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Înţelegerea cunoştinţelor de către studenţii din primul an în timpul tranziţiei de la liceu la universitate

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FIRST-YEAR STUDENTS' KNOWLEDGE UNDERSTANDINGS DURING THE TRANSITION FROM HIGH SCHOOL TO UNIVERSITY

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Abstract

The transition from high school to university presents significant challenges, particularly in adapting to new academic expectations and knowledge paradigms. This shift often leads to difficulties in managing the discrepancy between expected and actual academic demands. Despite its importance, the lived experience of this transition remains under-researched, particularly regarding how students engage with different forms of knowledge. This qualitative exploratory study investigates first-year students' perspectives on the types of knowledge they encounter during their transition to university. The aim is to conceptualize the transition as a lived experience and understand the role of knowledge in shaping the necessary competencies for success. The study focuses on two primary research questions: *What types of knowledge do students refer to when discussing their transition from high school to university?* and *How do students describe their engagement with different types of knowledge, both explicit and implicit?*. The data were gathered through an online questionnaire consisting of five open-ended questions, administered between November and December 2023 to 437 first-year social science students at the University of Bucharest. Using reflexive thematic analysis, three key themes emerged: (1) knowledge management and learning strategies, (2) the value and utility of knowledge, and (3) knowledge as a process of personal growth. These findings contribute to a deeper understanding of how students perceive and engage with knowledge during their transition and how these perceptions align with the competencies necessary for academic success in higher education.

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Keywords: competencies, epistemic aims of education, first-year students, reflexive thematic analysis, university transition.

Rezumat

Tranziţia de la liceu la universitate prezintă provocări semnificative, în special în ceea ce priveşte adaptarea la noile aşteptări academice şi paradigmele de cunoaştere utilizate. Această schimbare duce la dificultăţi în gestionarea noilor cerinţe academice. Deşi este un aspect important, experienţa trăită a acestei tranziţii rămâne insuficient cercetată, în special în privinţa modului în care studenţii gestionează diferitele forme de cunoaştere. Acest studiu calitativ explorator investighează perspectivele studenţilor din primul an de facultate cu privire la tipurile de cunoaştere întâlnite în timpul tranziţiei la universitate. Scopul este de a conceptualiza tranziţia ca o experienţă trăită şi de a înţelege rolul cunoaşterii în formarea competenţelor necesare pentru succes. Datele au fost colectate printr-un chestionar online compus din cinci întrebări deschise, administrat între noiembrie şi decembrie 2023 la 437 de studenţi de anul întâi din domeniul ştiinţelor sociale de la Universitatea din Bucureşti. Prin analiza tematică reflexivă, au rezultat trei teme principale: (1) gestionarea cunoaşterii şi strategiile de învăţare, (2) valoarea şi utilitatea cunoaşterii şi (3) cunoaşterea ca proces de creştere personală. Aceste constatări contribuie la o înţelegere mai profundă a modului în care studenţii înţeleg şi gestionează cunoaşterea în timpul tranziţiei.

Cuvinte-cheie: *analiză tematică reflexivă, competenţe, obiective epistemice ale educaţiei, studenţi din primul an, tranziţia la universitate.*

1. Introduction

The transition from high school to university comes with multiple challenges in the lives of first-year students, from developing academic competencies to adjusting to new social dynamics and self-management (Briggs et al., 2012; Gale & Parker, 2014; Tinto, 2012). Among them is also the way students engage with knowledge, defined as formal explicit content, but also more implicit forms of knowledge, like procedural or metacognitive ones (Anderson et al., 2013). In Romania's higher education context, a study on student satisfaction (Deaconu & Hâj, 2022) revealed that students face significant challenges in the learning process. While two-thirds of students experienced openness from professors, less than half had access to educational development courses or tutoring when needed. This lack of support is particularly concerning for first-year students transitioning from high school to university, where engaging with new forms of learning and, hence, knowledge is critical.

The current discourse on transitions in higher education focuses on student's academic preparedness and their ability to adapt to new ways of learning (Cameron & Rideout, 2020). At the same time, higher education institutions have turned to competency-based education (CBE) frameworks, which emphasize the development of skills over traditional content mastery (Păun, 2017; Scott, 2017; Young & Muller, 2016). This shift has sparked debates regarding the balance between acquiring competencies and fostering a deeper engagement with knowledge. Critics argue that while CBE offers practical skills relevant to the workforce, it may marginalize the broader educational goal of helping students engage reflectively with knowledge as a relational process (Jessup, 1991; Wolf, 1989).

