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Student-Centred Approaches in Higher Education From the Student Perspective

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Teaching approaches in higher education have been the subject of considerable research, which has resulted in a paradigm shift from teacher-centred to student-centred approaches. The present study investigates this shift, focusing on student eagerness to participate in various aspects of education and their expectations of teachers' roles. It includes 218 students enrolled in the Primary Education programme at the Faculty of Education, University of Maribor, in the 2023–2024 academic year. Through a questionnaire, diverse student attitudes towards student-centred approaches were revealed. Students expressed a desire to participate in decision-making about their education, particularly in choosing types of assessment and, to a lesser extent, in designing the curriculum. They also expect teachers to transcend traditional roles, emphasising the need for sound pedagogical skills and a supportive learning environment. Based on their attitudes towards student-centred approaches, two distinct groups of students were identified. These groups exhibited statistically significant differences in their academic behaviour. The study underscores the need for ongoing professional development for teachers in order to meet students' preferences.

Keywords: higher education, teacher education, student-centred approach, balance of power, role of the teacher

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Pristopi, osredinjeni na študenta, v študijskem procesu s perspektive študenta

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Pristopi k poučevanju v visokem šolstvu, ki so predmet številnih raziskav, doživljajo paradigemski premik od pristopov, osredinjenih na učitelja, k pristopom, osredinjenim na študenta. V raziskavi obravnavamo ta premik s poudarkom na želji študentov po sodelovanju v različnih segmentih izobraževanja in njihovih pričakovanjih glede vlog učiteljev. Študija vključuje 218 študentov razrednega pouka na Pedagoški fakulteti Univerze v Mariboru v študijskem letu 2023/24. S pomočjo anketnega vprašalnika smo ugotovili raznolika mnenja študentov o pristopih, osredinjenih na študenta. Študentje so izrazili željo po sodelovanju pri odločanju o svojem izobraževanju, še posebej pri izbiri oblik ocenjevanja in manj pri načrtovanju učnega načrta. Prav tako pričakujejo, da bodo njihovi učitelji presegli tradicionalne vloge, pri čemer poudarjajo potrebo po dobrih pedagoških spretnostih učiteljev in spodbudnem učnem okolju. Raziskava je identificirala dve različni skupini študentov na podlagi njihovih mnenj do pristopov, osredinjenih na študenta. Med tema skupinama so bile ugotovljene statistično značilne razlike v akademskem vedenju. Študija poudarja potrebo po stalnem strokovnem razvoju učiteljev za zadovoljevanje različnih preferenc študentov.

Ključne besede: visoko šolstvo, izobraževanje učiteljev, pristopi, osredinjeni na študenta, ravnovesje moči, vloga učitelja

Introduction

The rapid development of higher education has prioritised the quality of teaching and learning, setting forth new requirements and tasks for teachers (Ho et al., 2001). Therefore, the emphasis on student-centred approaches in the European higher education area, including Slovenia, addresses the specific needs of an increasingly diverse student body (Cendon, 2018; Lea et al., 2003) as well as society's demands for individuals to develop versatile professional skills and become lifelong learners during their education (Asikainen & Gijbels, 2017). The idea of student-centred approaches is not new. It was formed in the last century and is associated with the ideas of progressive, humanistic and critical pedagogy, as well as constructivism, reform pedagogy and andragogy (Hoidn & Reusser, 2021). At the end of the last century, Barr and Tagg (1995) noted that a paradigm shift from teaching to learning, and thus from teacher-centred approaches to student-centred approaches, was taking place in higher education (Wagner & McCombs, 1995).

Hoidn (2016) notes that the implementation of student-centred approaches in educational practice is occurring much more slowly than expected. Similarly, McKenna and Quinn (2021) assert that, despite widespread advocacy for such approaches, teaching predominantly remains traditional, transmissive and teacher-centred. According to Børte et al. (2020), resistance to implementing student-centred approaches may arise from a combination of factors, including institutional, pedagogical, spatial, teacher-related, student-related and technological barriers.

In the context of ongoing changes and student diversity in higher education, it is imperative to explore and comprehend diverse pedagogical approaches to ensure high-quality education that addresses student needs and societal demands.

Teaching Approaches

Understanding the role of the teacher is essential for the successful implementation of modern teaching approaches. Teachers are responsible for the complete cycle of teaching activities, including planning, preparation, guidance, execution and assessment, as well as the enhancement and ongoing development of instructional practices (Kramar, 2009). Thus, teachers play a pivotal role in implementing student-centred approaches. It is essential to avoid compelling teachers to adopt these approaches until they fully appreciate their importance (Guo, 2016; Li & Ding, 2023). Kember (2009) suggests that resistance

to student-centred approaches by teachers may be rooted in their conceptions of teaching (Ho et al., 2001), as well as the intentions underlying their chosen teaching strategies, as Trigwell et al. (1994) have identified.

