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Perceptions regarding primary and secondary school students' engagement in school learning: A multi-informant approach

La percepción de la implicación del alumnado de educación primaria y secundaria en los aprendizajes escolares: una aproximación multi-informante

Uma abordagem multi-informante ao envolvimento dos alunos através da personalização da aprendizagem

从个性化学习视角下多信息源对学生投入度的研究

مقاربة متعددة المصادر حول انخراط المتعلمين انطلاقًا من تفريد التعلم

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Abstract

A current challenge for primary and secondary education schools is to develop practices that promote greater engagement of students in their learning. Personalized learning responds to this challenge by placing the learner at the centre of teaching and learning processes. Within this framework the present study adopts a multi-informant approach so as to compare the perceptions of teachers, students and their parents regarding the level of engagement in school activities and learning, and on the factors that promote it, while also exploring whether these perceptions are influenced by certain characteristics of schools. To this end, we developed three versions of a questionnaire (one for each kind of informant) and applied it across a total of 14 schools (258 teachers, 2731 students and 718 parents). Sampling of schools was intentional, seeking variation in the following aspects: educational stage taught, type of school, size, socioeconomic context and the school's educational philosophy. Analysis of questionnaire responses revealed significant differences between the three groups in their perception of student engagement, as well as regarding the factors that promote it. There was no consistent pattern as to the characteristics of schools that may influence these perceptions. These results underline the need to design support processes for teachers, students and parents that take into account their different perspectives and guide them towards a shared vision of new educational practices based on personalized learning.

Keywords: school learning, multi-informant approach, questionnaires, engagement, personalized learning.

Resumen

Los centros de educación primaria y secundaria se enfrentan al desafío actual de generar prácticas que promuevan una mayor implicación y compromiso del alumnado con su aprendizaje. El enfoque de la personalización del aprendizaje pretende dar respuesta a este reto situando al aprendiz en el centro de los procesos de enseñanza y aprendizaje. Este trabajo, mediante una perspectiva multi-informante, tiene como objetivo contrastar la percepción de profesorado, alumnado y sus familias sobre el nivel de implicación del alumnado en las actividades y aprendizajes en centros educativos de primaria y secundaria, y sobre los factores que la promueven, así como identificar si estas percepciones se ven influenciadas por algunas de las características de los centros educativos. Para ello construimos un cuestionario con tres versiones dirigidas a los tres colectivos participantes y lo aplicamos a una muestra formada por 14 centros educativos (258 profesores/as, 2731 alumnos/as y 718 familiares). La muestra de centros fue intencional, buscando variabilidad en cuanto a las etapas educativas, la titularidad, el tamaño, el nivel socioeconómico y el proyecto educativo de los centros. El análisis estadístico de las respuestas de los cuestionarios revela importantes divergencias entre los tres colectivos sobre el nivel de implicación del alumnado en las actividades y aprendizajes escolares y los factores que la favorecen, así como algunas tendencias en función de las variables exploradas. Estos resultados subrayan la necesidad de diseñar procesos de acompañamiento al profesorado, alumnado y familias que tengan en cuenta sus distintas perspectivas y les orienten hacia una visión compartida de las nuevas prácticas educativas basadas en la personalización del aprendizaje.

Palabras clave: aprendizajes escolares, aproximación multi-informante, cuestionarios, implicación, personalización del aprendizaje.

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Resumo

As escolas enfrentam o desafio atual de criar práticas que promovam um maior envolvimento e compromisso dos alunos na sua aprendizagem. A abordagem da personalização da aprendizagem visa responder a este desafio, colocando o aluno no centro dos processos de ensino e aprendizagem. Este trabalho, utilizando uma perspetiva multi-informante, visa contrastar as perceções dos professores, dos alunos e das suas famílias sobre o nível de envolvimento dos alunos nas atividades e aprendizagens escolares, e sobre os fatores que o promovem, bem como identificar se estas perceções são influenciadas por algumas das características das escolas. Para isso, elaborámos um questionário com três versões destinadas aos três grupos participantes e aplicámo-lo a uma amostra de 14 escolas (258 professores, 2731 alunos e 718 familiares). A amostra de escolas foi intencional, procurando variabilidade em termos de níveis de ensino, propriedade, dimensão, nível socioeconómico e projeto educativo das escolas. A análise estatística das respostas aos questionários revela diferenças significativas entre os três grupos quanto ao nível de envolvimento dos alunos nas atividades e aprendizagens escolares, e aos fatores que o favorecem, bem como algumas tendências em função das variáveis exploradas. Estes resultados destacam a necessidade de criar processos de acompanhamento para professores, alunos e famílias que levem em consideração as suas diferentes perspetivas e os orientem para uma visão comum das novas práticas educativas baseadas na personalização da aprendizagem.

Palavras-chave: Aprendizagens escolares, abordagem multi-informante, questionários, envolvimento, personalização da aprendizagem.

