

“SIGNATURE PEDAGOGIES” ON ASSESSMENT AND EVALUATION IN TEACHER EDUCATION

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Abstract: *Our study identified the pedagogical routines regarding assessment and evaluation of pre-service teachers. A document analysis, a questionnaire-based inquiry, and several interviews were conducted in order to investigate the surface structure of the signature pedagogies involved in teacher education and training. The findings highlight that pre-service teachers have a traditional mindset regarding assessment, as a result of signature pedagogies imprinted in their formation, patterns of industrial school from the beginning of the 20th century.*

Key words: *signature pedagogies, pedagogical clichés, assessment and evaluation.*

1. Introduction

The “signature pedagogies” were introduced by Lee S. Shulman as the types of teaching in which students are educated for their future professions, as their forms of professional preparation (Shulman, 2005). According to the author, the empirical approach to signature pedagogies reveals them as “*the forms of instruction that leap to mind when we first think about the preparation of members of particular professions*”, which have a “critical role” in the representation of the future practices, including the attitudinal perspective (p. 53). The author argued that these pedagogical signatures emphasize many aspects regarding the personality, dispositions, and culture of each professional field. He later outlined that signature pedagogies are “routines that are habitual, visible, accountable, interdependent, collaborative, emotional, unpredictable, and affect laden” (Falk, 2006, p. 80). Therefore, professional education represents a genuine preparation for accomplished and responsible practice in the benefit of each and all interested members of the society. The studies developed by Carnegie Foundation about the pedagogy of professions in action highlighted “*the critical role of signature pedagogies in shaping the character of future practice and symbolizing the values and hopes of the profession*” (Shulman, 2005, p. 53).

The forms of preparation acknowledge consistent differences among professions on three dimensions of professional work: to think, to perform, and to act with integrity.

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Even though they are fundamental, these levels do not benefit of equally distributed attention. Being pervasive, signature pedagogies determine the design of instruction in educational institutions that will be perpetuated in educational practices. Studies identified three typical patterns of signature pedagogies in the professions: the quasi-Socratic interactions in initial pedagogy, the apprenticeships interactions in teaching medicine or in teacher education and sequenced and balanced portfolio in engineering and in education of clergy (Shulman, 2005).

There are three dimensions in the architecture of a signature pedagogy: a surface structure associated to the acts of teaching, a deep structure associated to knowledge presentation, and an implicit structure associated to professional attitudes, values, and dispositions. Studies also identified three temporal patterns of signature pedagogies in the profession: 1. a pervasive initial pedagogy framing the professional preparation that follows the pedagogical routines of legal education; 2. the pervasive capstone apprenticeship as in teaching medicine or in teacher education; 3. the sequenced and balanced portfolio as in the education of engineers and clergy (Shulman, 2005, p. 54-55). The signature pedagogy in teacher education is similar to that of studying law. The pattern of student-teacher interaction shows the direct and rigid control of the teacher, who guides the exchange of lines between speakers. The authoritative teacher addresses to the same student a set of questions about the core elements of subjects. This framework allows less originality and innovation for the participants. Although “habits make novelty tolerable and surprise sufferable” (p. 56), they have a major contribution to the preservation of many pedagogical routines less adapted to new environments and contexts. Nevertheless, the advance of technology and digitalization will consistently change signature pedagogies (Varga-Atkins, 2020) which will enable inquiry-based and student-centred learning (Beck & Eno, 2012). Other authors argued that new pedagogies and programme elements should be treated in education more than in other fields as educational experiments (Golde, 2007), contributing to the development of the research competences, which would lead to innovation. In specific domains, like field education of social work signature pedagogies provide opportunities for teachers to deeper examine and analyse the teaching, learning, and evaluating processes (Wayne et al., 2010).

It is a fact that any profession needs a set of skills and a specific mindset for success. The teaching profession also requires a flexible mindset and a core of pedagogical values and principles that help teachers become experts, as John Hattie highlighted (Hattie, 2014). Many studies about teachers' beliefs (Beijaard et al., 2000; Korthagen & Vasalos, 2005; Yero, 2002) underline that each teacher has a set of beliefs, a “pedagogical thinking” or “signature pedagogies” in Shulman acceptance, that determine their didactical behaviour. Therefore, the training of pedagogical thinking might be the key to change the teaching profession. Pedagogical thinking is developed through training and practice in classroom, through reflection and self-assessment, through sharing professional experiences with co-workers. According to recent studies about teacher in the digital era (STOA, 2021; Braun et al., 2020) and about changing pedagogical beliefs (Voinea & Pălăşan, 2014; Voinea & Bota, 2015), new topics will be addressed for the pedagogical thinking in digitalized society. As Shulman enhanced, signature pedagogies

are also characterized by uncertainty, engagement, and formation (Shulman, 2005) and pedagogies of uncertainty help new teachers to make decisions under conditions of unavoidable ambiguity and uncertainty (Yendol-Hoppey & Franco, 2014). Nevertheless, teachers will have to adjust their pedagogical thinking to the new realities of schools and to the students' needs. Teachers will reshape learning, teaching, and assessment in the digital context. There are two aspects to be considered:

- firstly, it is important for each pre-service and in-service teacher to reflect on their professional values, on their motivation for teaching, and on assessment. These will lead to identifying the patterns of thinking;
- secondly, it is important to align the pedagogical patterns of thinking, the mindset of teachers to the new demands of school and society.