In a phenomenographic study, Trigwell et al. (1994) identified five qualitatively different approaches to teaching, ranging from those involving the transmission of information to those where the aim is to develop learning through conceptual changes:

1. Approach A: a teacher-centred strategy with the intent of transmitting information to students;
2. Approach B: a teacher-centred strategy with the intent of students' acquisition of disciplinary concepts;
3. Approach C: a teacher-student interaction strategy with the intent of students' acquisition of disciplinary concepts;
4. Approach D: a student-centred strategy with the intent of developing students' conceptions;
5. Approach E: a student-centred strategy with the intent of changing students' conceptions.

Understanding the link between a teacher's intentions and strategies is fundamental to effective teaching (Mladenovici & Ilie, 2023; Trigwell & Prosser, 1996; Trigwell et al., 1994). Indeed, teachers who perceive learning as accumulating information to satisfy external criteria also view teaching as transmitting information to students and tend to use teaching approaches with teacher-centred strategies. Conversely, teachers who perceive learning as the development and change of students' conceptions view teaching as assisting students in developing and changing their conceptions and carry out their teaching approach in a student-centred manner (Prosser & Trigwell, 1998).

Kember (1997) developed a multi-level model based on research into teachers' conceptions of teaching, encompassing five conceptual categories: 1) imparting information; 2) transmitting structured knowledge; 3) student-teacher interaction; 4) facilitating understanding; and 5) conceptual change/ intellectual development The first two categories represent a teacher-centred or content-oriented approach, while the latter two indicate a student-centred or learning-oriented approach. The intermediate category, student-teacher interaction, acts as a conduit between these orientations. Since many teachers primarily view themselves as subject-matter experts, they tend to adopt a content-oriented view of teaching, which poses a challenge in persuading them to embrace student-centred approaches, even in the face of evidence demonstrating the efficacy of such approaches (Kember, 2009).

Åkerlind (2004) reached similar conclusions in her research on the significance and experience of being a teacher, identifying four understandings that vary according to teaching experience: 1) an experience focused on the teacher's transmission of knowledge; 2) an experience focused on the relationship between teacher and student; 3) an experience focused on student engagement; and 4) an experience focused on student learning. The understanding of the teacher's role varies based on the role attributed to the students (from passive recipients to active creators), the benefits for the student (from acquiring knowledge to personal development), the benefits for the teacher (from gaining subject knowledge to personal satisfaction and expanding their understanding), and the broader benefits (from benefits solely for the students to benefits for the profession and society). The study identified a hierarchical relationship between these perceptions, suggesting a progression from a simpler to a more sophisticated and comprehensive understanding of teaching.

Teaching intentions, therefore, range from transmitting disciplinary content (i.e., teacher-centred) to fostering changes in students' perceptions of the subject content (i.e., student-centred) (Åkerlind, 2004; Trigwell et al., 1994; Prosser & Trigwell, 2014). This range demonstrates the diversity of pedagogical approaches, with student-centred approaches being regarded as more effective than teacher-centred ones due to their enhanced focus on student learning and development (Åkerlind, 2004; du Plessis, 2020; Guo, 2016). Importantly, student-centred approaches are not intended to replace teacher-centred practices, but rather to complement them (Hoidn & Klemenčič, 2021; Klemenčič, 2017). By integrating teacher-centred and student-centred approaches, teachers can cultivate a dynamic learning environment that offers structure, expertise and guidance, while promoting student autonomy, collaboration and research (du Plessis, 2020; Elen et al., 2007). The preceding discussion has highlighted some key features of these approaches, which will be examined in greater detail in subsequent sections for an in-depth understanding.

Teacher-Centred Approaches

In teacher-centred approaches, the teacher is responsible for determining what is taught, when it is taught and under what conditions (Spencer & Jordan, 1999). The teacher's role involves transmitting knowledge structured and defined from their own or an expert's viewpoint (Schuh, 2004; Wagner & McCombs, 1995). Within this framework, students are typically perceived as passive recipients of information, with the instructional focus predominantly on memorising and replicating knowledge (Åkerlind, 2004).

Cuban (1983) identifies several key indicators of teacher-centred

approaches, namely 1) teachers talk much more than students during teaching; 2) most of the teacher's questions are related to the retrieval of factor knowledge; 3) most teaching is done in large groups rather than in small groups or individually; 4) the teacher defines the use of time; 5) the assessment mainly involves the recall of factorial knowledge; and 6) classrooms are arranged with desks in rows facing the blackboard. The underlying premise is that teachers are required to facilitate specific conditions conducive to students achieving the intended learning outcomes (Wagner & McCombs, 1995).