摘要

当前，教育机构面临着如何促进学生更积极参与和投入自身学习过程的重大挑战。个性化学习理念旨在通过以学习者为中心的教学模式应对这一难题。本文采用多信息源视角，旨在比较教师、学生及其家庭成员对学生在校学习活动和学业参与度的认知，以及影响学生参与度的相关因素，并分析这些认知是否受学校特征影响。为此，研究团队设计了三套问卷，分别针对教师、学生和家庭成员，并在 14 所学校（包括 258 名教师、2731 名学生和 718 名家长）中实施。学校样本有意涵盖不同教育阶段、所有制类型、规模、社会经济水平和教育项目，以保证多样性。对问卷数据的统计分析显示，三类群体在学生参与度及其影响因素方面的看法存在显著差异，并在所分析的变量中体现出若干趋势。研究结果强调，必须为教师、学生和家庭成员设计相应的支持与引导机制，重视不同群体的观点，推动基于个性化学习理念的新型教育实践的共识与协作。

关键词：学业活动、多信息源方法、问卷、投入度、个性化学习。

ملخص

تواجه المؤسسات التعليمية التحدي المتمثل في تطوير ممارسات تُعزّز من انخراط المتعلمين والتزامهم بعملية التعلم. ويهدف نهج تفريد التعلم إلى الاستجابة لهذا التحدي من خلال وضع المتعلم في مركز عمليات التعليم والتعلم. وتسعى هذه الدراسة، من خلال مقاربة متعددة المصادر، إلى مقارنة تصورات كلٍّ من المعلمين والمتعلمين وأسرهم حول مستوى انخراط التلاميذ في الأنشطة والتعلم المدرسي، وحول العوامل التي تعزز هذا الانخراط، بالإضافة إلى التحقق مما إذا كانت هذه التصورات تتأثر ببعض خصائص المؤسسات التعليمية. ولهذا الغرض، تم إعداد استبيان بثلاث صيغ موجهة إلى الفئات الثلاث المشاركة، وتم تطبيقه على عينة مكونة من 14 مؤسسة تعليمية (258 معلمًا ومعلمة، 2731 تلميذًا وتلميذة، و718 من أولياء الأمور). وقد تم اختيار العينة بطريقة قصدية لضمان التنوع من حيث المراحل التعليمية، وطبيعة المؤسسة (عمومية أو خاصة)، والحجم، والمستوى الاجتماعي-الاقتصادي، والمشروع التربوي. وكشف التحليل الإحصائي لبيانات الاستبيانات عن وجود تباينات ملحوظة بين الفئات الثلاث فيما يتعلق بتقدير مستوى انخراط المتعلمين في الأنشطة والتعلم المدرسي، وكذلك بشأن العوامل الداعمة لهذا الانخراط، بالإضافة إلى بروز بعض الاتجاهات المرتبطة بالمتغيرات المدروسة. وتؤكد هذه النتائج على ضرورة تصميم مسارات مرافقة تربوية موجهة للمعلمين والمتعلمين وأسرهم تأخذ بعين الاعتبار اختلاف وجهات نظرهم، وتعمل على توجيههم نحو رؤية مشتركة

الكلمات المفتاحية: التعلمات المدرسية؛ المقاربة متعددة المصادر؛ الاستبيانات؛ الانخراط؛ تفريد التعلم

Introduction

Most education systems today seek to ensure that the school experience prepares students to face twenty-first century challenges and become active citizens in building a more sustainable, inclusive and fairer world. This goal has led to a number of curricular reforms inspired by two approaches: competence-based education and personalized learning. The former refers to the issue of *what should be taught*. Some authors (Miettinen, 2022; Voogt & Pareja, 2012) regard the OECD's *Definition and Selection of Competences (DeSeCo)* project (OECD, 2001) as initiating the shift towards competence-based learning. The second approach, personalized learning, refers to the question of *how to teach* and seeks to maximize students' active engagement in their own learning processes. Although this idea can be traced back to the work of Dewey at the beginning of the twentieth century, it is only more recently that it has been incorporated into the curriculum of several countries (Australia, Canada, Finland, New Zealand, Spain, the UK and the USA, among others) as a complement to competence-based learning. A wide range of governmental organizations (OECD, 2020; UNESCO, 2017; U.S. Department of Education, 2016) have also highlighted the potential of this approach to improve learning outcomes and enhance student engagement.

The primary focus of interest in the present study is personalized learning. It is now widely acknowledged that the one-size-fits-all approach of traditional education systems is unsuited to meeting the wide diversity of student needs and, therefore, to promoting equity among students. Personalized learning aims to address this by taking into consideration not only the different personal, social and cultural needs of students, but also their personal interests, goals and choices with respect to learning (Coll, 2018). Accordingly, this is a student-centred approach that seeks to promote engagement and active participation, to encourage effort and persistence when carrying out tasks, to make learning a positive emotional experience, to foster a sense of belonging to the class group and to encourage self-regulation of learning, the ultimate goal being to provide students with a deep and meaningful learning experience (Fredricks, 2022; Havik & Westergård, 2020). The importance of this is underscored by the fact that the opposite scenario, namely school disengagement, is known to be associated with absenteeism, poor academic achievement and, over time, to dropout (Montalbán & Ruiz, 2022; Ramos et al., 2017).

