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# The practical reality of learning assessment in initial teacher training from the perspective of students vs teachers

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**ABSTRACT**

A central issue in the initial training of physical education teachers lies in the dominance of traditional assessment systems that fail to fully support student learning and engagement. This study addresses this issue by identifying the assessment systems used in four university campuses in the southernmost region of Chile, comparing the perspectives of teachers and students. A sample of 538 students (M=21.8, SD=2.9) and 60 teachers (M=42.9, SD=12.3) was surveyed using the "Questionnaire for the study of the assessment system in the initial training of physical education teachers". The results revealed significant differences between students and teachers in their perception of the importance of cognitive abilities and the coherence of syllabus elements. Traditional assessment tools were used more frequently, and students attributed failed assessments to issues with teaching methods. Additionally, students perceived having less influence on grading processes. These findings suggest a need for reform in assessment practices, emphasizing more formative and participatory approaches to better align with student needs and improve the learning process in physical education teacher training. The practical applications of the study facilitate implementing formative assessment in physical education with active feedback and training teachers in shared assessment.



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## 1. INTRODUCTION

Assessment in the teaching-learning (T-L) process has been a widely discussed topic in recent decades. There has been a clear need to move away from grading-focused approaches towards models that actively support students through constant feedback [1], [2]. In this regard, initial teacher training in physical education (ITEPE) plays a key role, as the adoption of good assessment practices fosters student engagement and participation in the T-L process [3]. This shift challenges traditional methodologies, such as the classic lecture, which has been predominant in teaching for decades [4].

The main issue in Western education lies in the influence of highly technician curricula, primarily centered on grading, which has significantly affected teaching practices [5]. As Tyler [6] noted, education has

been focused for decades on changing students' behavior patterns. As a result, the T-L process has marginalized learning, reducing it to something observable, quantifiable, and transferable to other contexts [7], where teachers make all the decisions in the classroom. The introduction of a competency-based model emerges as an alternative to modify this approach, placing students at the center of the process. This approach requires teachers to reflect on their practice, research, and design curricula and assessment tools, actively involving students in the process [8].

Reviewing the existing literature shows that assessment has traditionally been seen as a moment when teachers confirm the knowledge memorized by students, assigning a grade [9]. However, an assessment approach focused on learning promotes a shift towards understanding and applying knowledge in real-life situations [10]. This traditional approach has had a greater impact on disciplines like physical education, where the influence of sports has shaped assessment practices [11]. In the Chilean context, this emphasis on the technical execution of sports movements has often relegated the broader role of physical education within the school curriculum [12], [13]. In contrast, formative and shared assessment systems have emerged as effective alternatives, promoting learning and improving the teacher's role in the T-L process [14]. Numerous studies have demonstrated the positive effects of these systems on student autonomy [15], [16], improved self-perception of acquired competencies [17], and their implementation in tutored learning projects [18], including virtual formats [19].

To address this issue, the present study proposes identifying the assessment systems used during the initial training of physical education teachers in four university campuses in southern Chile. The study analyzes both faculty and student perceptions, seeking coherence or discrepancy between assessment practices and competency development. Through a quantitative approach, data on the frequency and types of assessment tools used are collected. The results of this study will provide insights into the perceptions of assessment from both students and faculty in Chilean ITEPE, which is particularly relevant given that international evidence still reports that traditional methods prevail, while the integration of formative and shared approaches remains limited [14], [20].

The innovation of this research lies in the comparative analysis of student and teacher perceptions of assessment in ITEPE. The study aims to provide crucial information for reforming assessment systems and aligning them with current educational demands. The results are expected to guide the implementation of improvements in the training centers involved in the study, especially by drawing on evidence that highlights the need to move away from certification-centered assessment models, which have shown limited impact on learning, and towards practices that promote deeper learning. This shift is particularly important in physical education, where traditional methods, such as physical fitness tests, have influenced the discipline's assessment practices [21], [22]. The adoption of learning-oriented assessments in ITEPE is essential for the future development of this field.

