

# A longitudinal study on the imaginary of future Physics teachers about learning assessment

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**Abstract.** This research aims at presenting partial results of a longitudinal study, which analyses the changes in the discourses of future Physics teachers of a Brazilian Public University throughout their undergraduate program designed for teachers (called ‘licenciatura’ in Brazil), on issues related to science and science teaching. We highlight the changes in the imaginary of the future teachers regarding the assessment of learning.

## 1 Introduction

This research aims at presenting partial results of a longitudinal study, which analyses the changes in the discourses of future Physics teachers of a Brazilian Public University throughout their undergraduate course (called ‘licenciatura’ in Brazil) on issues related to Science and Science teaching. We highlight the changes in the imaginary of the future teachers regarding the assessment of learning. We have also examined how the conditions of production of the discourses have influenced in changes of that concept.

## 2 Methodology

The research data was collected according to a qualitative approach (FLICK, 2009) [1]. It was carried out through questionnaires, applied at the beginning of each school year, in certain disciplines of the program. The theoretical foundation that supports the analysis of the future Physics teachers’ imaginary about assessment was the theoretical-methodological device of Discourse Analysis in its French approach. According to Pêcheux [2], every discursive process assumes the existence of imaginary formations. Authors who write on learning assessment have also been consulted for the purposes of this research.

## 3 Data Analysis

In order to identify meaning connections in their discourses, we have tried to establish a bridge between identification and interpretation, finding meanings in the future Physics teachers’ discourse. In this context, it is important to note that there is a relationship of power that is predetermined by the institution in which the student is immersed, where the student plays the role of an author and the researcher plays the role of a reader, or analyst Taking this into account, we will examine here the changes in the future Physics teachers’ imaginary about learning assessment.

### *3.1 First and second questionnaires (applied in the first and second scholar year)*

In the first years of this undergraduate course (2014 and 2015), we may highlight the following excerpts, respectively:

*[...] Besides of assessing how much the students have learnt, they (the teachers' assessment instruments) can also indicate where the teachers could adjust their classes [...]*

*[...] In a situation where the students fail, it is up to the teacher to try to understand the reasons behind their failure.*

We may notice that the student uses terms in the construction of his discourse that match the concept of formative assessment that, according to Luckesi<sup>[3]</sup>, it performs a classificatory function in the learning process and, by means of that, the professor can identify problems to be solved for the preparation of next semester's courses.

### *3.2 Third questionnaire (applied at the beginning of the third year)*

By analyzing the discourses produced by the future Physics teacher in 2016, we notice the use of sentences like: "*[...] If the assessment is done correctly, it will serve as a diagnosis of the students and their comprehension*", which goes along the idea of a diagnosis assessment, an idea supported by Luckesi<sup>[3]</sup>.

### *3.3 Fourth questionnaire (applied in the beginning of the last scholar year)*

Lastly, in 2017, the student produced discourses that show that he understands the assessment process as a mediator.

*[...] It is a moment of self-assessment for the teachers. They may assess themselves, their methodologies and how efficient these methodologies are.*

According to Hoffmann<sup>[4]</sup>, it consist of a procedural monitoring of students' progress during their learning process, evidencing their participation in the context.

## **4 Conclusion**

The results show that the conditions of production of the discourses were the elements that made possible the change in the future Physics teachers' imaginary about learning assessment. In addition, the study also points that the present curricular structure and the way that the undergraduate course (licenciatura) have been conducted are two more factor that have contributed to this process.

## **5 Acknowledgements**

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## **References**

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