As Wang et al. (2019) point out, engagement is a multidimensional phenomenon that encompasses all the ways in which students interact with their environment both in and outside school, and consequently, a holistic approach that takes into account the various contexts in which young people develop is needed to foster their active participation (Fernández-Zabala et al., 2016; Izar-de-la-Fuente et al., 2023; Wang et al., 2019). In this respect, Fredricks (2022) considers that student engagement comprises three closely related dimensions: cognitive (thinking), whereby students employ strategies to master content, solve problems or self-regulate their learning; behavioural (doing), which refers to active involvement and participation, putting effort into tasks and activities, and positive conduct; and emotional (feeling), defined by interest in learning and feeling happy and secure at school. Each of these dimensions must be considered when seeking to promote engagement, and this requires new approaches to the design of learning environments.

Changes to the curriculum and approaches to teaching pose important challenges for educational authorities, schools and other related stakeholders. Indeed, these processes of change and innovation require the participation of all those involved so as to create within schools the necessary conditions for their effective implementation (Fullan, 2025). It is important here not to overlook the role played by parents, whose views are often absent from many studies on school-related issues that do, by contrast, consider the perspective of teachers and students. However, as the extensive review by Bempechat et al. (2022)

shows, parents can influence their child's engagement and school performance in various ways. In particular, these authors note that parental influences, in the form of emotional support, their attitudes and commitment toward school, and their expectations of their child, are a stronger predictor of student engagement than is the influence of teachers or peers.

This highlights the importance of exploring and understanding the perceptions that all stakeholders have regarding processes of teaching and learning, so as to guide interventions aimed at improving them (Molinari & Grazia, 2023). In this regard, the present study aims to identify and compare the perceptions of teachers, students and parents regarding the level of engagement in school activities and learning, and on the factors that promote it. These perceptions are understood as reflecting participants' subjective interpretation based on their previous experiences, beliefs, emotions and the context in question. As Slavin (2020) points out, perceptions about school are crucial for understanding how children respond to learning scenarios, insofar as it is the perceived – rather than objective – reality that determines their behaviour, motivation, engagement and emotional wellbeing. In the next section we review the findings of a number of studies that have gathered and compared the perceptions of teachers, students and parents about various aspects of teaching and learning processes. We then go on to describe our perspective on the relationships between engagement, the attribution of meaning and personalized learning.

Literature Review

Multi-informant approaches to the study of teaching and learning processes

While it is acknowledged that knowing the views of teachers, students and parents is important for understanding and improving educational practices, there is little research comparing their respective perceptions of the learning process in schools. In reviewing the literature we identified a number of studies that set out to compare the perspectives of different informants on the emotional and/or relational dimension of learning, although few focus exclusively on student engagement in school activities and learning. In what follows we discuss the findings grouped according to the type of informants who took part in the research.

A considerable number of studies have compared the perceptions of teachers and students about various aspects of education, including productive learning or the opportunities students have to make decisions about learning tasks (Könings et al., 2014), teacher-centred versus student-centred learning environments (Mameli et al., 2020), the quality of teaching (Wisniewski et al., 2022), the relationship between school climate, engagement and academic achievement (Berkowitz et al., 2017; Konold et al., 2018), and student engagement in school activities (Chandra, 2020; Wang et al., 2016). These studies use questionnaires to gather data from teachers and students, and they encompass a wide range of sample sizes, from 60,441 students and 11,442 teachers from 298 secondary schools in Konold et al. (2018), to 26 teachers and 397 students from a single school in Mameli et al. (2020). The findings overall reveal a divergence of views between teachers and students, with teachers tending to have more positive perceptions of education than students (Mapulanga & Bwalya, 2024). Some authors (Könings et al., 2014) use the term 'friction' to refer to these discrepancies and suggest that large differences between students' learning strategies and teachers' teaching strategies may evolve into 'destructive frictions' that act as a barrier to productive learning. Chandra (2020) similarly claims that students are likely to engage more when activities are aligned with their interests, incorporate their previous experience and allow them to make decisions about their own learning process. For their part, Wisniewski et al. (2022) show that the type of school has an impact on student engagement. Overall, these studies highlight the need for teachers and students to have a shared understanding of

education so as to foster optimal teaching and learning experiences within schools.

A second group of studies have examined the views of students and parents about school and how these views influence student engagement in learning activities. Griffith (2000) investigated whether students' and parents' views about school climate were more closely aligned when students attended the same school and shared a sociocultural background. The results of a survey administered to a large sample (49,875 parents and 30,725 students from 122 primary schools) indicated that consensus of views was less likely in schools with a more diverse student population, highlighting the need to consider the characteristics of schools in order to better understand divergence in perceptions. More recently, Song et al. (2024) similarly used questionnaires to explore the educational expectations of 455 secondary school students and their parents. They found that high expectations among adolescents were associated with high learning engagement, regardless of whether their parents reported high or low expectations.