For all the aforementioned reasons, it is crucial to understand, from the perspective of the key actors in the T-L process, what type of assessment is being used in ITEPE, from here arises the research question: "what are the assessment systems used during the initial training of physical education teachers in four university campuses in the southernmost region of Chile, based on the perceptions of faculty and students regarding these systems?" To answer this question, the objective of the present study is to identify the assessment systems used during the initial training of physical education teachers in four university campuses in the southernmost region of Chile, from the perspective of faculty vs. students.

## 2. METHOD

Considering that aspects related to the sample were already known, an intentional and non-probabilistic sampling method was used [23]. The sample had to complete a questionnaire, a quantitative approach was employed [24]. The questionnaire used was the "questionnaire for the study of the assessment system in the initial training of physical education teachers," a validated instrument that has been previously used in both international and national contexts. It consisted of 63 items organized into ten questions [25]. Considering that the present study employed a quantitative approach to compare the perceptions of students vs. teachers regarding the assessment systems in ITEPE, the sampling was non-probabilistic and included a sample of 538 students and 60 teachers. To record participants' perceptions, a 4-point Likert scale was used (none or few; some or medium; many or high; all or very high). The instrument's application process adhered to strict ethical/methodological aspects, which were previously analyzed and approved by the scientific ethics committee of the University of Los Lagos (CEC-Ulagos), and each participant signed an informed consent form. The data were analyzed using descriptive statistics to obtain the arithmetic mean (M) and the standard deviation (SD). These data were then subjected to inferential statistical analysis (mean difference), correlating the assessments of students and teachers using the Mann-Whitney U test, with a significance level (Sig.) of $p \leq 0.05$. The entire process was carried out using SPSS statistical software, version 18.0.

## 3. RESULTS

The sample consisted of 538 students with ages (M=21.8, SD=2.9) and 60 teachers with ages (M=42.9, SD=12.3), all belonging to the initial training of physical education teachers from four university campuses located in the southernmost region of Chile. The results show that the opinions of students and teachers regarding the assessment systems applied and experienced, as well as their alignment with what is established in the course syllabi, indicate that this agreement occurs between "often" and "always" (students: M=3.2/SD=0.7; teachers: M=3.4/SD=0.7), with no significant differences in perception. On the other hand, in response to the question "for students: how often have teachers, through the assessment system used in the different courses, informed you about your learning? (M=2.6/SD=0.9); for teachers: how often do you inform students about their learning through the assessment system used? (M=3.4/SD=0.6)," significant differences were found between the perceptions of each group [U=23655.0/Sig. 0.01*], where the teachers' perception was significantly higher than that of the students. Table 1 presents the assessments related to the importance and presence of a series of cognitive abilities.

Table 1. Presents the appreciations of the importance and presence of cognitive abilities in course evaluation systems

| SN | Value A | | | | | | Indicator | Value B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Students | | Teachers | | S vs. T | | | Students | | Teachers | | S vs. T | |
| | M | SD | M | SD | U S-T | Sig. | | M | SD | M | SD | U S-T | Sig. |
| 1 | 3.3 | 0.9 | 2.8 | 1.0 | 11966.0 | 0.01* | Remember | 3.1 | 0.9 | 2.6 | 1.1 | 11960.0 | 0.01* |
| 2 | 3.8 | 0.4 | 3.8 | 0.4 | 16240.0 | 0.93 | Apply | 3.4 | 0.7 | 3.6 | 0.6 | 18729.0 | 0.03* |
| 3 | 3.8 | 0.4 | 3.8 | 0.4 | 16026.0 | 0.86 | Understand | 3.3 | 0.7 | 3.4 | 0.7 | 17238.5 | 0.35 |
| 4 | 3.7 | 0.6 | 3.8 | 0.4 | 18285.0 | 0.03* | Analyze | 3.1 | 0.8 | 3.3 | 0.8 | 15256.5 | 0.36 |
| 5 | 3.6 | 0.7 | 3.8 | 0.5 | 18852.0 | 0.12 | Synthesize | 3.1 | 0.8 | 3.2 | 0.8 | 17473.0 | 0.27 |
| 6 | 3.6 | 0.7 | 3.8 | 0.4 | 19012.5 | 0.01* | Evaluate | 2.9 | 1.0 | 3.3 | 0.9 | 19755.5 | 0.01* |