In the context of this focus and despite the literature on transitions to higher education, limited research explores how students perceive and engage with knowledge during their transition from high school to university. Existing studies often focus on social and emotional aspects of the transition (Wilcox et al., 2005) or academic preparedness in terms of skills and competencies (Geisler, 2023). Little is known about how students conceptualize and discuss knowledge - both its content and its applications, as they adapt to university-level learning. This gap is especially significant in Romania, where students face notable challenges in the learning process. For instance, while two-thirds of students report experiencing openness from professors, fewer than half have access to critical resources like tutoring or educational development courses (Deaconu & Hâj, 2022).

Moreover, research on educational transitions has insufficiently addressed the metacognitive knowledge students use to adapt their learning strategies to meet the epistemic demands of higher education. While the importance of social integration and academic support is well-documented (Smyth & Hannan, 2007; Wilcox et al., 2005), there is also the need to understand how students relate to different forms of knowledge in their new academic contexts (Păun, 2017; Young & Muller, 2016) for developing interventions that support students' academic engagement, metacognitive development, and personal growth during this transition.

This study addresses the critical gap in understanding how first-year students engage with knowledge during the transition from high school to university, with a particular focus on the Romanian higher education context. By exploring how students perceive and interact with knowledge, this research provides new insights into the epistemic dimensions of this transition. It argues for a more balanced approach to competency-based education (CBE) by emphasizing the need for reflective engagement with knowledge alongside the development of measurable skills. The research questions guiding this inquiry focus on what aspects of knowledge they find most important:

- What types of knowledge do students refer to when discussing the transition from high school to university?
- How do students describe their transition from the perspective of the knowledge they engage with, either explicitly or implicitly?

The findings of this study aim to inform higher educational practices directly by students' understandings and perspectives of different types of knowledge, with which they engage.

2. Literature Review and Concepts

2.1. Educational Transitions

The transition from high school to university is a complex process that influences students academically, socially, and emotionally (Cameron &

Rideout, 2020; Gale & Parker, 2014; Hussey & Smith, 2010; Tinto, 2012). Social integration is a key factor in successful transitions, with early peer network formation reducing dropout risks and fostering persistence (Wilcox et al., 2005). Conversely, students who struggle to connect are at higher risk of leaving university.

Students' beliefs about knowledge also play a crucial role. Geisler (2023) found that students who view knowledge as dynamic and evolving tend to perform better and feel more satisfied, especially when transitioning to university-level learning, which emphasizes adaptation and problem-solving. Institutional factors further shape readiness for higher education. According to Smyth and Hannan (2007), guidance services, subject choice timing, and institutional habits significantly impact how prepared students feel, while socioeconomic inequalities exacerbate structural barriers to access since high school.

Theoretical frameworks further clarify these transitions. Gale and Parker's (2014) typology frames transition as a continuous process of induction, development, and identity formation, while Hussey and Smith (2010) highlight the shift to autonomous learning, requiring skills like time management and self-regulation. Brooman and Darwent (2014) emphasize that this adjustment process is prolonged, requiring sustained support and Ashwin and Trigwell (2012) stress how prior experiences shape students' engagement with new learning environments.

To support this transition, the literature identifies measures addressing social, institutional, and educational factors. Early peer networks are vital for social integration (Wilcox et al., 2005), while fostering dynamic beliefs about knowledge aids academic adaptation (Geisler, 2023), and institutional support enhances readiness (Smyth & Hannan, 2007). Sustained first-year support that emphasizes self-efficacy, social connections, and autonomous learning skills, such as time management, is essential (Hussey & Smith, 2010).