A third and smaller group of studies have compared the perceptions of teachers, students and parents about specific aspects of education. For example, Bou-Sospedra et al. (2021) developed three questionnaires to gather information about different teaching methods (ranging from the more traditional to more constructivist) in a sample comprising 198 secondary school students, their parents (n = 104) and 23 of their teachers, all from the same school. The results showed a lack of concordance between the three groups of informants regarding their preferred teaching methods. Molinari and Grazia (2023) compared the perceptions of teachers, students and parents about school climate. They surveyed 105 teachers, 320 parents and 1,070 students enrolled in four secondary schools, in each case exploring their views on the same two dimensions: classroom practices and the relational atmosphere in the school. Comparison of perceptions revealed important differences between the three groups of informants, with teachers generally reporting a more positive view of the quality of the school environment. Smith (2021), in a study involving 6,184 students, 1,344 teachers and 1,472 parents from across 50 schools, similarly reported discrepancies between participants' perceptions of school climate. Furthermore, they found that the perceptions of those surveyed were strongly associated with the type of school (i.e. the educational level taught) but not their size. In summary, the literature provides consistent evidence of discrepancies in the perceptions of these three groups of informants, although the key factors driving these differences have been less systematically identified.

Relationships between school engagement and personalized learning from a constructivist and sociocultural perspective

The changes associated with the information society have given rise to an important gap between what students do and learn in school and out-of-school contexts (Bronkhorst & Akkerman, 2016), making it more difficult for them to attribute meaning to what they are learning and, therefore, to engage with school activities. Personalized learning strategies (Bray & McClaskey, 2015) have emerged in response to this challenge and seek to help students find a stronger sense of meaning and personal value in what they learn at school (Coll & Engel 2023).

From a constructivist and sociocultural perspective, students are more likely to attribute meaning to content and learning activities that align with what is important to them, that is, with the goals, interests and motivations that form part of their personal and professional life project (Coll, 2018). The premise here is that meaning is constructed and that this process can be facilitated through specific educational initiatives. Personalized learning is a clear example of an intervention designed to help students attribute meaning to their learning and to engage with school activities. It is a student-centred approach to education that takes students' voices into account, encourages them to identify their own goals and needs, and gives them a degree of autonomy in making decisions about their own learning process. Examples of personalized

learning strategies include taking students' interests, goals and choices into account when designing activities (Harackiewicz et al., 2016; Solari et al., 2023), accepting and promoting their ability to make decisions about certain aspects of these activities (DeMink & Netcoh, 2019), building bridges between in-school and out-of-school learning experiences (Oller et al., 2021), introducing activities that encourage students to reflect on how best to approach in-school and out-of-school learning, and on how they see themselves as learners (Engel et al., 2022), and placing greater emphasis on content that is socially and culturally relevant to students (Silseth & Erstad, 2022), among others.

The present study examines the perceptions of teachers, students and parents about the factors that influence student engagement in school activities. By doing so from the perspective of personalized learning, it adopts a novel approach that has so far been under-explored in the literature.

The specific study objectives were as follows:

1. To compare the perceptions of teachers, students and their parents about the level of student engagement in school activities and learning.
2. To compare the perceptions of teachers, students and their parents regarding the factors that help to promote student engagement in school activities and learning.
3. To determine whether the perceptions of teachers, students and their parents about student engagement and the factors that influence it vary according to certain characteristics of schools.

Method

In order to gain a more holistic view of student engagement in school activities and learning, and to avoid the potential bias associated with a single data source, we opted to use a multi-informant approach. To this end, we designed a questionnaire with three versions, one for each group of informants: teachers, students and their parents.

Sample and variables

The sample for this study comprised 14 schools located within the province of Barcelona (see Figure 1). Sampling was intentional and we did not seek to obtain a representative or exhaustive selection of schools in our area. Rather, schools were selected to ensure variation and balance across the following variables: educational stage taught (primary and/or secondary), size (large or small), socioeconomic level of school population (high, medium or low), type of school (state or privately managed, state-funded) and the school's educational philosophy (whether or not they adopt a personalized learning approach). Based on both the literature and our theoretical framework, these are all variables of interest that may influence student engagement. Data were gathered from three groups of informants: teachers, students and parents (see Figure 2).

Figure 1. Characteristics of the sample of schools (numbers are percentages)