Student-Centred Approaches

Weimer (2002), emphasising learning and the student at the core of the educational process, proposed changes in teaching, thus enhancing the understanding of student-centred approaches. These include 1) shifting the balance of power from teacher to student, evidenced by collaborative decision-making; 2) defining content as a tool for knowledge construction and skill development; 3) positioning the teacher as a learning process facilitator; 4) transferring learning responsibility to students; and 5) reorienting assessment to foster learning and feedback, and to develop self-assessment and peer assessment skills among students.

Within the framework of student-centred approaches, instructional forms emphasise empowering students to construct their knowledge, make decisions and actively engage in various activities, while also contributing to educational planning (Hoidn & Reusser, 2021). The characteristics of student-centred approaches therefore typically include: 1) students engaging in discussions about the learning task as much as, or more than, teachers; 2) students initiating questions at least as frequently as teachers; 3) the predominance of teaching in small to medium-sized groups, or on an individual basis; 4) student involvement in selecting learning content; 5) teacher facilitation of student participation in establishing study-related guidelines; 6) the availability of diverse learning resources; and 7) an adaptable learning environment designed to support group work, pair work or individual tasks, facilitated by flexible seating arrangements such as movable desks and chairs (Cuban, 1983).

To summarise, using the definition provided by Collins and O'Brien (2011, p. 446), a student-centred approach is "an instructional approach employing creative methodologies in which students become the centre of the learning process by influencing the content, activities, materials, and pace of learning. If properly implemented, the SCI approach strengthens retention of knowledge and increases motivation to learn". In the following sections, we explore additional significant impacts of student-centred approaches.

Relevance and Effectiveness of Student-Centred Approaches

The implications and efficacy of student-centred approaches are better comprehended by examining the rationale behind their emphasis and adoption in higher education. Schweisfurth (2013) identifies three key reasons for the implementation of these approaches. Firstly, the cognitive perspective highlights the fact that students' learning is more effective when they exert greater control over their educational process and receive guidance. Secondly, the emancipatory perspective suggests that student-centred approaches contribute to broader societal advantages, such as diminishing inequalities, amplifying student voices and fostering a more flexible understanding of knowledge. Lastly, the preparatory perspective is predicated on the belief that such approaches equip students more effectively for the challenges of an evolving world, primarily through developing metacognitive abilities and research skills.

Studies (Kember, 1997; Prosser & Trigwell, 2014; Trigwell et al., 1994; Trigwell et al., 1999; Uiboleht et al., 2018) also show parallels between teachers' approaches to teaching and students' approaches to learning, and thus learning outcomes. Specifically, teacher-centred approaches lead to more superficial approaches to learning, while student-centred approaches are associated with a deeper approach to student learning. This correlation aligns with expectations, given that student-centred approaches have been shown to positively influence the development of content comprehension, critical thinking and student motivation (Lea et al., 2003; Treesuwan & Tanitteerapan, 2016; Yap et al., 2016). Furthermore, these approaches promote student independence and collaboration (Li & Ding, 2023).

Through a systematic review, Bremner et al. (2022) examined the outcomes of implementing student-centred approaches. The investigation revealed a spectrum of outcomes encompassing classroom dynamics, learner perceptions, academic achievements, emotional well-being and the quality of interpersonal connections. Notably, the review underscored a scarcity of studies presenting objective evidence regarding the efficacy of these approaches. Conversely, a considerable volume of research pointed to subjective indicators of success, such as favourable attitudes towards these approaches among teachers and learners, increased motivation and self-assurance among students, and enriched social interactions. Li and Ding (2023) report that student-centred approaches benefit students' non-academic accomplishments, thus fostering personal and social skill development. Additionally, du Plessis (2020) underscores the enhancement of communicative and cooperative competencies as an advantage of student-centred approaches.

In applying these approaches, teachers must consider students' perspectives and support their existing abilities to achieve desired learning outcomes (Schuh, 2004). Consequently, teachers should acknowledge and address students' attitudes towards student-centred approaches.

Student Attitudes Towards Student-Centred Approaches

From the student perspective, student-centred approaches are perceived as effective, engaging and successful (Mastrokoukou et al., 2022). Du Plessis (2022) notes that students acknowledge the value of student-centred approaches in shaping concepts, methods and teaching strategies within a conceptual framework. Additionally, students recognise the importance of active engagement and participation in the educational process and the necessity of actively constructing their knowledge. However, students did not identify the fact that student-centred approaches also entail learning critical thinking skills such as problem-solving, evaluation of evidence, argument analysis or hypothesis formulation. Disciplinary issues, overcrowded classrooms and time limitations were cited as challenges associated with student-centred approaches.

