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CURRICULAR RELEVANCE AND WORKFORCE PREPAREDNESS: STUDENT PERSPECTIVES ON PRACTICAL EXPERIENCES IN URBAN PLANNING AND CONSTRUCTION COURSES

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Abstract:

This study conducted at Ovidius University of Constanta, Romania, examines the integration of practical experiences into urban planning and construction curricula, involving 318 students from Construction, Law, and Administrative Sciences faculties. The study stresses the significance of these experiences in preparing students for the workforce, while assessing their perspectives on the relevance of their courses to future careers, with a particular emphasis on the influence of internships and real project involvement. The findings suggest that students who engage in practical activities view their courses as more relevant to their career advancement. This pattern is consistent across an array of courses, with various statistical analyses revealing degrees of significance. The study underscores the need of aligning educational programmes with labour market standards and professional requirements, particularly within fields that emphasise practical competencies. It also highlights the essential roles of construction engineers and public administration professionals, emphasizing the importance of understanding practical and legal aspects in their education.

Keywords: *educational perception, practical relevance, career preparedness, curriculum assessment, workforce integration*

1. Introduction

In the intricate and evolving fields of urban planning and construction, the synergy between practical experiences and theoretical instruction stands at the forefront of educational excellence. These disciplines, foundational to professional education and practice, play a pivotal role in shaping our cities and communities and demand not only an

understanding of urban dynamics and public spaces but also an adherence to rigorous legal and ethical standards.

Urban planning, a discipline that intricately intertwines theoretical knowledge with practical application, is essential in shaping the fabric of urban life. Planners are tasked with navigating the complexities of land use, where decisions must transcend academic theory, delving into the practicalities of construction execution. This involves a delicate balance between what is feasible and what remains impractical, a balance that can significantly impact the viability and legal compliance of construction projects.

Similarly, construction engineers are required to possess an acute awareness from the very inception of a project. They must understand the nuanced boundaries between feasible and unfeasible construction endeavors. In this realm, even minor miscalculations can lead to significant ramifications, altering the course of a construction project from viable to untenable. This highlights the need for meticulous planning and strict adherence to both legal and practical standards in all stages of construction.

In parallel, public administration professionals managing urban planning and construction must be well-versed in the legislative and regulatory aspects. Their role is important in ensuring that projects are not only compliant with the law but also practically feasible and well-integrated within existing legal frameworks. Also, public administration professionals ensure that urban projects comply with laws and are compatible with existing structures, while local police officers enforce construction regulations. They inspect unauthorized construction projects, ensure compliance with repair and construction permits, and supervise the dismantling of illegal structures, prioritizing operational safety (Sabie, 2015).

The current academic environment emphasizes aligning education with workforce preparedness, essential for graduates' smooth transition into their professional roles. Practical experiences are essential in education, as highlighted by Wijaya et al. (2021), who explored socio-economic factors affecting labor and economic growth, underscoring education's role in workforce skill development. Similarly, Hübel (Anghel), Stan, and Tasențe (2023) see education as pivotal in socio-economic progress, linking educational levels to life satisfaction and economic stability.

Digital transformation in classrooms, as discussed by Aivaz and Teodorescu (2023), presents the dual impact of digital tools enhancing access and communication but potentially leading to superficial learning and inequality. Digital proficiency is becoming vital in curriculum design, preparing students for modern careers. Additionally, Fang et al. (2022) advocate incorporating Urban Data Science in research and education, highlighting the need for curricula that evolve with technology and market needs, particularly in urban planning and construction.

In line with this perspective, the following objectives have been formulated for the current research: (O1) To explore the relationship between students' engagement in practical activities, intership and their perception of the courses' usefulness in career preparation; (O2) To understand the extent to which direct involvement in concrete projects enhances students' perception of the usefulness of courses in developing the necessary professional competencies. This research focuses on three hypotheses to understand how hands-on activities and project participation enhance and solidify the educational value in urban

planning and construction. A comprehensive review of this educational curriculum is essential, covering educational relevance, practical application, student preparedness for careers, and workforce integration. Such an analysis promises to yield insights into how higher education institutions can more effectively prepare future professionals with the skills and knowledge needed to meet the challenges of urban planning and construction in an ever-evolving world.