U=U de Mann-Whitney; T=Teachers; S=Students*$p \leq 0.05$

Regarding the importance that students and teachers place on the presence of various cognitive abilities in ITEPE, significant differences were observed in three aspects. On the one hand, students perceive a significantly greater importance in the cognitive ability of "remember," while teachers place significantly more value on the importance of cognitive abilities such as "analyze" and "evaluate". When asked about the presence of these cognitive abilities in the courses they have taken or taught, significant differences were found in three cases. Students consider the presence of the cognitive abilities of "remember" and "apply" to be higher compared to the teachers' perception. On the other hand, teachers perceive a significantly greater presence of the cognitive ability "evaluate".

Regarding the degree of coherence between various elements contained in the course syllabi, such as: i) the program's objectives; ii) the content; iii) the competencies; iv) the teaching methodology; and v) the assessment and grading. Significant differences were observed for all the aforementioned elements, with higher ratings from teachers in all cases, suggesting a lower perception of coherence among students. The data regarding the perception of the presence of a series of assessment instruments and procedures can be observed in Table 2.

The perception of the frequency of use of different assessment instruments/procedures revealed significant differences in six aspects. In all cases, students gave significantly higher ratings, indicating that exams/tests, short-answer exams, closed-ended questions exams, and written exams are used between "some" and "often," while reports and essays are employed between "often" and "always." Regarding the coherence of these assessment instruments/procedures with the development of teaching competencies, significant differences were observed in three aspects. Teachers perceived significantly greater coherence with "portfolios" and "reports or written assignments." On the other hand, students considered that "oral exams" were more aligned with teaching competencies, giving them significantly greater importance.

Furthermore, the applied instrument (questionnaire) included several statements related to assessment, aiming to gather the levels of agreement between teachers and students. Of the seven statements presented, all received high ratings (with a high or very high degree of agreement). Four of them received similar appreciation from both groups ("The assessment tests are based on an agreement with the teachers"; "The collection of information for assessment generates tension and nervousness in students"; "The collection of information for assessment fosters student motivation for learning"; and "Prior knowledge of the assessment system favors the student's learning process"). Meanwhile, three statements presented significant differences ("The interaction between teachers and students favors the assessment process" [U=18843.5/Sig. 0.01*]; "The assessment tests are announced with sufficient notice" [U=19376.0/ Sig. 0.03*]; "Positive assessment impacts the student's self-esteem" [U=18415.5/Sig. 0.03*]), with

significantly higher ratings from teachers in all cases. The ratings regarding the reasons why the assessment system has not been adequate can be seen in Table 3.

As shown in Table 3, regarding the reasons behind inadequate assessment processes, four items were found with significant differences in perception between students and teachers. In all four cases, students had a significantly higher perception (between "some" and "often") of situations related to teachers, such as lack of motivation, lack of training, lack of clarity, and the complexity of the assessment system itself. Finally, regarding how grading was established, both students and teachers gave a high level of agreement (between "medium" and "high") to the following statements: "Students grade themselves (partially or completely)"; "Grading is done through dialogue and consensus (between teachers and students) (partially or completely)"; "Grading is based on self-assessment (partially or completely)"; and "Grading is based on peer assessment (between classmates) (partially or completely)." Only one statement showed significant differences between teachers and students ("The grade is decided by the teacher based on the assessment" [U=11724.0/ Sig. 0.01*]), with students giving it a higher rating.

Table 2. Present frequency and coherence of assessment instruments in teacher training courses