Treesuwan and Tanitteerapan (2016) note that students have a favourable view of the effects of implementing student-centred approaches, as such implementation has improved interactions with peers and teachers, increased confidence in expressing ideas and enabled the use of various learning strategies. In discussions conducted by Lea et al. (2003) regarding the spectrum of teaching and learning approaches, students voiced concerns over approaches that lack structure, guidance and support. They underscored the importance of a balanced approach that avoids an excessive tilt towards teacher-centred or student-centred practices. This underscores the need for a balance between the roles of students and teachers in order to ensure equity in educational opportunities. Such equilibrium is vital in optimising learning outcomes for the entire student body, not merely the most dedicated or academically gifted individuals.

Research Problem and Research Questions

In planning changes, educational institutions are encouraged to transition from an 'inside-out' approach, whereby teachers dictate educational best practices, to an 'outside-in' approach that prioritises understanding and addressing student expectations (Lea et al., 2003).

The present study therefore explores student perspectives on various elements typical of student-centred approaches. Drawing upon the reforms

suggested by Weimer (2002), our focus is on the balance of power and the role of the teacher. We investigated the students' desire to participate in decision-making processes concerning the curriculum, content, teaching methods and forms, assessment and academic responsibilities. We also sought to understand students' expectations of the teacher's role, specifically their expectations of the teacher as a facilitator in the learning process. Our objective was to ascertain student openness to some aspects of student-centred approaches. It is important to clarify that our research did not examine the actual implementation of these approaches in the students' current educational settings.

We also sought to identify groups of students with shared perspectives on power dynamics and teacher roles in education, and to ascertain whether there are disparities in academic behaviours between these groups based on their self-reported frequency of lecture and tutorial attendance, effort invested in academic obligations, time dedicated to study per day, motivation, and activity during the lessons.

The research targeted primary education students, emphasising, as du Plessis (2020) suggests, the importance of student-centred approaches in teacher training institutions. It is essential for aspiring teachers to be proficient in these approaches in order to enhance the learning experiences of their future students (Mithans et al., 2017a).

The research was structured around the following research questions:

1. To what extent do students desire to participate in decision-making processes about their education?
2. What are students' expectations of teachers' roles in education?
3. Can distinct groups of students be identified based on their perspectives on power dynamics and teacher roles in education?

We also introduced an additional research question related to the third question:

3.1 Are there any disparities in academic behaviours between different student groups?

Method

Participants

The research was based on a convenience sample of 218 students enrolled in the Primary Education programme[3] at the Faculty of Education, University of Maribor, in the 2023–2024 academic year. A more detailed description of the sample is presented in Table 1.

Table 1

Structure of the sample of students

		f	*f* %
Degree and year of study	1st degree	200	91.7
	1st year	57	26.1
	2nd year	53	23.9
	3rd year	43	19.7
	4th year	48	22.0
	2nd degree	18	8.3
	1st year	18	8.3
Average grade[4]	*M* = 8.60, *SD* = 0.69, MIN = 6.53, MAX = 10.00		

Note. *M* = mean; *SD* = standard deviation.

Instrument

For research purposes, we developed a questionnaire organised into two thematic sections. The first section contained questions on various aspects of academic behaviours, including the frequency of attending lectures and tutorials (with a response scale ranging from 'never' to 'very often'), student activity during the study process (with a scale from 'not at all active' to 'very active'), the number of hours the students allocate to studying outside the classroom, the effort they invest in completing assignments and projects (with a scale from 'very low effort' to 'very high effort'), and their motivation levels for their studies (with a scale from 'very unmotivated' to 'very motivated'). The second section of the questionnaire focused on some aspects of student-centred approaches in higher education. Specifically, it comprised ten items concerning the students' desire to participate in the educational decision-making process and their

3 In the Methods and Results section, the term 'students' will refer specifically to those enrolled in the Primary Education programme.

4 First-year students were excluded from the calculation of the average study grade.

expectations regarding the teacher's role in education. The responses ranged from 'not at all true for me' to 'very true for me'. At the end of the questionnaire, the students provided basic demographic information, including their degree and year of study, as well as their average grade.

Research Design

The research data were collected at the Faculty of Education, University of Maribor, in the first half of November 2023. An online questionnaire was created to obtain the data. The students were personally invited to participate in the research and accessed the questionnaire via a QR code. The questionnaires were completed in the classroom, typically taking less than five minutes. While the students were filling out the questionnaires, the researchers were available to address any questions. The procedures followed ethical guidelines, ensuring anonymity and voluntary participation. The participants also had the option of withdrawing from the study at any time without facing any consequences.