2.2. The Concept of Knowledge

The transition from high school to university represents a crucial phase in students' academic and personal development, involving shifts in learning environments, social networks, and self-regulation strategies (Gale & Parker, 2014; Tinto, 2012). Social and institutional factors, such as peer networks, institutional support systems, and the ability to adapt to new learning demands, as already shown, are essential in this process (Smyth & Hannan, 2007; Wilcox et al., 2005). A deeper understanding of how students engage with both explicit and implicit knowledge is also helpful in supporting their adaptation to university life (Anderson et al., 2013; Polanyi, 2009). Peer networks facilitate both social and academic engagement by fostering collaborative learning and information sharing (Wilcox et al., 2005), while institutional resources and metacognitive skills enhance students' ability to process and apply knowledge independently (Biggs, 1988; Dennis & Somerville, 2023). A key focus of this transition is how students conceptualize and engage with knowledge itself in the university context (Scott, 2017; Young & Muller, 2016).

Knowledge is often defined philosophically as a valid and justified belief (Ungureanu, 2024). Flonta (1994) distinguishes between explicit knowledge - articulated and formalized, such as facts and theories - and implicit knowledge, which is intuitive, experiential, and difficult to articulate. Polanyi's (2009) concept of tacit knowledge underscores its significance, showing how implicit knowledge shapes learning and problem-solving. Similarly, Taber (2014) highlights that implicit knowledge, though critical, remains underexplored in education research.

We can also approach knowledge from a psychological point of view as factual, conceptual, procedural, or metacognitive (Anderson et al., 2013). Metacognitive knowledge, the ability to reflect on and regulate cognitive processes, is vital for developing deep learning approaches but is often neglected in educational practices (Biggs, 1988; Flavell, 1976). Despite their critical role in academic adaptation, both metacognitive and implicit knowledge remain underrepresented in educational transitions, leaving gaps in understanding their impact on higher education success.

Students' engagement with different forms of knowledge is fundamental to navigating university challenges. Beliefs about knowledge influence reasoning, motivation, and perseverance in academic tasks (Bendixen & Rule, 2004; Hofer, 2001; Maggioni & Parkinson, 2008). Transitioning from structured, teacher-directed learning in high school to engaging with both content-based (explicit) and process-based (implicit) knowledge at university requires developing metacognitive strategies, enabling students to approach knowledge dynamically (Biggs, 1988). However, implicit and metacognitive knowledge, while essential for fostering academic adaptation, remains insufficiently addressed in educational discourse and practice.

2.3. Knowledge and Educational Transitions

Educational transitions, particularly from high school to university, profoundly shape students' engagement with knowledge, marking a critical phase in their academic and personal development. High school emphasizes explicit, structured knowledge focused on factual recall (Anderson et al., 2013), whereas university introduces implicit, experiential knowledge that requires applying concepts to real-world contexts (Scott, 2017). This shift from content-based to process-oriented learning challenges students to move from passive recipients to active constructors of meaning.

Peer networks play a vital role in facilitating this transition by fostering collaborative learning and resource sharing, which enhance critical thinking, problem-solving, and independent study skills (Wilcox et al., 2005). These interactions deepen students' engagement with complex academic content, contributing to their academic success.

Scott (2017) emphasizes that knowledge is relational and dynamic, a perspective crucial for understanding how students' engagement evolves during this transition. While high school learning often relies on memorization, university demands critical engagement with knowledge, where students construct meaning through independent research and application. This shift aligns with broader critiques of Competency-Based Education (CBE), which prioritizes measurable outcomes over reflective and relational approaches to learning. Scott critiques CBE's focus on practical skills, arguing it risks neglecting knowledge's transformative role in personal and intellectual growth. Similarly, Battaly's (2013) concept of epistemic insensitivity critiques the undervaluation of reflective knowledge within utilitarian educational frameworks.

Sociologically, this transition reflects Bernstein's (2003) hierarchical organization of knowledge, where students must shift from rigid, static learning to engaging with complex, provisional knowledge structures. This aligns with Biesta's (2020) educational functions: qualification, which involves acquiring career-relevant skills; socialization, where students integrate into academic cultures; and subjectification, where engagement with knowledge fosters self-formation and identity development.

Finally, Young and Muller's (2016) concept of powerful knowledge highlights the cognitive shift from context-dependent everyday knowledge to abstract, disciplinary knowledge, which requires deeper analytical engagement. These transitions demand both institutional support and the development of students' self-regulation and metacognitive strategies to navigate the complexities of university-level learning.