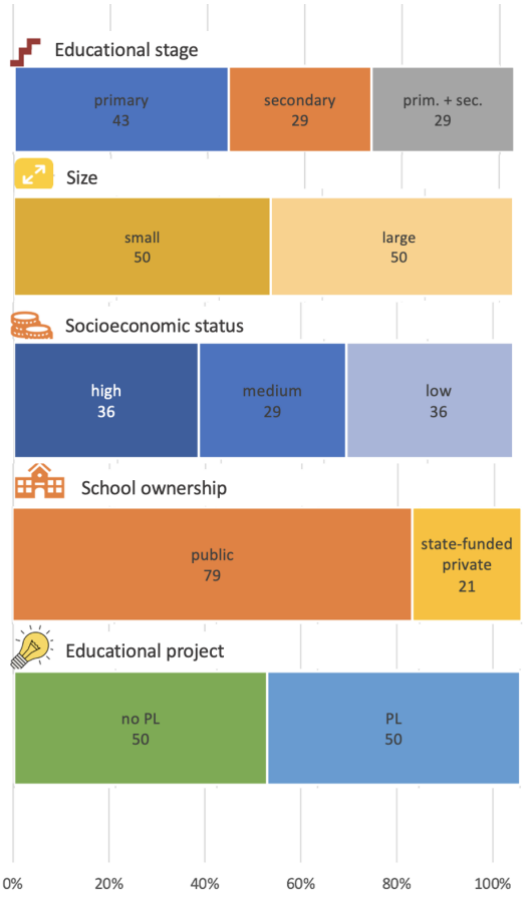
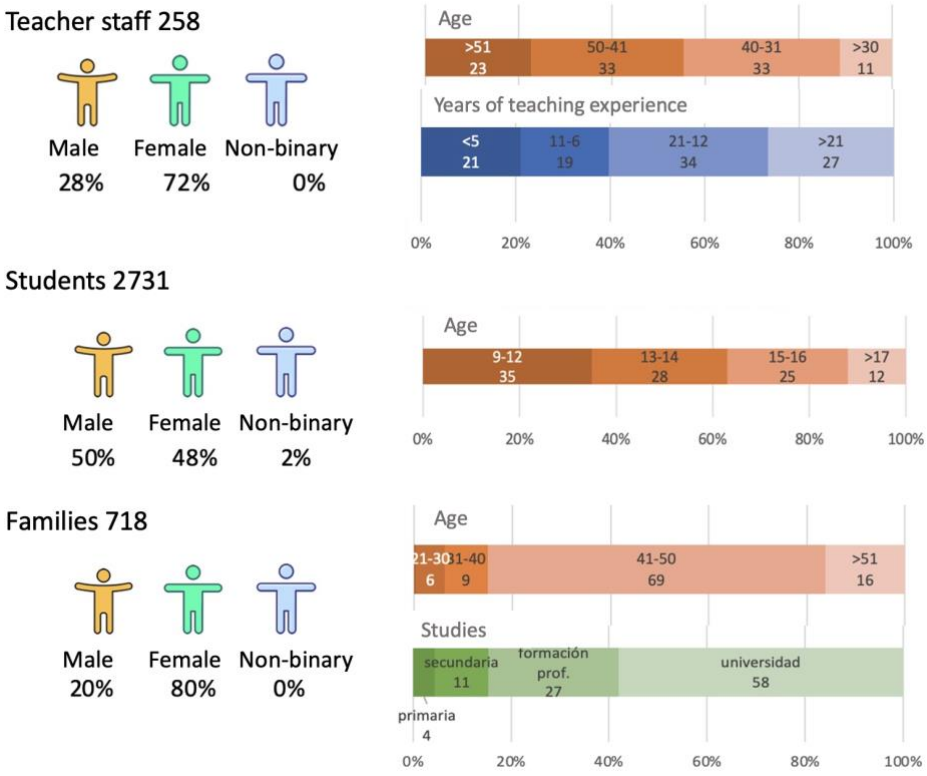


Figure 2. Number of valid questionnaires gathered and sociodemographic data for each of the three groups of informants



Data Collection

The questionnaire comprised three blocks of items relating to the following: 1) sociodemographic information (age, gender, socioeconomic status, etc.), 2) perceptions about student engagement in school activities and learning, and 3) views regarding the factors that encourage students to engage in learning. As in previous studies (Konold et al. 2018; Mameli et al., 2020), the items of the three versions all relate to the same aspects and differ only in the specific wording, which was adapted for each group of informants.

Items in block 2 were designed to evaluate two aspects: student engagement and support from teachers. For block 3 we first created a 5x3 table, in which the rows corresponded to the five dimensions of personalized learning proposed by Coll (2018), namely alignment with a student's interests and goals, student decision-making over learning activities, content of relevance to the student's sociocultural context, connections between students' in-school and out-of-school learning experiences, and experiential learning. The columns corresponded to the three dimensions of engagement proposed by Fredricks (2022), namely thinking, doing and feeling. We then drew up an item for each of the cells in the table, corresponding to the intersection between different dimensions. To mitigate acquiescence bias, some of the items were reverse worded, that is, in the opposite direction of the construct being measured.

All items in blocks 2 and 3 were rated using a 4-point scale. Response options for items in block 2 reflected either the level of agreement (1 = "Strongly disagree"; 2 = "Disagree"; 3 = "Agree; 4 = "Strongly agree") or frequency (1 = "Never"; 2 = "Occasionally"; 3 = "Often"; 4 = "Always"), while those in block 3 were rated only in terms of the level of agreement.

The complete list of items for each version of the questionnaire underwent an iterative process of review, discussion and reformulation in order to eliminate repetitions, improve wording and ensure that all the dimensions of interest were adequately covered. As part of this process the item statements were submitted to a panel of 10 experts, who verified their correspondence with the theoretical framework and the different dimensions of interest, as well as the suitability of their wording for the three groups of informants. The three versions of the questionnaire were also piloted with a sample of 10 students, 12 teachers and 11 parents to ensure that all items were clear and unambiguous. In addition, and to determine the reliability (internal consistency) of scores on each version of the questionnaire, we calculated Cronbach's alpha coefficients for items in blocks 2 and 3, which in all cases were excellent or adequate (alphas ranged between .906 and .991).