Data analysis was performed using IBM SPSS 29.0 and JASP 0.18.1. The data processing involved both descriptive and inferential statistics. Before the analysis, a check was undertaken for missing values, which were less than 10% and were treated by mean substitution. At the level of descriptive statistics, the mean (*M*), standard deviation (*SD*), minimum (MIN) and maximum (MAX) values were used, as well as coefficients of skewness and kurtosis.

In order to verify the assumptions for exploratory factor analysis (EFA), the database was first checked for univariate outliers in the items assessing the students' favourability towards certain elements typical of student-centred approaches in higher education. Mowbray et al. (2018) suggest using standardised (z) values as an objective method to identify univariate outliers, where any standardised (z) value above 3.29 or below –3.29 is considered an outlier (Tabachnick & Fidell, 2013). The database was found to be free of univariate outliers. Subsequently, a check was undertaken for multivariate outliers, using Mahalanobis distance as a basis. Cases with p-values less than 0.001 were identified as multivariate outliers (Hair et al., 1998).

One such case was encountered in the database, which was excluded from further analysis. The univariate normal distribution of the items was assessed using the Shapiro–Wilk test and by analysing skewness and kurtosis coefficients. The Shapiro–Wilk test revealed deviations from the normal distribution in all items ($p < 0.05$). The skewness coefficients ranged from –1.20 to –0.33, while the kurtosis coefficients varied from –0.67 to 0.74. The literature presents varying threshold values, from the more lenient ones suggested by Byrne (1998) – skewness values within ±3 and kurtosis values between ±7 – to

more restrictive ones, such as those proposed by George and Mallery (2010), who consider values between ±1 as excellent and up to ±2 as acceptable. All of the items displayed coefficient values within ±2, making them suitable for further analysis. Multivariate normality was examined using Mardia's coefficient, which was 11.38, indicating a deviation from multivariate normal distribution. Therefore, exploratory factor analysis was undertaken using the principal axis method, which is a suitable approach when the assumption of multivariate normality is violated (Fabrigar et al., 1999).

Hierarchical and k-means clustering analysis were subsequently used. The objective was to identify distinct groups of students, thereby enhancing our understanding of students' attitudes towards student-centred approaches in higher education. Since the assumptions of normal distribution and homogeneity of variances were met, the t-test for independent samples was used to determine whether the clusters differed on the two scales.

Following the cluster analysis, the students were classified into two groups based on their attitudes towards different aspects of student-centred approaches in higher education. The Mann-Whitney test was utilised to identify statistically significant differences in academic behaviours between these two groups. This test was selected due to the dependent variables not being approximately normally distributed within each independent variable group.

Results

The research examines student perspectives on student-centred approaches in education, primarily focusing on students' involvement in decision-making processes and their expectations of teachers' roles in education. Furthermore, it seeks to identify distinct groups of students based on these perspectives and examine any disparities in their academic behaviours.

Table 2

Students' self-assessments of their desire to participate in decision-making about their education

Item	*N*	*M*	*SD*	MIN	MAX
I want to participate in choosing the types of assessment that will be used in each subject.	218	5.22	1.34	1	7
I want to participate in designing rules related to academic obligations (submission deadlines, attendance, etc.).	218	4.98	1.62	1	7
I want to participate in selecting the teaching methods and forms that will be used in each subject.	218	4.82	1.50	1	7
I want to participate in choosing the content for each subject.	218	4.76	1.59	1	7
I want to participate in designing the curriculum for each subject.	218	4.16	1.65	1	7
Cronbach α = 0.85					

Note. M = mean; *SD* = standard deviation; rating scale: 1 = not at all true for me to 7 = very true for me.

As shown in Table 2, the item concerning participation in selecting types of assessment received the highest rating from the students. This is followed by items about participation in developing rules associated with academic obligations, in selecting teaching methods and forms, and in choosing educational content. The item about participation in curriculum design received the lowest rating. Although the desire to participate in curriculum design was the least expressed, the mean values (*M*) for all of the educational aspects were relatively high, indicating a general desire among the students to be involved in decision-making about their education. The standard deviations (*SD*) across all of the items reveal a diversity of student responses, suggesting a range of preferences for participation levels in decision-making about their education.