In the light of the reviewed literature, knowledge in educational settings is not just content to be learned but a process shaping students' identities and intellectual growth (e.g., Bendixen & Rule, 2004; Geisler, 2023; Hofer, 2001; Maggioni & Parkinson, 2008). However, there is still limited understanding of how students engage with this knowledge during the shift to university, especially in a more self-directed environment. Barriers like inadequate long-term support hinder students from developing the metacognitive strategies needed for academic adaptation. Although orientation programs exist also in the Romanian context (Rădulescu et al., 2023), many students still struggle to stay engaged due to the demands of independent study and knowledge application. Thus, this study addresses this gap by exploring how students conceptualize and experience knowledge during their transition to university. Based on the reviewed research that targeted interventions such as fostering social integration (e.g., Cameron & Rideout, 2020; Wilcox et al., 2005) and reflective practices (Geisler, 2023), this study aims to offer a more holistic understanding of the competencies necessary for higher education success.

3. Methodology of the study

3.1. Data collection

This study was conducted during the 2023-2024 academic year, between November and January. The participants (N = 437) were first-year students enrolled at the Faculty of Psychology and Educational Sciences at the University of Bucharest. Of the participants, 34.5% (N = 151) identified as male, while 65% (N = 286) identified as female. In terms of academic programs, 45% of the participants were enrolled in the Initial Teacher Training Education Program (PIPP), 20% were studying pedagogy, and 35% were pursuing degrees in psychology and cognitive sciences. Participants were recruited using a convenience sampling strategy. Data collection was performed through an online survey featuring five open-ended questions alongside minimal demographic data (Creswell, 2012). The questions I used were: What did the transition from high school to university mean for me?, In retrospect, what advice would I give to my younger self/ 12th-grade student about transitioning from school to university?, How did my relationships and social interactions change as I moved from school to university?, In what ways did my time management and study habits evolve from school to university?, How did the transition from school to university shape my understanding of the world and my place in it?. The survey instrument was distributed to students via Google Classroom and email, ensuring accessibility across different programs. Open-ended questions are designed to elicit qualitative data, allowing participants to provide their responses without predefined answer choices. This method facilitates richer insights into the students' experiences and perceptions regarding their transition from high school to university. No incentives were offered for participation to ensure voluntary involvement and to avoid potential biases related to compensation. The consent was requested from the students and no personal data was collected.

3.2. Data analysis

This qualitative exploratory study investigates first-year students' perspectives, focusing on their understanding of the knowledge involved and experienced in the transition to university. I employed reflexive thematic analysis (Braun & Clarke, 2022; Clarke & Braun, 2013) on participants' open-ended answers, to develop themes that reflect patterns of meaning regarding students' representations of knowledge during this transition. The themes developed in this study represent the students' understanding of the knowledge's role in passing from high school to university. The aim is to conceptualize the university transition as a lived experience and identify the necessary competencies students perceive as crucial. The study addresses two key research questions:

- What types of knowledge do students refer to when discussing the transition from high school to university?
- How do students describe their transition from the perspective of the knowledge they engage with, either explicitly or implicitly?

Thematic analysis is a qualitative method for identifying and organizing patterns of meaning into themes (Saldańa, 2009). This approach, which goes beyond mere frequency patterns, assumes that identified patterns reveal socially significant insights (Clarke & Braun, 2013). I employed an inductive coding process, with repeated readings of students' responses to ensure familiarity with the data. Coding was open and progressed without predefined schemes, focusing on how students represent knowledge during their transition. Both latent and semantic levels were explored, and codes were grouped into themes based on meaningful patterns related to the research question. Following Braun and Clarke's (2022) recommendations, I critically examined patterns until reaching saturation. The analysis did not quantify themes but focused on meaning. MAXQDA software was used to systematically organize and analyze the data.

4. Results

The analysis of the open-ended responses leads to the development of three themes around the students' understanding of knowledge during their initial months of transitioning to university life. While distinct, the themes contribute to a broader narrative of students about their efforts to navigate a time of change, where learning, information, and knowledge emerge as building blocks in the transition process. The following themes are presented in this section: knowledge management and learning strategies, value and utility of knowledge, and knowledge as a process of personal growth.