| SN | Value A | | | | | | Indicator | Value B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Students | | Teachers | | S vs. T | | | Students | | Teachers | | S vs. T | |
| | M | SD | M | SD | U S-T | Sig. | | M | SD | M | SD | U S-T | Sig. |
| 1 | 2.3 | 1.2 | 2.3 | 1.3 | 6497.0 | 0.79 | Teacher's classroom observation (observation sheets) | 2.9 | 1.0 | 3.0 | 1.0 | 16823.5 | 0.59 |
| 2 | 2.8 | 0.9 | 2.5 | 1.1 | 14014.5 | 0.08 | Participation control in the classroom (in groups and debates) | 3.2 | 0.9 | 3.0 | 1.0 | 14904.0 | 0.28 |
| 3 | 2.6 | 1.1 | 1.7 | 1.5 | 10285.5 | 0.01* | Multiple-choice test | 2.6 | 1.0 | 2.7 | 1.2 | 17572.5 | 0.25 |
| 4 | 2.3 | 1.2 | 2.0 | 1.3 | 14197.5 | 0.11 | Open-ended questions exam | 2.9 | 1.0 | 3.0 | 1.0 | 17844.0 | 0.16 |
| 5 | 2.4 | 1.1 | 1.8 | 1.3 | 12078.0 | 0.01* | Short-answer questions exam (brief explanations) | 2.8 | 1.0 | 2.8 | 1.1 | 16147.0 | 0.99 |
| 6 | 2.6 | 1.1 | 1.6 | 1.4 | 9662.0 | 0.01* | Closed-ended questions exam (definitions) | 2.7 | 1.0 | 2.7 | 1.1 | 16402.5 | 0.85 |
| 7 | 2.5 | 1.2 | 2.1 | 1.4 | 13536.0 | 0.03* | Written exams with documents | 2.7 | 1.1 | 2.9 | 1.1 | 18055.0 | 0.12 |
| 8 | 2.0 | 1.4 | 2.1 | 1.6 | 16638.5 | 0.71 | Oral exams | 3.7 | 1.1 | 3.1 | 1.1 | 19255.0 | 0.01* |
| 9 | 3.2 | 1.0 | 2.9 | 1.4 | 15188.5 | 0.40 | Practical tests of a physical nature (physical exercises, game situations) | 3.5 | 0.8 | 3.3 | 1.0 | 15365.5 | 0.46 |
| 10 | 2.1 | 1.3 | 2.3 | 1.5 | 17207.0 | 0.41 | Portfolios | 2.4 | 1.2 | 3.0 | 1.0 | 19998.5 | 0.01* |
| 11 | 2.0 | 1.3 | 1.7 | 1.4 | 14033.0 | 0.09 | Field notebooks | 2.4 | 1.2 | 2.7 | 1.2 | 18376.0 | 0.07 |
| 12 | 3.5 | 0.8 | 3.3 | 0.9 | 13346.5 | 0.01* | Reports or written assignments | 3.0 | 1.0 | 3.3 | 0.8 | 18749.5 | 0.03* |
| 13 | 3.1 | 1.0 | 2.6 | 1.1 | 11967.5 | 0.01* | Essays based on written texts or audiovisual materials | 3.1 | 1.0 | 3.0 | 1.2 | 16453.0 | 0.81 |

*U*=U de Mann-Whitney; T=Teachers; S=Students; *$p \leq 0.05$

Table 3. Present level of agreement with statements related to the causes of an inadequate assessment system

| SN | Indicator | Value | | | | | |
|---|---|---|---|---|---|---|---|
| | | Students | | Teachers | | S vs. T | |
| | | M | SD | M | SD | U S-T | Sig. |
| 1 | The teacher's lack of motivation | 2.0 | 1.3 | 1.2 | 1.3 | 10475.5 | 0.01* |
| 2 | The teacher's lack of training | 1.9 | 1.3 | 1.3 | 1.3 | 12430.0 | 0.01* |
| 3 | The complexity of the assessment system itself | 2.4 | 1.1 | 1.7 | 1.3 | 11180.0 | 0.01* |
| 4 | The teacher's lack of clarity in applying it | 2.4 | 1.2 | 1.5 | 1.3 | 9879.0 | 0.01* |
| 5 | The lack of time for assessment | 2.3 | 1.2 | 2.2 | 1.4 | 15501.5 | 0.59 |
| 6 | The excessive number of students per class | 2.2 | 1.4 | 2.5 | 1.5 | 17949.5 | 0.15 |

