, mimicry, eye contact, and classroom management, and he has found a close connection between his values and beliefs and his practices. He observed that his students developed their understandings about STEM career fields and that their mental structures for STEM concepts also developed. He noticed that participating science teachers enriched their STEM activities with their own knowledge and experiences while reflecting on the course contents, realized that they had difficulties in applying STEM activities in crowded classrooms and those STEM activities were performed more efficiently when the socio-economic level increased.

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