

Does knowledge count? Inquiry-based learning in the elementary school system in Israel

Evaluation findings

Miri Levin Rozalis, PhD
Head, Graduate and Post-Graduate Program in Evaluation
Department of Education
Ben-Gurion University of the Negev
rozalis@bgu.ac.il

Some history

- **Inquiry-based learning has been part of the modern educational system since its very beginning in the 19th century.**
- **It was a real need at that time, to help build life in the new environment, or in other words, to "research" the new environment.**
- **The teachers in a revolutionary society were the elite of society: highly educated scientists, novelists, researchers, linguists and so on.**

Inquiry-based learning today

The idea is for inquiry and research to be an integral part of everyday life at school.

The viewpoint is that of a "culture of inquiry"—an overall attitude and practice that overarches every corner of life at school: a way of thinking and not a “slot” in the lesson timetable.

The research

(conducted by a group of researchers from BGU during 2002-2003)

- 5 portraits of “best schools”
- 30 case studies of schools with “a lot of activity”

In addition to the above:

- 50 Interviews with supervisors, pedagogical instructors, high ranking ministry staff, etc.
- Analysis of 80 final written assignments
- randomized sampling of 500 teacher questionnaires

Main findings

- Inquiry-based learning has broad influence.
- A good, efficient supporting system has been established by the Ministry.
- As to pupils' learning levels, inquiry-based learning is far from fulfilling its potential.
- The teachers don't know what research is.

The paradox

- On one hand, a success: a widespread program that creates many changes in atmosphere, in ways of learning and teaching, in the role of the teacher and which is supported by a very efficient structure.
- On the other hand, it is not clear what has been achieved or whether it is an achievement at all.

Why is that so?

One of our main claims is that the “folk epistemologies” of the field (pedagogical instructors as well as teachers) are the main influence on teachers' practices.

Important epistemological questions for teachers to deal with:

- What is the subject of inquiry?
- What is an appropriate process of acquiring knowledge?
- Who or what is perceived as "knower"-as a reliable resource of knowledge?
- How do we decide that something is true?
- What are the qualities of truth?

Without understanding these questions, it is impossible for teachers or pedagogical instructors to teach in an educated way, to decide what kinds of questions or skills we want the pupils to have, at what age and for what purpose.

Without this knowledge, what guides the teachers' work are the "folk epistemologies" they are not aware of.

It's difficult to compare ourselves favorably with the early days of modern education, when the answers were clearer – not necessarily better or more correct, but clearer.

The reasons:

- In those distant days, everything was “for real”. A means to an end, and not just a “better way of teaching and learning.”**
- The notion of “research,” “knowledge,” “teaching” and “learning” was much clearer.**

Questions being raised

Several theoretical questions arise from these findings:

- What is the place of non-disciplinary skills and knowledge (research) in a disciplinary system (conventional school organization)?
- Is a "culture of inquiry" possible only in universities and research institutes?
- Is there a canonical body of knowledge that is "a must"?
- Who creates the knowledge (positivist vs. constructivist vs. hermeneutic approach to knowledge)?
- What is the place of knowledge vs. skills and "know-how" in post-modern society?

And some practical questions:

- What do teachers need to know in order to facilitate inquiry-based learning?
- Do they have to have research experience? If so, what kind?
- Does this knowledge – how to conduct research that conforms to standards – replace pedagogical knowledge and knowledge about a specific content area (such as history, math)?
- Is there a need for ethical and professional standards for research work at different ages? What should the standards be for different age groups?
- How can we bridge the rigid school structure and the open and irregular structure (in terms of time and space) of research, if we want to use inquiry-based learning as a guiding principle?

Thank you for your attention

What are the qualities of truth?

- Is there an absolute truth?
- Is it stable and eternal or does it tend to change?
- What are the connections between different kinds of knowledge and, particularly, scientific knowledge and the truth?

*

How do we decide that something is true?

- Intuition
- Systematic rational thinking
- Observations
- The scientific way: assumptions and experiments *

What is an appropriate process of acquiring knowledge?

- Is it a personal, intuitive process or perhaps a rational, systematic process?
- Do we need to do observations in order to gain new knowledge or maybe to interpret what we see in order to arrive at a better understanding?
- Is it possible to create new knowledge or is all there is already in books and what is left for us to do is just to read?

What is the subject of inquiry?

- Are we looking at a whole or analyzing a whole to its segments? What is the meaning of each approach?
- Are we looking at “things” and phenomena? Or do we look at society? At our internal relationships? Interpersonal relationships? Symbols?

The teachers don't know what research is

- They never experienced it, and they know nothing about research methods. They do know pedagogy but not research.
- Most of the work done by teachers deals with "what shall I do in class tomorrow morning?"
- There is some confusion about inquiry-based learning. There are many meaningless "buzz words," "folk epistemologies" and slogans.
- The same is true for research procedures. *

Pupils' learning is far from fulfilling its *potential*

- Products are often uninteresting and trivial.
- The knowledge the children acquire is dull and simplistic and, on many occasions, wrong.
- The research practices they apply are usually incorrect
- The resources in most cases are trivial: internet and encyclopedia.
- Most teachers emphasize the products. *

Inquiry-based learning has broad influence

- a) In most schools (96%) we found inquiry-based learning.
- b) Most teachers, pupils, and parents love and enjoy it.
- c) The main impact is on the teacher's role.
- d) Parallel changes occur in the children's ways of learning.
- e) Activities within schools are very vivid.
- f) Many activities are done out of school.
- g) All this really changes the school atmosphere.
Traditional class structures, time frames and disciplinary structures are broken on many occasions.