2. Literature review

Exploring the dynamic world of urban planning and construction education, this literature review examines how current teaching methods are adapting to prepare students for the realities of the workforce.

The discipline of urban planning education is characterised by its dynamic nature. Essential to this approach is the integration of practical experiences, evaluation of the curriculum, and preparation for careers. Such an approach informs students' perceptions and aligns educational outcomes with the demands of the professional workforce. Contemporary urban planning curricula are promptly responding to societal transformations, indicating a notable movement towards a dynamic, competency-centred methodology. This adaptation, articulated by Perez & Chaparro (2023), highlights the importance of urban planners developing necessary competencies, skills, and knowledge for tackling the intricate and evolving nature of present-day societies.

Furthermore, post-socialist nations have developed pedagogical models that concentrate on sustainable development and integrated platforms for dialogue. Maruna, Rodic, and Colic (2018) stress that these models serve the education of various stakeholders and underline the importance of cooperative networks in this expanding educational realm. This trend highlights a worldwide shift in urban planning education, marked by the gradual and constant creation of autonomous educational programmes. Frank and Silver (2018) emphasise that this movement emphasises the significance of interdisciplinary competencies and the necessity for academics and planners to adjust to constantly shifting educational requirements.

Additionally, the interdisciplinary nature of urban planning, emphasised by Sanchez (2021), necessitates a broad research approach. This approach is important to encompass the varied expertise from diverse fields engaged in urban planning. Such diversity is essential for understanding the nuances of human settlement activities and the natural and built environment. This comprehensive perspective not only augments the curriculum but also guarantees that students acquire a broad spectrum of skills and knowledge, thereby facilitating their capacity to address the diverse array of challenges anticipated in their professional trajectories.

In the field of urban planning and construction education, the necessity of incorporating practical and technological aspects into the curriculum is becoming increasingly significant. The reliance on Building Information Modelling (BIM) in the industry is growing, which is leading to the emergence of tailored curriculum designs. As stated by Abdirad and Dossick (2016), such curricula are tackling important pedagogical problems including student enrolment, technology application, essential competencies, and industry commitment. This

highlights the necessity for educational programmes to advance in tandem with technological developments, to ensure that students are not only knowledgeable but also skilled in the tools and methods that influence today's construction and urban planning field.

Additionally, the practical facets of urban planning education, including hands-on learning and community engagement, are essential to providing students with genuine real-world experiences. As Kotval (2003) and Di et al. (2012) have noted, these experiences provide students with base abilities in community development and helps to bridge the distance between theoretical knowledge and practical application.

Moveover, the role of collaborative teaching strategies in postgraduate education cannot be overstated. Lin et al. (2018) emphasize that fusing constructive principles with participatory and research-focused teaching not only amplifies student involvement but also addresses individual learning needs. The concept of co-creation in curriculum development is also gaining momentum, with Niinikoski (2019) placing emphasis on involving students in the curriculum design process as a matter of importance. This commitment guarantees that educational provision is not solely up to date, but also highly pertinent to the requirements of students and the industry. Also, the connection between increased research and development investments and the enhancement of digitalization and ICT skills in businesses, as revealed through the econometric analysis by Aivaz and Tofan (2022), further highlights the significance of aligning educational strategies with industry trends.

The inclusion of sustainability in higher education curricula, as highlighted by Lebre et al. (2019), represents a noteworthy change in societal values. This shift towards sustainability emphasises the requirement for curricula that not only promote economic growth and social development but also ensure environmental stability.

Nevertheless, incorporating these sophisticated science curricula, particularly in the context of educational reforms, poses several obstacles. Vasconcelos et al. (2015) point out that curriculum length, resource limitations, and student discipline are substantial impediments. These obstacles emphasise the pivotal involvement of teachers during the reform process, guaranteeing curricular alterations are implemented effectively and aligned with the practicalities of the classroom.