Table 3

Students' self-assessments of expectations regarding the teacher's role in education

Item	*N*	*M*	*SD*	MIN	MAX
I appreciate it when teachers demonstrate good pedagogical skills that extend beyond the traditional transmission of information.	218	6.21	0.99	3	7
I expect teachers to be open to changing their traditional roles and willing to adopt new approaches to teaching.	218	5.70	1.16	2	7
It is important to me that teachers focus more on creating a supportive learning environment rather than merely transmitting information.	218	5.42	1.23	2	7
I see the teacher's role in education as guiding my learning process.	218	5.31	1.16	2	7
It is important to me that teachers focus less on directly transmitting information and more on encouraging learning.	218	5.18	1.25	2	7
Cronbach α = 0,75					

Note. M = mean; *SD* = standard deviation; rating scale: 1 = not at all true for me to 7 = very true for me.

The item emphasising the importance of teachers' good pedagogical skills, extending beyond traditional information transmission, received the highest rating from the students. This was followed by the item about expecting teachers to be open to changing their traditional roles and adopting new teaching approaches. The items concerning the teacher's role in creating a stimulating learning environment, rather than merely transmitting information and guiding the learning process received slightly lower ratings. The item about the significance of teachers focusing less on direct information transmission and more on encouraging learning obtained the lowest rating, although it was still relatively high. The mean values for all of the aspects are quite high, reflecting the students' expectations for teachers to adopt roles aligned with student-centred approaches and to be innovative in their teaching. The standard deviations across all of the items suggest diversity in the students' expectations, possibly indicating varied student preferences concerning the teacher's role in education. Notably, the students did not select the response 'not at all true for me' in any of the items presented in Table 3, indicating that no item was rejected entirely by the students.

The interpretations presented for the mean values and standard deviations of various items offer an insight into the students' desire to participate in decision-making about different aspects of education and their expectations

concerning the role of teachers. Exploratory factor analysis (EFA) was employed to gain a deeper understanding of the complex patterns in the responses and potential latent dimensions underlying individual items. The suitability of EFA was assessed prior to analysis, as described in the Research Design section. The principal axis factoring method was used, as it is a suitable approach when the assumption of multivariate normality is violated (Fabrigar et al., 1999). From the correlation matrix, the strength of correlations between items was examined. It was found that all of the items exhibited a Pearson correlation coefficient (r) greater than 0.3 in at least one correlation, thus justifying the continuation of the analysis. The Kaiser-Meyer-Olkin (KMO) test confirmed the adequacy of the sampling, with an overall KMO over 0.8 (KMO = 0.86) and individual item KMO values meeting or surpassing 0.8. Bartlett's test of sphericity was statistically significant ($p < 0.001$), indicating that the data was probably factorisable. Given these results, the analysis proceeded. Employing the eigenvalue criterion and retaining factors with an eigenvalue above 1, two factors were extracted that accounted for 46.7% of the variance. Oblique rotation was applied to improve the interpretability of these factors. The factor weights are presented in Table 4. The items loading on the same factor indicate that factor 1 represents a student's desire to participate in decision-making about their education, while factor 2 reflects the student's expectations of teacher roles in education. Factor scores were obtained by averaging the corresponding items.

Table 4

Rotated structure matrix for EFA with principal axis factoring

Items	Rotated factor loadings	
I want to participate in selecting the teaching methods and forms that will be used in each subject.	0.90	
I want to participate in designing the curriculum for each subject.	0.76	
I want to participate in choosing the content for each subject.	0.68	
I want to participate in designing rules related to academic obligations.	0.57	
I want to participate in choosing the types of assessment that will be used in each subject.	0.45	
It is important to me that teachers focus more on creating a supportive learning environment rather than merely transmitting information.		0.66
I appreciate it when teachers demonstrate good pedagogical skills that extend beyond the traditional transmission of information.		0.62
I expect teachers to be open to changing their traditional roles and willing to adopt new approaches to teaching.		0.60
I see the teacher's role in education as guiding my learning process.		0.56

Items	Rotated factor loadings	
It is important to me that teachers focus less on directly transmitting information and more on encouraging learning.		0.53
Eigenvalues	4.46	1.26
% of variance	25.5	21.2
Cronbach α	0.85	0.75
M	4.79	5.56
SD	1.26	0.82

Note. M = mean; *SD* = standard deviation.

A cluster analysis on latent variables was conducted: the students desire to participate in decision-making about their education and their expectations regarding the role of teachers. The objective was to identify distinct student groups, thereby enhancing our understanding of the students' attitudes towards student-centred approaches in higher education. In the cluster analysis, standardisation was applied to the data using z-scores for each variable. The hierarchical clustering analysis with Ward's method was initially employed, revealing two clusters through the dendrogram. Subsequently, k-means clustering analysis was conducted with eight iterations, using a convergence criterion of no change in cluster centres. The silhouette score was higher than 0.5, indicating high-quality clustering. This analysis distinguished two groups of students:

Group 1: Characterised by a higher desire among students to participate in decision-making about their education (M = 5.51) and higher expectations regarding the role of teachers (M = 6.09) in accordance with the role that teachers encompass in student-centred approaches. We perceive this group of students as more receptive to the principles underlying student-centred approaches in higher education (N = 123).