Prior to any data collection, participants were informed about the aims of the study and what would be required of them, it being made clear that they could withdraw at any time. Informed consent was signed by all participating informants, which in the case of students who were legal minors also included permission from their parents or legal guardians for the young person's participation. The entire data collection process was conducted in strict accordance with our university's code of conduct and ethical protocols for research, thereby ensuring the anonymity of participants, the confidentiality of their data and full respect for their human rights. Reflexivity was also considered crucial for the study, and thus we maintained a critical stance throughout, acknowledging that our experiences, pedagogical beliefs, epistemological position and expectations as researchers could influence our methodological decisions.

Teachers and parents completed an online version of their respective questionnaires, hosted on the Qualtrics platform. Students responded to a online version of the questionnaire in a classroom setting in the presence of a member of the research team, who explained the purpose of the study and the items, and remained on hand to resolve any queries.

Data analysis

After first conducting a descriptive analysis of questionnaire responses, we used non-parametric tests to determine the effect of the variables considered, the choice of test (Mann-Whitney U, Spearman R or Kruskal-Wallis) depending on item characteristics. Statistical significance was set at $p < .05$.

Results

We will begin by considering the results relating to the first study objective, which involved comparing the perceptions of teachers, students and parents about the level of student engagement.

It can be seen in Table 1 that the mean ratings on both of the items evaluating perceived student engagement differed significantly between groups of informants. On the first item, relating to participation in class, teacher ratings were significantly higher than those of students, with parent ratings occupying an intermediate position. Ratings on the second item (referring to handing in work of time) followed a different pattern: in this case, parent ratings were significantly higher than those of teachers.

Table 1. Mean ratings of perceived student engagement in each group of informants

	Participation in class	**Handing in work on time**
p-value	.001	.001
Teachers	3.13	2.97
Students	2.70	3.29
Parents	3.02	3.36

Note: Ratings on 4-point scale: 1, very low · 2, low · 3, high · 4, very high

Table 2 shows the results obtained in each group of informants for the two items exploring perceived support from teachers with regard to promoting student engagement. It can be seen that on both items, which relate to teachers showing interest in what students think and recognizing their efforts, student ratings were significantly lower than those of teachers.

The second study objective was to compare the perceptions of teachers, students and parents regarding the factors that help to promote student engagement. It can be seen in Table 3 that there were significant differences between the three groups of informants on all of the items pertaining to this aspect, and overall the level of agreement across groups was low.

Table 2. Mean ratings in each group of informants of perceived support from teachers with regard to promoting student engagement

	Showing interest in what students think	**Recognizing students' efforts in learning**
p-value	.001	.001
Teachers	3.53	3.35
Students	2.72	2.87
Parents	3.03	3.11

Note: Ratings on 4-point scale: 1, very low · 2, low · 3, high · 4, very high

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Table 3. Mean ratings for the three groups of informants on the items exploring factors that help to promote student engagement

Dimensions of personalized learning	**Item**	**Teachers**	**Students**	**Parents**	***p***
Culturally sensitive content	Everyday life	3.50	2.52	3.41	.001
	Proximal context	2.99	2.32	2.95	.001
	Family involvement	2.99	2.76	2.90	.001
Alignment with student interests	Expressing own interests	3.02	2.58	3.32	.001
	Working on topics of interest	3.52	2.72	2.36	.001
	Discovering new interests	3.24	3.09	3.66	.001
Connections between in-school and out-of-school learning experiences	Out-of-school learning	3.64	2.85	3.56	.001
	Recounting experiences outside school	3.30	2.93	1.93	.001
	Useful learning in everyday life	3.60	3.29	3.55	.001
Decision making	About content	3.03	3.37	2.51	.001
	About types of activities	3.12	2.58	3.19	.001
	Appraisal of activities	2.88	2.55	2.89	.001
Experiential learning	Practical tasks	3.43	2.93	2.97	.001
	Manual tasks	3.29	3.01	3.20	.001
	Presenting completed work	3.13	2.93	3.12	.001

Note: For all items, differences are significant at $p < .05$. Shaded cells: mean rating ≥ 3. Ratings on 4-point scale: 1, strongly disagree · 2, disagree · 3, agree · 4, strongly agree.

Whereas mean ratings among teachers were above 3 (indicating either agreement or strong agreement) on the large majority of items (80.0%), this was the case for only a little over half of the items (53.3%) among parents, and for only four items (26.6%) among students. The items that yielded the highest ratings related to connections between in-school and out-of-school learning experiences (teachers: 3.30-3.64; students 2.85-3.29; parents: 1.93-3.56), alignment with student interests (teachers: 3.02-3.52; students: 2.58-3.09; parents: 2.36-3.66), and experiential learning (teachers: 3.13-3.43; students: 2.93-3.01; parents: 2.97-3.20).

Finally, the third study objective was to examine whether the perceptions of teachers, students and their parents about student engagement and the factors that influence it vary according to certain characteristics of schools.

