

REFLECTION ON PRACTICES AS TEACHER'S EDUCATORS IN STATISTICS

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In this poster we reflect upon our practices as teacher educators revisiting a study we developed with forty future teachers aiming to analyse their statistical knowledge at the beginning of their training.

The study with the students

(Barros, Martins & Pires, 2009)

a qualitative and interpretative approach ^{2,3}, aiming (i) to identify which statistical knowledge 40 future educators and teachers (1st year of the License Degree in Basic Education) possessed when starting their training, and (ii) to assess the influence of the work undertaken in the curricular unit *Numbers and Statistics* in the progression of this knowledge

data collected by an initial questionnaire, participant observation and a final questionnaire, and data analysed by interpreting the students' answers ²

the development of the curricular unit has allowed students to deepen, change or consolidate their statistical knowledge, mainly regarding what concerns understanding concepts

The class context main options in the classroom

Topics: data and variables, organizing data in tables and graphs, location and dispersion measures, and probabilities

Take into account students' prior knowledge and their difficulties

Concern in clarifying and systematizing the different concepts and procedures

Problem solving

Project/Group work (*Let's get to know our group*)

What are the reasons for this "success"?
Which aspects of our practices have contributed to a real improvement of students' learning?

Reflection as

- an activity which is liable to contribute to the professional development of teachers (and futures teachers) and to the improvement of practice ⁴
- a continuous process of analysis and refinement of practice ⁴
- a rigorous and disciplined process, different from stream of consciousness, invention and belief ⁵

Some reflections

Consideration of students' needs and difficulties

identification of students' **needs and difficulties** in the initial questionnaire (the starting point of the study)

determination of our teaching practices

Valuing the nature of tasks and their diversification

tasks involving the clarification and application of concepts

tasks of a more closed nature as well as more open ones

completing a project
Let's get to know our group

Integration of evaluation within the learning process

the use of the different meanings of **evaluation** (diagnostic, formative, summative)

reformulation of teaching strategies and practices

Discussion about understanding of concepts

importance of the **questioning** of the meaning of results

Empowerment of participants

the **teacher** as a guide and moderator, proposing tasks, questioning or clarifying ideas

the **student** as the builder of his knowledge, bestowing shape and meaning on his learning, within a context of active participation in the negotiation of the different meanings

References:
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⁴Cole, L., & Krieger, J. (2000). *Researching teaching: Exploring teacher development through reflexive inquiry*. Boston: Allyn & Bacon.
⁵Dewey, J. (1933). *How we think: A restatement of reflective thinking in the educative process*. Boston: D. C. Heath.
⁶Martins, C., & Santos, L. (2012). Development of reflection ability in PCKM in T.Y. (Ed.) Proceedings of the 36th Conference of the International Group for the Psychology of Mathematics Education (pp. 193-200). Taipei: PME.