Group 2: Comprising students with a lower desire to participate in decision-making about their education (M = 3.85) and more modest expectations of the teacher's role (M = 4.86). We view this group as less receptive to the principles underlying student-centred approaches in higher education (N = 95).

The independent samples t-test was statistically significant, evaluating the relationship between belonging to one of the two clusters and the students' desire to participate in decision-making about their education (t = -13.52, $p < 0.001$). The two clusters also differed statistically significantly regarding the students' expectations of teacher roles in education (t = 15.76, $p < 0.001$).

Subsequently, our goal was to determine whether there were differences between the two groups in various aspects of their academic behaviours, as presented in Table 5.

Table 5

Students' self-assessments of various aspects of their academic behaviours

Item	*N*	*M*	*SD*	MIN	MAX
Tutorial attendance	218	4.98	0.15	1	5
Lecture attendance	218	4.24	0.93	1	5
Effort invested in assignments and projects	218	4.01	0.73	1	5
Study motivation	218	3.85	0.89	1	5
Engagement during the study process	218	3.65	0.79	1	5
Daily study time	218	2.08	1.26	0	6

Note. M = mean; *SD* = standard deviation; rating scales: 1 = never to 5 = very often; 1 = very low effort to 5 = very high effort; 1 = very unmotivated to 5 = very motivated; 1 = not active at all to 5 = very active.

The data presents a consistent trend of high tutorial attendance among the students, indicating that tutorials are a regularly attended component of their academic routine. Although generally well attended, lectures show a broader range of attendance frequencies compared to tutorials, suggesting a greater diversity in the students' dedication to attending lectures. The students also report investing a high level of effort in their assignments and projects. Study motivation is rated as quite high and moderate engagement during the study process is observed, which includes activities such as questioning, participating in discussions, note-taking and preparing for classes. The students estimated that, on average, they dedicate approximately two hours per day to studying outside of the classroom (reviewing lecture materials, completing assignments, or preparing for upcoming examinations or presentations).

The Mann-Whitney U test was performed to determine whether there were differences in self-assessed academic behaviours between the students identified as more supportive of certain elements typical of student-centred approaches in higher education and those identified as less supportive.

Table 6

Comparison of the two groups by the Mann-Whitney U test

		N	Mean Rank	*U*	*p*
Tutorial attendance	More supportive of student-centredness	123	111.11	5644.00	0.097
	Less supportive of student-centredness	95	107.41		
Lecture attendance	More supportive of student-centredness	123	117.33	4880.00	**0.023**
	Less supportive of student-centredness	95	99.37		
Effort invested in assignments and projects	More supportive of student-centredness	123	121.34	4386.50	**< 0.001**
	Less supportive of student-centredness	95	94.17		
Study motivation	More supportive of student-centredness	123	121.05	4422.00	**< 0.001**
	Less supportive of student-centredness	95	94.55		
Engagement during the study process	More supportive of student-centredness	123	121.48	4369.50	**< 0.001**
	Less supportive of student-centredness	95	93.99		
Daily study time	More supportive of student-centredness	123	112.37	5489.00	0.428
	Less supportive of student-centredness	95	105.78		

As shown in Table 6, the Mann-Whitney test revealed statistically significant differences in four of the six evaluated aspects of student academic behaviours: lecture attendance, effort invested in assignments and projects, study motivation, and engagement during the study process. The students identified as more supportive of elements underlying student-centred approaches in higher education reported higher lecture attendance, greater study effort, increased motivation and more active engagement during the study process than their peers who were less supportive of such principles. No statistically significant differences were found for tutorial attendance and daily study time.

Discussion

Creating a learning environment where students can learn effectively and successfully is increasingly becoming a prerequisite for effective education. This requires that teachers not only be experts in their respective fields, but also understand the diverse needs of their students (Spencer & Jordan, 1999). In line with this, the importance of active collaboration between teachers and students in making decisions about various educational aspects is gaining emphasis (Wagner & McCombs, 1995; Weimer, 2002).