4.1. Knowledge Management and Learning Strategies

This theme was built around the idea of the management of knowledge as a critical part of a student's first-year university experience. Students frequently mention that transitioning to university requires adapting to new methods of learning and managing information which are significantly different from what they knew from high school learning experiences. From this perspective, based on the students' answers, the transition can be defined as a process of adaptation. The participants also refer to a certain discontinuity between high school and university, not only in terms of the volume of information but also in its nature and purpose. University tasks are often viewed as more relevant and meaningful for their personal and professional development. For example, some students mentioned:

> University is different from high school, being a space where finally it seems to me that any information revealed to me piques my interest.

Other students reflected on the challenge of adjusting to the university's academic demands:

> It is very difficult to get used to the university teaching style, where you are practically forced to do your research beforehand and have a background of information.

> Things have changed a lot. In high school, I had homework that had to be done from one day to the next, but in college, it was different. We have classes, but exams and most assignments are spread over a longer period and are also more complex. The information is different, but I retain it by rereading or writing it down.

The transition requires students to adapt to new teaching styles and engage in independent research, which implies managing a larger volume of information than they were used to in high school. As students navigate these demands, they report developing new study habits such as time management, efficient information processing, and critical thinking: „The information is different, but I remember it by re-reading or writing it down." Moreover, students highlight the shift from a memorization-based model of learning in high school to a deeper understanding and application of knowledge in the university. One participant noted:

> The learning style is different because I no longer need to simply memorize information, and now the focus is on understanding.

> In high school, I learned mechanically and memorized the information, whereas in college, I prefer to understand the courses first and only then truly learn them.

Students describe the emotional and physical adjustments they must make, including coping with longer class sessions and more intensive academic workloads:

> Initially, it seemed impossible to stay focused for two hours straight, especially compared to the 50-minute lessons in high school. After the first few classes, I'd go home with headaches. But over time, I realized I could stay focused throughout the entire course—I just had to want it.

Finally, students mention how university requires them to be more self-directed in their learning, often without the same structure or support they had in high school:

> I learned how to gather information, evaluate sources, and form evidence-based conclusions, contributing to a more informed perspective on various subjects.
>
> I had to adjust to the new type of teaching and the new information I'm learning.
>
> Since I started university, I have become a much more organized person, I keep a daily diary of my activities. I like to do my homework on time and to be organized. My life now is much more active and productive, and that makes me incredibly happy.

4.2. Value and Utility of Knowledge

Another theme centers on how students talk about the relevance and utility of the knowledge they encounter at university. They mention that, unlike high school, where information was often seen as something to memorize without much immediate relevance, university learning is viewed as a tool that contributes significantly to professional development and seems to have meaning for their life. Value and utility of knowledge focuses on how students understand the knowledge as relevant to their future careers and professional development. It emphasizes knowledge as a tool for achieving tangible, external goals. Many students mention that university tasks and information are more meaningful and align more closely with their future goals. For example, one student explained:

> In high school, there were a lot of meaningless assignments, whereas here you gain a lot of useful information from the assignments and activities.

Another student emphasized how this stage of learning aligns with their future goals:

> An important stage to explore new opportunities, learn, and shape my future.

Similarly, the professors are seen as more oriented on practical applications and as having expectations that contribute to this change in how students view knowledge: „The professors are focused on what's truly important for us and our future careers."

Many students describe university as an eye-opening experience that makes them aware of the importance of knowledge and its role in shaping their personal and professional growth. For example, one student says: "It opened my eyes to how important knowledge is."

At the same time, the utility of knowledge extends beyond the classroom as students realize how it will help them in life and their future careers:

> It's important to be open, to listen, and to absorb any information because it will definitely help you in life.
> Attending university opened my eyes to a greater variety of topics, cultures, and viewpoints, which broadened my perspective and gave me a more profound appreciation for the complexity of the world.

Additionally, students emphasize the responsibility they feel now that their engagement with knowledge has more purposeful implications:

> There is no benefit if I don't use my knowledge to help others.
> This continuous engagement with knowledge is seen as essential for developing skills, growing as individuals, and meeting professional aspirations.