Table 4. Analysis of differences in the mean ratings obtained in each group of informants when considering different characteristics of schools. Data are p-values for differences in perceptions between groups

		Educational stage			**Size**		**Socioeconomic level**			**Educational philosophy**		**Type of school**	
Dimensions of personalized learning	Items	P	S	P+S	Pq	Sm	L	M	Lo	M	H	Pu	S
Student engagement	Class participation	.001	.001	.001	.067	.001	.001	.001	.001	.001	.001	.001	.001
	Timely submission of tasks	.001	.001	.001	.001	.001	.001	.005	.001	.001	.001	.001	.001
Support from teachers	Interest in students' views	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Recognition of student effort	.152	.001	.001	.810	.001	.001	.001	.001	.001	.001	.001	.001
Culturally sensitive content	Everyday life	.001	.001	.001	.000	.001	.001	.001	.001	.001	.001	.001	.001
	Local context	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Family involvement	.111	.047	.001	.058	.001	.726	.043	.001	.295	.001	.018	.001
Alignment with student interests	Expressing personal interests	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Working on topics of interest	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Discovering new interests	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
Connections between in-school and out-of-school learning experiences	Learning outside school	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Sharing out-of-school experiences	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Learning useful in everyday life	.001	.007	.001	.001	.001	.036	.001	.001	.001	.001	.001	.001
Decision-making	Regarding content	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Regarding types of activities	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Assessment of activities	.001	.001	.001	.642	.001	.001	.001	.001	.001	.001	.001	.001
Experiential learning	Practical tasks	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
	Hands-on work	.006	.093	.001	.352	.001	.241	.415	.001	.157	.001	.131	.001
	Presentation of completed work	.837	.001	.001	.064	.001	.013	.001	.004	.120	.001	.001	.001

Note 1: P, Primary; S, Secondary; Sm, Small; L, Large; oL, Low; M, Medium; H, High; Pu, Public; S, Subsidised.
Note 2: Shaded cells: p > .05, indicating no significant differences between groups of informants.

It can be seen in Table 4 that the significant differences we observed between groups of informants in their mean ratings of student engagement, support from teachers and the factors that help to promote engagement are generally maintained even when taking into account differences in the characteristics of schools (i.e. educational stage taught, size, socioeconomic level, educational philosophy and type of school). However, a degree of consensus across informants was observed on three items in particular when considering certain characteristics of schools. The item relating to "Experiential learning: Manual tasks" yielded a degree of agreement in secondary schools, small schools, those with a population of low or medium socioeconomic status, schools that do not adopt a personalized approach to learning and in state schools. In the case of the item relating to "Culturally sensitive content: Family involvement", some agreement was present in primary schools, small schools, those with a population of low socioeconomic status and schools that do not adopt a personalized approach to learning. Finally, the item relating to "Experiential

learning: Presenting completed work" showed a degree of informant agreement in primary schools, small schools and schools that do not adopt a personalized approach to learning.

Overall, these results suggest that of the school characteristics considered, the only ones that appear to be associated with some degree of informant agreement over student engagement and the factors that influence it are school size, the educational stage taught, the school's educational philosophy and the socioeconomic status of the school population.

Discussion

The first point to highlight from our results is that teachers, students and parents clearly differ in their perceptions of student engagement in school activities and learning and the factors that help to promote it. This may be understood in terms of their different experiences and roles in education. Teachers' classroom behaviours will be influenced by their pedagogical conceptions, while students will, based on their experiences, develop their own ideas of how teachers may help them to learn. As for parents, they will also have their own views of what education should entail based on their personal experiences of school and their hopes and expectations for their child's future. However, as Könings et al. (2014) point out, this lack of congruence (or friction) between teachers' intentions and students' conceptions of learning may lead to misunderstandings and undermine the effectiveness of teaching and learning processes. These authors therefore stress the importance of taking students' views into account when planning and implementing learning activities. From our perspective, informed by personalized learning (Bray & McClaskey, 2015), we agree with Könings et al. (2014) that involving students as well as teachers in the design of instructional activities could, by accounting for the perceptions of both stakeholders, lead to more effective pedagogical practices. That said, we also share the concern expressed by Mameli et al. (2020), namely that it is unclear how students and teachers might co-construct valuable learning activities if they do not have a shared view of what they are doing together in the classroom. Nevertheless, we also agree with Wisniewski et al. (2021) that reflecting on these discrepancies can be an opportunity for teachers to question their own assumptions and design learning environments that are more suited to the needs of their students.

The results we obtained when comparing perceptions of the level of student engagement across the three groups of informants suggest that their views are influenced by their role and responsibilities in relation to the aspect of the teaching and learning process that is being considered. Thus, in those aspects where greater responsibility falls on teachers, such as promoting active engagement among students, teachers had a more positive view of their own behaviour (higher mean ratings) than did students or parents. Conversely, when it comes to handing in work on time, which is the responsibility primarily of students, and to a lesser extent parents, teacher ratings were the lowest among the three groups of informants. This variability reflects the findings of Wang et al. (2016) but contrasts with the results of Molinari and Grazia (2023), who concluded that teachers' views are always more positive than those of students or parents. Konold et al. (2018) note that teachers tend to adopt a more holistic view of education, and consequently their more positive perception may be the result of their commitment to the school and their knowledge of educational initiatives and improvements. By contrast, the perceptions of students and parents tend to be based on their personal experiences and relationships within the school setting (Könings et al., 2014; Wisniewski et al., 2021). The relationship between students and their parents is also a factor to consider here, insofar as parents' expectations of their child's academic achievement can have a strong impact on the latter's engagement in school activities and learning (Song et al., 2024).