The move to online education amid the COVID-19 pandemic presents additional challenges, as evaluated by Sandu et al.'s (2021) research. Their findings add to the discussion on the effects of this transition on students' practical learning, stressing the significance of maintaining academic continuity during crises. Moreover, another studies (Aivaz and Teodorescu, 2022b; Teodorescu, Aivaz and Amalfi, 2021) investigate factors affecting student motivation in online courses during the COVID-19 pandemic. Their research sheds light on the challenges and dynamics of online learning, underscoring the need for effective strategies to maintain student engagement in a virtual environment. Moreover, Du, Grigorescu and Aivaz's (2023) study scrutinises the function of digital platform capability (DPC) in stimulating innovation performance during the digital transformation of higher education institutions post-COVID-19. Their discoveries furnish imperative perspectives for educational institutions striving to intensify their innovation capabilities via digital transformation. Also, Stan's (2021) study into labor productivity in the construction industry during the pandemic highlights the required adaptive measures within the sector.

Understanding students' perceptions of science curricula implementation offers valuable insights into the efficacy of current educational strategies. As Vasconcelos, Amador and Torres (2012) emphasize, these perceptions highlight the necessity of inquiry-based approaches and the active engagement of students in their learning processes.

In their study, Rokooei, Kisi and Shojaei (2020) delve into construction students' perceptions of mastering course content within different educational models. Authors de la Herran Gascon and Rodriguez Herrero (2022) advocate for a radical and inclusive approach to curriculum theory. This approach aims to critique both traditional and critical curriculum methods, suggesting significant changes that focus on the complexity and heightened consciousness in education and pedagogy.

The transition from traditional classroom-based training to online modalities in specialized fields like construction is another critical aspect. Jimenez Delgado and Piedecausa-Garcia (2013) explore the challenges and innovations in this area, reflecting on the implications for curriculum development in these specialized educational domains. Their research suggests that embracing online education requires not just technological adaptation but also a rethinking of pedagogical strategies to ensure effective learning.

Liu, Hodgson and Lord (2010) emphasise the importance of culture in e-learning, specifically in construction education. Their research highlights the necessity for inventive approaches to incorporate e-learning into construction education, while Țîmbalari and Herciu (2023) also are taking into account the cultural influences affecting these educational innovations. Also, Aivaz and Teodorescu's (2022a) case study compares students' digital device usage in online versus face-to-face classes, suggesting that enhanced instructional design and interactive sessions can improve student engagement and reduce multitasking in online classes. This finding is pivotal for faculties aiming to improve online course quality, including pedagogy, content, and preparation.

Thus, Teodorescu et al. (2023) examine the intersection of educational curricula and the workforce needs, detailing how students' trust in AI technologies is shaped by their curriculum's practical experiences. This study informs strategies for workforce readiness in the digital economy, emphasizing the importance of transparency, familiarity, and usefulness in curriculum design.

The importance of interactive and collaborative activities in education is well-demonstrated by Hasegawa (2022), who investigates their impact on undergraduate students during the COVID-19 pandemic. This study highlights the adaptability of educational models to external challenges, emphasizing the continued need for collaborative and interactive learning experiences, even in the face of unprecedented disruptions.

Karji et al. (2020) delve into the practical application of learning through an interview-based internship class within a construction management curriculum. Their findings offer valuable insights into the effectiveness of integrating real-world experiences into academic curricula, showcasing the practical relevance of such experiential learning approaches.

In the context of data literacy, Tas (2023) examines its education through university-industry collaboration, underscoring the importance of jointly designing and delivering curricula that equip students with essential skills for the digital age labor market. This study points out the significance of collaborative efforts between academia and industry in developing curricula that are both relevant and applicable in the modern workplace. Another

study, Micu et al. (2021) investigates the application of neuroscientific methods in the digital and social media context, focusing on the assessment of their impact on educational perception and practical relevance within the curriculum.

Similarly, Valiente Bermejo et al. (2022) present a cooperative model for curriculum design in manufacturing engineering courses, based on the Plan-Do-Study-Act cycle. Their approach demonstrates successful university-industry collaboration, aligning industrial needs with academic offerings, thus bridging the gap between academic learning and practical application.

Matkovic et al. (2014) discuss the benefits of redesigning the curriculum development process through university-industry cooperation. The results indicate that collaborations between universities and industry partners have mutual benefits, such as enhanced quality of educational programs, improved graduate employment opportunities, and a bolstered public image.