4.3. Knowledge as a Process of Personal Growth

This theme highlights the transformative role of knowledge in students' personal growth and identity formation during the transition to university. Unlike the second theme, which focuses on the utility of knowledge, this theme emphasizes how students perceive knowledge as a tool for self-discovery, fostering a deeper understanding of their identity and place in the world. The process of acquiring knowledge is described as empowering, helping students build confidence in their decisions and shaping their academic and personal identities. Students view knowledge as a pathway to specialization, equipping them with skills for their professional futures while also broadening their perspectives and offering new ways to reflect on their lives. Through these experiences, knowledge emerges as both an academic and deeply personal journey, integral to students' development and self-awareness. This theme relates more to the internal, transformative role of knowledge. It explores how students talk about engaging with knowledge to shape their identity, self-awareness, and personal development. One student mentioned:

> The purpose of life is knowledge, I read and ask myself to read more, I want to know more, and I want to find my personal truth.

Another aspect of this theme is how students view knowledge as a path to specialization, feeling more skilled and prepared for their professional futures as they engage deeply with their chosen fields:

> Attending university frequently results in specialization in a certain field, which has helped me feel more knowledgeable and skilled.

Students also mention how moving from high school to university has broadened their perspectives, offering them new ways to understand themselves:

> Moving from school to university broadened my worldview, offering new perspectives over my personal life.

5. Discussion

The findings offer insights into how students conceptualize and engage with knowledge during their transition to university, emphasizing its role as a practical tool, a resource to be managed, and a catalyst for personal growth. Students' discourses reveal a multifaceted understanding of knowledge, referencing metacognitive, procedural, and conceptual dimensions (Anderson et al., 2013). These insights contribute to the existing literature on academic transitions, shedding light on how students navigate the shift from content-based, teacher-guided learning to process-oriented and self-directed inquiry (Scott, 2017).

Students frequently described knowledge as a practical resource, emphasizing its value in shaping their professional futures and aligning with Biesta's (2020) concept of qualification. This resonates with Geisler's (2023) assertion that students with dynamic beliefs about knowledge adapt more effectively to academic demands. However, participants also expressed a tension between valuing the practical applications of knowledge and engaging with its deeper theoretical dimensions, raising concerns about what Battaly (2013) refers to as epistemic insensitivity. To address this, institutions might consider fostering learning environments that integrate real-world applications, such as internships, case studies, and project-based learning, while simultaneously encouraging reflective engagement with theoretical content.

Students' reflections also highlight the transformative role of knowledge in shaping their sense of self, consistent with Biesta's (2020) concept of subjectification. Participants described how engaging with knowledge broadened their perspectives, facilitated self-discovery, and helped them articulate their place in the world. This aligns with Young and Muller's (2016) idea of powerful knowledge, which enables individuals to engage critically with abstract and specialized concepts. Universities could support this identity-shaping process by integrating reflective practices - such as journaling, self-assessments, and personal growth assignments - into the curriculum. These practices offer students a space to connect their academic learning to their evolving personal and professional identities, fostering a more meaningful engagement with knowledge.

Managing knowledge emerged as a central theme, with participants describing the challenges of adapting to larger volumes of information and engaging in independent learning. This finding echoes Hussey and Smith's (2010) emphasis on the importance of autonomous learning skills and Brooman and Darwent's (2014) recognition of the complexities of self-directed academic environments. The shift from memorization to understanding and application requires students to develop new strategies for engaging with knowledge. Universities might respond by offering tailored workshops on time management, critical thinking, and research skills. Mentorship and tutoring programs could also provide crucial support during this transition, helping students bridge the gap between the structured learning environment of high school and the independent inquiry required at university.

The findings also reflect sociological perspectives on the transition, particularly Bernstein's (2003) concepts of classification and framing. Participants described the disorientation that comes with moving from high school's compartmentalized subjects to the university's interdisciplinary and open-ended knowledge structures. This reduced teacher guidance and the reliance on higher-order thinking often led to feelings of uncertainty. These challenges point to the importance of sustained institutional support. Orientation programs that extend into the academic year, coupled with mentorship and reflective activities, can offer students the reassurance and tools needed to navigate these shifts in how knowledge is structured and applied.

Although the themes of utility and personal growth intersect, analyzing them separately reveals the dual roles of knowledge in students' experiences. While utility focuses on external, career-oriented applications (qualification), personal growth emphasizes internal transformation and self-discovery (subjectification). Participants' ideas suggest the need for a balanced approach to education - one that combines competency-based frameworks with relational and reflective engagements with knowledge. This balance ensures that students are equipped with practical skills while also fostering their capacity for deeper intellectual and personal exploration.