Despite the highlighted need for collaboration between teachers and students, it is not a given that students are always interested in participating (Mithans et al., 2017a, 2017b). Thus, our research focused on the desire of students to engage in decision-making processes related to their education, such as curriculum, content, teaching methods and forms, assessment and rules related to academic obligations. Students need preparation for student-centred approaches, but this does not justify making decisions on their behalf (Weimer, 2002). Our findings reveal that students want to participate in the decision-making processes related to their education. Specifically, the students surveyed expressed the most interest in participating in decisions about types of assessment and the least interest in designing the curriculum. A general desire among the students to collaborate in educational decision-making was observed. This insight carries significant implications for educational institutions: incorporating students' feedback and preferences could create more engaging and supportive learning environments tailored to students' interests and desires.

In most educational institutions, the focus remains on teachers (McKenna & Quinn, 2021). Consequently, we explored the expectations students have regarding the role of teachers in education. Students expect their teachers to fulfil roles that extend beyond merely transmitting information. They hope teachers will demonstrate solid pedagogical skills, be open to revising their traditional roles, and thus be willing to embrace new teaching approaches, create supportive learning environments and guide the learning process. Since students hold these high expectations, which align with the principles of student-centred approaches, it is imperative to encourage teachers to explore and adopt various teaching approaches.

The choice of teaching approach is often influenced by teachers' concepts of teaching and their intentions (Kember, 1997; Trigwell et al., 1994). It is important to note that student-centred approaches may not be the best fit for teachers primarily focused on transmitting information, as they can lead to ineffective teaching and learning (Trigwell et al., 1994). Prior to implementing

student-centred approaches, teachers require training (Aškerc Veniger, 2016) that reshapes their existing conceptions of teaching, directing them towards fostering student learning (Ho et al., 2001). Furthermore, as student-centred approaches continue to evolve, regular training sessions are necessary to enhance teachers' knowledge and confidence in teaching, thereby equipping them to adhere to student-centred approaches (Li & Ding, 2023). Additionally, presenting teachers with examples of effective practices is crucial. Mladenovici and Ilie (2023) have shown that changes in teaching concepts can also result from observing the impacts of specific teaching approaches on student learning.

As student-centredness requires a high degree of independence, learning ability, teamwork and collaboration (Li & Ding, 2023), it is not surprising that we identified two different groups of students who differ in their desire to participate in making decisions about education and the expectations of the teacher. This dichotomy suggests that a universal teaching approach may not be effective, aligning with the findings of other studies (du Plessis, 2020; Elen et al., 2007; Hoidn & Klemenčič, 2021; Klemenčič, 2017). Teaching approaches need to be sufficiently flexible to accommodate diverse student preferences. However, it is important to note, as Uiboleht et al. (2018) found, that learning outcomes and student approaches to learning were of somewhat higher quality with a consistent learning-focused teaching approach than with a dissonant approach (combining elements of teacher-centred and student-centred elements), although the latter did not always result in inferior learning approaches and outcomes.

Additionally, students favouring certain elements of student-centred approaches exhibited better academic behaviour, including higher lecture attendance, increased effort, greater motivation and more active class participation. Interestingly, no differences were observed in the frequency of attending tutorials, which can be attributed to their usual mandatory nature. These findings could indicate that students' academic behaviour and attitudes are shaped not only by the teaching approaches they encounter, but also by their personal beliefs and preferences regarding how they learn best. This underscores the importance of considering student preferences in shaping educational experiences and highlights the significance of promoting student-centred approaches.

Conclusion

The study highlights the need for interactive and collaborative education involving teachers and students. It emphasises the importance of understanding and integrating students' expectations and preferences in the educational process. Research indicates that students desire to be involved in educational decision-making and expect teachers to adopt roles extending beyond traditional information transmission. These insights underscore the need for educational institutions to foster engaging, supportive environments that resonate with student interests. The study also emphasises the importance of continuous teacher training, which should equip teachers with the necessary skills to meet the evolving expectations of their students and the demands of contemporary educational settings.

The research has several limitations. Firstly, it uses a convenience sample from a specific programme at the University of Maribor, thus limiting its generalisability. Secondly, it relies on subjective, self-reported data from students. Furthermore, the study focuses on specific elements of student-centred approaches, not encompassing all aspects, and lacks objective measures to assess the effectiveness of these approaches, relying mainly on students' perceptions. These factors suggest caution in interpreting and applying the findings beyond the context of the study.

In terms of future research directions, given the identification of distinct student groups with different preferences concerning student-centred approaches in this study, it is recommended that subsequent studies focus on comparing the outcomes of student-centred approaches with more flexible, hybrid approaches that combine elements of teacher-centred and student-centred approaches. Such analysis would provide insights into the most effective strategies for different learning environments and different groups of students. For a more comprehensive understanding of student-centred approaches, it is important for future research to investigate students' views on their own responsibility in the learning process, the nature of assessments and the role of learning content.

Disclosure Statement

The authors have no conflict of interest to declare.

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