2. Study Objectives and Hypothesis

The present study was conducted in a mixed methodological approach, embedded in a constructivist-interpretivist research paradigm (Patton, 2002)

The objectives of the study concerning the assessment and evaluation patterns perpetuated in teacher education are the following:

- to explore the patterns in the assessment and evaluation process encountered at pre-service teachers;
- to investigate the common beliefs in assessment and evaluation encountered at pre-service teachers considering the background of the participants in the study.

The hypothesis of our study predicts a pragmatic traditional perspective on evaluation in teacher education.

3. Participants, Instruments, and Procedure

The participants were a total of 261 students enrolled in the teacher training programme: 140 were students at the Faculty of Letters in the second year of studies (17 males and 123 females), 62 in the third year (5 males and 57 females), and 60 were enrolled in the certification programme for the teaching career, in the final period of their psycho-pedagogical preparation. The participants in the questionnaire-based inquiry form a convenience sample: 30 pre-service teachers were enlisted in the third year of their undergraduate studies and 30 pre-service teachers in the similar period for the programme developed for the graduates who did not complete the pedagogical training programme during their university studies. The average age was 32.2 years and standard deviation of 11.5, 8 students being of masculine gender and 52 of feminine gender, 11 were employed in education and 49 did not have any work experience in education. The completion was voluntary and anonymous. The express consent of the participants was obtained before completing the questionnaire under the supervision of the researcher. The questionnaire was developed according to Shulman's theory of signature pedagogies in the profession. The items consisted in a five-point Likert scale, from 1 – completely disagree to 5 – completely agree. The data collection took place from March to May 2023. The assignments for the final examination at a core

pedagogical discipline of the 140 students in the second year were object to a document analysis. The deadlines for the submission of the assignments were 18 and 23 January 2021. The examination consisted of a structured essay on the teacher's competences. The content of the essay was subject to content analysis.

Interviews were also organized in May 2023 with the students from the third year of the Faculty of Letters in order to investigate the evolution of their pedagogical thinking patterns.

4. Results

The data analysis showed that the students continue to present old, traditional patterns regarding teaching, learning, and evaluating, even though they are exponents of the new generation. The main themes extracted through the analysis were grouped around the teacher's position, the teachers' role, the relationship between teaching and learning, the recall of the former experience as a student that is quite difficult to get rid of. Thus, the students understand the teachers' role from the perspective of their own experience; the pedagogical beliefs are induced by their experiences as primary or secondary level students. The learning success depends on the quality of the teacher: *"a teacher attentive to the way a student understands or not the subject, learns it and then is evaluated accordingly, influences both the superficial and deep results of the student, ensuring a short-term success, such as the assimilation of information for a course, a subject or a long time one, the assimilation of more information to obtain an important qualification, an important exam"*. The role of the teacher is limited to knowledge and contents: *"teachers play a crucial role when it comes to students' assimilation of information, and they have a major influence on students' understanding process"*. Regarding the expertise, students considered that *"expert teachers possess advanced knowledge that they use effectively in the field they teach. Among the knowledge they possess, we can mention the specialized ones accumulated during the years of study, and on the other hand the pedagogical ones, monitoring the learning that leads to the desired surface and depth results"*. Even in these circumstances, participants outline that *"An expert teacher influences from the inside out. Not just superficial, because what is superficial will be considered useless by students who feel aimless, unmotivated and who often complain that they don't understand why some subjects are taught"*. Nevertheless, the students were impressed by effective teachers: *"Indeed, there are teachers who have chosen their profession well and carefully, which makes them special compared to others who need to be part of the workforce and have an income. I believe that a good teacher realizes very well and quickly when his student has learned only to "hunt for the grade" and escape the stress of an assessment"*.

The interview pointed out that students have pedagogical routines which tend to innovation, but they continue promote a rigid mindset, according to outdated pedagogic practices which contributed to their formal education, in which teachers promoted an industrial school model.

The questionnaire-based inquiry revealed openness to the importance of the learning process, considering the findings regarding feedback, evaluation for learning, attitude

towards learning. The data enhance that many respondents agree on the importance of feedback in teaching activities and evaluation of abilities and skills. More than half of the respondents have a rather neutral opinion about the effectiveness of the traditional evaluation methods. More than half of the respondents consider the evaluation grade-centred. The descriptive statistics are summarized in Table 1.

Descriptive statistic of assessment and evaluation items Table 1

	1	2	3	4	5
I always ask students for feedback on the activities carried out.	2	-	12	20	26
Assessment only matters if it produces learning.	2	7	17	16	18
Assessment and evaluation are still grade-centred.	1	7	17	17	18
I am glad when a student wants to increase their grade.	-	3	6	17	34
I use traditional evaluation methods because they are effective.	2	9	35	10	4
I usually include the students' attitude towards learning in the evaluation.	1	5	17	22	15
I am striving to adapt the evaluation to also highlight the skills formed.	-	1	12	21	26

The data analysis showed there are statistically significant differences between the participants' perspectives regarding the grade-centred approach of the evaluation ($\chi^2(4) = 13.5, p < .01$), depending on their type of pedagogical training programme. The two categories of participants are equivalent from the perspective of the course in the pedagogical training programme. These findings highlight that the respondents enrolled in the teacher training programme during their undergraduate studies perpetuate the cliché in which the assessment and evaluation are centred on grades. The frequencies are presented in Table 2.