6. Conclusion

This study provided some insights into the types of knowledge that first-year students engage with during their transition from high school to university, as well as how they describe their experiences from the perspective of this knowledge engagement. The findings highlight three key themes that emerged from students' responses: knowledge management and learning strategies, the value and utility of knowledge, and knowledge as a process of personal growth. Each of these themes sheds light on different aspects of how students navigate the complexities of university life, where learning and knowledge play central roles in their adaptation and success.

Firstly, the study reveals that students refer to various types of knowledge, including explicit, procedural, and metacognitive knowledge, as they describe their transition from high school to university. Students highlight the challenges of managing the increased volume and complexity of information, marking a clear shift from high school memorization-based learning to more independent, self-directed inquiry at university. This transition requires students to develop new learning strategies, such as effective time management, critical thinking, and efficient information processing. These findings directly address the first research question, illustrating the diverse forms of knowledge that students refer to in their descriptions of the transition, with an emphasis on the need for developing skills to manage and apply this knowledge effectively. Secondly, students describe their transition as a process of adaptation to new learning environments, characterized by the need for greater independence and self-direction in knowledge engagement. As they move away from teacher-guided, content-based learning in high school, students begin to engage with knowledge in ways that emphasize understanding over memorization. This shift underscores the second research question, as students' descriptions show how their engagement with knowledge evolves. They highlight how they are required to engage with knowledge critically and contextually, developing a more reflective and independent approach to learning. These findings suggest that universities need to provide structured support, such as tailored workshops on time management, critical thinking, and research skills, to help students adapt to these new expectations.

In terms of the value and utility of knowledge, students often discuss knowledge as a tool for personal and professional development. They view university learning as more directly relevant to their future careers compared to the often abstract or rote learning experiences in high school. This finding aligns with Biesta's (2020) concept of qualification, where knowledge is recognized as a resource that helps shape students' personal and professional identities. However, students also express a tension between the practical application of knowledge and its deeper theoretical aspects, which can sometimes feel disconnected from their immediate goals. This highlights the need for universities to foster environments that integrate both real-world applications, such as internships and project-based learning, and reflective engagement with theoretical concepts. The integration of both aspects ensures that students are not only prepared for their careers but also equipped to engage with knowledge critically.

The third theme centers on the transformative role of knowledge in students' personal growth and identity formation. Knowledge is not only seen as a tool for academic success and career preparation but also as a means of self-discovery. Students describe how engaging with knowledge broadens their perspectives and helps them articulate their sense of self and their place in the world. This aligns with Biesta's (2020) concept of subjectification, where the acquisition of knowledge helps students understand and define their personal identities. This personal transformation can be supported by universities through reflective practices, such as journaling or self-assessments, which encourage students to connect their academic learning with their evolving personal and professional identities.

These findings extend and challenge existing literature on Competency-Based Education (CBE) and knowledge engagement in educational transitions. While CBE emphasizes measurable outcomes and competencies, this study highlights the need for students to engage deeply with knowledge—not just as a means to achieve academic success, but also as a means of fostering personal growth and critical thinking. The study suggests that a more holistic approach to education is required, one that balances competency-based frameworks with opportunities for reflective engagement with knowledge. This approach would ensure that students are equipped with both practical skills and the intellectual depth required for future success.

In practice, these findings suggest that universities should design curricula and support systems that foster both the acquisition of competencies and the reflective engagement with knowledge. By integrating real-world applications, promoting critical thinking, and encouraging reflective practices, universities can help students not only meet academic demands but also engage in personal and professional growth. Additionally, long-term support systems, such as mentorship and tutoring programs, can help students continue to adapt and reflect on their learning throughout their university experience. Looking ahead, future research should explore how the findings of this study evolve. Longitudinal studies could assess how students' engagement with knowledge develops throughout their university careers, particularly concerning their academic identity and professional aspirations. Furthermore, examining the experiences of diverse student populations - such as those from varying socioeconomic backgrounds, fields of study, or cultural contexts - would provide a deeper understanding of how knowledge is engaged during transitions. Future studies could employ both quantitative methods, such as longitudinal assessments of metacognitive development, and qualitative approaches, such as interviews focused on reflective practices.

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