Regarding perceptions of the support offered by teachers to encourage student engagement, these were most positive among teachers and least positive among students. This divergence of views, which has been reported previously, might act as a barrier to

student engagement, which depends, among other things, on students feeling emotionally supported and recognized for their efforts and achievements by teachers (Izar-de-la-Fuente et al., 2023; Könings et al., 2014). In this respect, we agree with Izar-de-la-Fuente et al. (2023) about the need to design interventions that can guide teachers in building secure relationships of trust and mutual acceptance with their students. Our results here suggest that such initiatives should also focus on promoting teacher behaviours that indicate recognition of their students' achievements as learners.

With respect to perceptions of the factors that help to promote student engagement, our results showed important differences across informants, most notably between students and teachers. This suggests that in addition to designing learning activities and scenarios that are aligned with their students' interests, ensuring that content is linked to students' everyday lives and experiences, and affording them a degree of autonomy and responsibility over the teaching and learning process, teachers must also make explicit the goals and purposes of different activities so that students become aware of these factors that are key to personalized learning (Oller et al., 2021). Personalized learning is a challenge not only for teachers who wish to implement it, but also for students. Indeed, if students are to reflect on their own interests, make links between their learning experiences in and outside school, and assume increasing responsibility for their own learning, they need to be guided and supported by teachers throughout the process (Bray & McClaskey, 2015; De Mink & Netcoh, 2019). Parents also have a key role to play in supporting and promoting their child's learning interests (Harackiewicz et al., 2018).

On a finer level of detail, it is worth noting that the perception of teachers in our sample was that engagement could be fostered by designing activities that are aligned with students' learning interests, a finding that contrasts with the study by Chandra (2020), in which only a small number of teachers identified this as being important. Our results here are consistent with the shift towards a teaching approach in which students are given increasing opportunities to participate in designing tasks and in decision making about certain aspects of their learning process (Bou-Sospedra et al., 2021). It should be noted, however, that teacher ratings were low on one of the items we used to explore perceptions about encouraging decision making among students as a way of promoting engagement, which suggests, in line with Mameli et al. (2020), that teachers do not necessarily see the value of giving students greater responsibility in this regard. Mameli et al. (2020) speculate that this may be because teachers believe they already achieve these educational goals.

Finally, and regarding characteristics of schools that influence the perceptions of teachers, students and parents about student engagement and the factors that promote it, our analysis revealed – in contrast to what we hypothesized – no consistent pattern as to the characteristics of relevance. Whereas Berkowitz et al. (2017) concluded that school size, family socioeconomic status, ethnicity and the geographical location of schools seem to have the greatest impact, the only variables associated with a trend toward greater consensus across our three groups of informants were school size and the educational stage taught, a finding that is in line with Smith (2021).

Conclusions

The present results suggest that the successful implementation of curricular reforms and personalized learning requires the design of support processes for teachers, students and parents that take into account their different perspectives and guide them towards a shared vision of new educational practices. Doing so would facilitate not only the work of teachers but also students' learning and the capacity of parents to provide the necessary support (Bou-Sospedra et al., 2021). In addition to the practical implications of our findings that have already been mentioned, there are three other aspects that merit attention. One is the need to create collaborative spaces in which teachers can reflect on their own perceptions, as well as

those of students and parents, and then use what is learned to inform their decision making about how best to promote student engagement. Second, teachers should aim to communicate more with both students (e.g. making explicit their recognition of and interest in students' learning) and parents (e.g. making clear the value of activities based on students' interests) so as to share their pedagogical thinking and address any queries or concerns that students and parents may have. Finally, there is a priority need for evaluation of different teaching approaches and their impact on student engagement. All these initiatives, as well as others, require the support of educational authorities to ensure that teachers are given the time and space they need to engage in effective collaboration of the kind described above.

Regarding the limitations of this study and future lines of research, a primary shortcoming is that our results are based solely on self-report questionnaires. We aim to address this in future studies by using qualitative methods such as interviews, focus groups or learning diaries so as to gain a more nuanced understanding of the perceptions of different stakeholders. In addition, we plan to conduct an analysis of educational practices in schools that have implemented personalized learning so as to explore their effect on student engagement. A further complement to this research would involve analysing teacher collaboration (de Jong et al., 2022) in schools that implement personalized learning. Together, these initiatives would enable a fuller and more holistic account of the study phenomenon (Smith, 2021; Wang et al., 2016). Finally, future studies should aim to include a larger sample of schools so as obtain a more accurate picture of perceptions regarding student engagement and the factors that help to promote it, and to design practices that are more closely tailored to the needs of teachers, students and parents.

In summary, and despite the aforementioned limitations, the results of this study shed light on the differing perceptions of teachers, students and parents with regard to student engagement and how to promote it. Understanding these differences is important for ensuring that school activities and learning become a meaningful and personally relevant experience for students.

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