*U*=U de Mann-Whitney; T=Teachers; S=Students**p* $\leq 0.05$

## 4. DISCUSSION

Both students and teachers generally agree on the adequacy of the assessment systems in accordance with the course programs. This indicates an organizational concern for designing curricular elements, such as plans and programs, coherently and implementing them in the T-L process faithfully to their design. Similar

results can be found in the literature [26]. However, this cannot be considered a solved issue, as even in tertiary education programs (such as master's programs), there are conflicting perceptions regarding the curricular alignment between assessment and learning outcomes [27]. Similarly, concerning an important element such as feedback, a significant discrepancy was observed in the perception of how frequently students are informed about their learning. Students rated this significantly lower, which is also seen in other studies [28]. While teachers perceive they provide feedback frequently, students feel this does not happen as often. This finding is crucial because feedback is fundamental to the T-L process, and several studies over the past decade have shown a lack of teacher-student communication, where students perceive the use of techniques and instruments that do not foster dialogue, deepening the traditional focus on grading through final exams and multiple-choice tests [29]–[31].

As seen in other studies, students rate the cognitive ability of "remembering" higher, while teachers consider the cognitive abilities of "analyzing" and "evaluating" as the most important [32]. This difference in perception could be explained by the fact that students traditionally experience assessment systems where cognitive abilities such as "remembering, applying, and understanding" predominate [33]. Regarding the presence of different cognitive abilities in the courses they have participated in (students) and directed (teachers), significant differences exist. Teachers report a greater presence of abilities like "evaluating," while students perceive a greater presence of "remembering" and "applying," as seen in both recent and decade-old studies [34]–[36].

Regarding the degree of coherence between the elements contained in the course programs (objectives, content, competencies, methodologies, assessment, and grading), significant discrepancies were observed for all elements, with teachers rating coherence higher, in contrast to students' significantly lower ratings. These findings are consistent with previous studies [32], [37] and could be explained by the difference in expectations and educational experiences between the two groups. Teachers are traditionally directly involved in the design and implementation of programs, while students tend to be recipients of the educational process [38], [39]. Regarding the perception of assessment between students and teachers related to the use and coherence of instruments/procedures, significant differences were found. Students report a more frequent use of exams and written tests, indicating greater exposure to these traditional forms of assessment. This could be related to students' perception of assessment as a process focused on memorization and information retrieval, a trend in higher education that has been discussed in the literature for two decades, showing a preference for traditional assessment methods over more reflective and complex ones [40]. Regarding the coherence of assessment instruments and the development of teaching competencies, teachers' perception differs significantly from that of students. Specifically, teachers perceive greater coherence in instruments like portfolios and written reports, while students give higher coherence to oral exams. This differentiated perception may be due to teachers' greater familiarity with curricular objectives and the competencies expected of students, and the fact that instruments like portfolios are commonly associated with formative and process-focused assessment [41].

The significant differences regarding the statements related to "student-teacher interaction as a promoter of the assessment process," "the presentation of assessment criteria in due time," and "the relationship between assessment and self-esteem" were rated higher by teachers, highlighting the importance and awareness teachers have of the impact of assessment and the need to strengthen communication and transparency in the assessment process [42], [43]. However, implementing strategies to align both groups' expectations remains a challenge. The statements related to the inadequate use of assessment highlight that one of the factors for this inappropriate use is related to teacher demotivation. On this topic, the study by Pérez-Romero [44] mentioned that teacher demotivation can be influenced by the lack of autonomy when teachers are unable to implement their own methodological approaches. In this regard, other studies indicate that the motivational climate created by the teacher directly affects student learning outcomes [43], making teacher motivation essential for the proper implementation of the assessment system, but more importantly, for its impact on students.

Regarding teacher training and its impact on graduates' assessment practices, Sagredo *et al.* [45] mentioned that involvement in assessment processes during professional training influences graduates' perceptions of their declared skills and the use of assessment as a support for student learning. However, Andreu-Andrés and Labrador-Piquer [46] indicated that simply addressing assessment-related subjects in initial teacher training does not ensure that teachers are prepared and willing to implement changes in assessment practices, as this depends on various factors. Other studies show positive evaluations related to the use of a variety of assessment instruments as part of the process in initial training [47], [48]. It is also evident that the inadequate use of assessment is related to teachers considering themselves to have limited knowledge about assessment and feedback (EFyC), leading to difficulties in involving students in the assessment process [49], [50]. Regarding this, Rizo [51] concluded in his research the need to change teachers' perceptions of assessment so that this also impacts their teaching practices.