Contingency tables for grade-centred approach of evaluation Table 2

Assessment and evaluation are still grade-centred	Undergraduate studies	Postgraduate studies	Total
1	1	0	1
2	3	4	7
3	6	11	17
4	5	12	17
5	15	3	18
Total	30	30	60

The content analysis of the essays revealed the following themes and sub-themes, as those are presented in Table 3.

Themes and sub-themes in content analysis

Table 3

Theme	Code	Sub-themes	Code
Assessment	A	Assessment methods	(1)
		Feed-back	(2)
		Grades	(3)
		Assessment competence	(4)
		Assessment errors	(5)
		Assessor traits	(6)

The most frequent sub-themes were the need for feedback (87%), assessment methods (64%), and grades (82%). The qualitative analysis of the essays revealed that pre-service teachers, although exponents of the 21st century (Z generation!), have a traditional mindset of assessment limited to the formal, observable, and measurable aspects of assessment. The qualitative analysis of the essays underlines the fact that pre-service teachers' view of evaluation is idealized. Frequently in the essays, specific normative pedagogical experiences are used, describing what a teacher should be like: the teacher must be a good evaluator, must be open-minded, must be understanding, must use various evaluation methods.

The same idea emerged from the analysis of the interviews. In addition, the theme of *pedagogical practice* appeared frequently (78%) in the interviews, which is not sufficient for the formation of teachers' competences. The evaluation and the evaluator's behaviour are inadequately addressed and insufficiently practiced. In the interviews, we also note the same limited mindset of pre-service teacher of the visible behaviours of the teacher evaluator. We can conclude that teachers have a pragmatic-idealistic mindset of assessment as an effect of the “signature pedagogies” resulting from their own experience as students.

4. Conclusions and Discussion

The analysis of the collected data pointed out that there are certain clichés encountered at pre-service teachers, such as the focus on grades, the use of traditional methods for their virtues, the great emphasis on the evaluation of knowledge in contrast to skills, attitudes, and values. The pedagogical routines regarding assessment and evaluation encountered at student teachers enhance the traditional and approach centred on the products of learning without also considering the process of learning among the respondents enrolled in undergraduate studies. This demonstrates the discrepancy between the teachers' mindset or pedagogical thinking and the reality from the classroom and society. There is a lack in innovative evaluation like the use of digital applications, the evaluation of research skills, the evaluation of social skills associated to the learning process: perseverance, intrinsic motivation, resilience. Even though the training programme for the teaching career introduces students in the postmodern

paradigm of teaching, learning, and evaluating, it does not break the barriers, the clichés that students have formed in their pre-university education. This proves that unlearning is a difficult process. Thus, pre-service teachers will perpetuate the traditional model of teaching and evaluating, even though they are representatives of Gen Z (Z Generation) in a training programme which strongly presents different facets of teaching and evaluation. The traditional paradigm of the teacher who holds the central position and provides the success of learning is no longer appropriate to the postmodern approach to lifelong learning. Although this study has some methodological limitations, the specific limitations of qualitative research, it highlights a very important idea with immediate and practical implications for teacher education:

1. reconsidering pedagogical practice classes in which assessment has a distinct weight, at least as much as teaching.

2. training teachers working with pre-service teachers in the spirit of the new trends in assessment (self-assessment, online assessment, assessment for learning) because their “signature pedagogies” are important.

Our study investigated the pedagogical clichés at a superficial level, associated to the first of the three dimensions in the architecture of a signature pedagogy: a surface structure associated to the acts of teaching, a deep structure associated to knowledge presentation, and an implicit structure associated to professional attitudes, values, and dispositions. Our study focused on the surface structure of the acts of teaching and on the superficial level of the students’ behaviour. Even though it was developed on a reduced number of participants and does not allow generalizations, the study highlights a trend that could be object to an in-depth analysis. A practical conclusion highlights the greatest importance of the innovative training programmes addressed to teachers that should enhance the newest paradigms in teaching, learning, and evaluating such as digitalization, soft skills, artificial intelligence. The flexible mindset of pre-service and in-service teachers requires the definitive breaking of the so-rooted clichés of 20th century school. The statistically significant differences of the signature pedagogies regarding evaluation depending on the type of pedagogical training programme in which students are enrolled highlight the contribution of the work-related factors to the flexibilization of the mindset. The clichés in evaluation were broken by the labour market, even if they could not be broken by the training programme. A competence-based approach in the work field may determine a different perspective on the importance of grade-centred evaluation. Therefore, a real competence-based approach in secondary and in upper secondary education will lead to the achievement of the growth and flexible pedagogical thinking patterns of pre-service and in-service teachers.

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