The study's results show significant differences regarding experiencing inadequate assessment systems, with significantly higher ratings from students in cases related to time constraints and class size. Similar findings are seen in studies where teachers face challenges when there is a large number of students in the class, as they must allocate time to address administrative aspects alongside the implementation of assessment [52], [53]. However, over time, the benefits of using formative and shared assessment have become evident, both from the teachers' perspective and that of the students [54]–[56]. Finally, the reasons behind assessment systems perceived as inadequate reveal considerable criticism of the teacher's role in terms of motivation, clarity in applying assessment systems, and teacher training. These areas represent significant opportunities for professional development and training in more effective and transparent assessment techniques.

Expanding the discussion allows for suggesting concrete practical applications that could influence ITEPE. For example, a practical suggestion based on the study's findings could be to implement a formative assessment system in physical education classes that includes active feedback from students, allowing them to participate in both peer assessment and self-assessment of their performance. This would foster a more reflective and participatory learning process. Additionally, training teachers in the use of shared assessment tools would contribute to a deeper understanding of learning objectives, promoting autonomy and self-regulation in students during physical activities. These practices would not only enrich the assessment process but also support the development of critical skills in students and enhance the effectiveness of physical education teaching.

## 5. CONCLUSION

In conclusion, the study's results reveal a gap between the perceptions and expectations of teachers and students in ITEPE regarding assessment systems, highlighting the need to strengthen communication in teacher training. Additionally, this underscores the importance of adapting assessment systems within the ITEPE context, incorporating assessment systems that support the T-L process. After examining the study's results, which focused on identifying the assessment systems used during the initial training of physical education teachers in four university campuses in the southernmost region of Chile, from the perspective of faculty vs. students, discrepancies were found between the perceptions of students and teachers. While teachers perceive their assessment practices as student-centered and focused on learning, students perceive a prevalence of traditional assessment methods and tools, suggesting resistance to adopting formative approaches.

The lack of interaction, particularly from the students' point of view, regarding the frequency with which they are informed about their learning, highlights an important area for improvement. This is especially crucial considering that feedback is a fundamental aspect of formative assessment systems, and improving this communication could lead to a clearer understanding of assessment as a process, thereby helping to establish a more coherent and effective assessment system in the T-L process. The main implications of the study for the initial training of physical education teachers lie in the discrepancy between the perceptions of students and teachers, which suggests the need for a thorough review of the current assessment systems. Additionally, the predominance of traditional assessment tools, which do not allow for active student participation, could be limiting the development of critical competencies in future teachers. If measures are not taken to incorporate formative and shared assessments, there is a risk that future teachers will perpetuate these traditional practices in their own classrooms, potentially limiting the effectiveness of teaching and learning in the field of physical education.

Considering the new evaluation regulations promulgated within the Chilean educational context, the results of this study may serve as a resource for reforming and modernizing assessment approaches in ITEPE at the analyzed university campuses. This study addresses the proposed objective by offering a comparative analysis between the perceptions of faculty and students regarding the current assessment systems, revealing key discrepancies and areas for improvement. This is crucial, as a change in assessment approaches is precisely one of the current demands of education, requiring assessments that not only certify achievements but also facilitate and enrich the T-L processes.

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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

**CONFLICT OF INTEREST STATEMENT**

Authors state no conflict of interest.

**INFORMED CONSENT**

We have obtained informed consent from all individuals included in this study.

**ETHICAL APPROVAL**

The research involved human participants and complied with all relevant national regulations and institutional policies in accordance with the principles of the Declaration of Helsinki. The research process was approved by a Scientific Ethics Committee accredited by the University of Los Lagos (CEC-Ulagos).

**DATA AVAILABILITY**

The data that support the findings of this study are available on request from the corresponding author, [FGF]. The data, which contain information that could compromise the privacy of research participants, are not publicly available due to certain restrictions.

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