Shrivastava et al. (2022) explore the intricacies of co-creating curricula with industry partners in a business school context. Their case study underlines the importance of harmonizing academic rigour with industry pertinence and catering to the varied demands of students, thereby demonstrating the intricate nature of designing a curriculum together.

Isopescu, Covatariu and Ștefan (2017) propose innovative strategies for integrating graduates into the construction sector labor market. Their project underlines the importance of familiarizing students with the organizational environment of construction companies, highlighting the role of academic institutions in facilitating this transition.

The concept of 'third mission' activities in higher education, explored by Woollard, Zhang and Jones (2007), highlights the importance of employer-led curriculum development. This approach supports regional economic growth and aligns academic offerings with industry needs. Additionally, Carbone et al. (2020) advocate for the inclusion of Work-Integrated Learning (WIL) in academic curricula, highlighting the wide-ranging advantages of practical experiences. They illustrate how activities like industry site visits significantly enhance students' understanding of career paths and contribute to the development of their professional identity.

In summary, this review highlights a significant trend in urban planning and construction education towards practicality and real-world application. It emphasizes the growing importance of aligning academic learning with industry demands, ensuring that students are not just educated, but truly prepared for their future roles. This shift represents an important step in developing a workforce that is not only knowledgeable but also adaptable and ready to meet the challenges of a rapidly evolving professional environment.

3. Research methodology

The survey was carefully designed and administered to 318 student participants from two faculties with academic curricula encompassing courses on urban planning and construction to ensure the validity and reliability of the data collected (Table 1).

Table 1: Sample Demographics

	N	%
Gender		
Male	230	72.3
Female	88	27.7
Total	318	100.0
Employment status		
Employed full-time	154	48.4
Employed part-time	24	7.5
Not employed	140	44.0
Total	318	100.0
Level of education		
Bachelor's degree	238	74.8
Master's degree	80	25.2
Total	318	100.0
Faculty		
Faculty of Construction	134	42.1
Faculty of Law and Administrative Sciences	184	57.9
Total	318	100.0

In this study, the questionnaire is specifically designed to investigate the variability in students' opinions about the usefulness of certain courses, specifically examining how this varies with their involvement in practical experience. The questionnaire includes both quantitative items, like Likert-scale questions, and qualitative items, such as open-ended questions.

The data gathered were analyzed using IBM SPSS software, enabling a detailed examination of student responses. This methodical approach allowed the study to effectively capture and analyze the nuances of students' experiences in urban planning and construction courses.

4. Results and discussion

The exploration of our study's results unfolds through the lens of three distinct yet interrelated hypotheses. These hypotheses scrutinize the nuances of student perceptions within the educational realm, addressing: (H1), students' opinion regarding the usefulness of certain courses varies significantly with the involvement in practical activities; (H2), students' opinion on the usefulness of certain courses varies significantly with involvement in the realisation of real projects within the faculty; and (H3), students' opinion on the usefulness of particular courses vary significantly with how they value this experience. This comprehensive analysis seeks to unravel the complex dynamics between experiential learning and student perspectives, shedding light on the essential role of practical engagement in shaping educational outcomes.

Hypothesis 1: Students' opinion regarding the usefulness of certain courses varies significantly with the involvement in practical activities.

Table 2 presents how students with and without internship experience perceive the usefulness of different courses in their academic program, particularly in the field of urban planning and construction.

The presented data indicates a distinct tendency among students who have completed internships towards deeming the *Urban Planning* course more advantageous for career development in comparison with those who have not. A considerable 40.3% of students who have experienced internships regard it as 'Very important', while in contrast, only 28.2% of those without internships share the same view. This contrast is less prominent but still noticeable for the 'Important' category (31.8% versus 32.5%). Of interest, fewer students with internships consider the course as 'Little important' or less (28.2% combined) when compared to their peers without internships (39.3% combined). The Chi Square value of 6.198 with a p-value of 0.185 suggests a trend, but it does not meet the conventional threshold of statistical significance (usually, $p < 0.05$). Hence, while there may be a difference in perception, it might not be significant enough to generalize across a larger population. The Cramer's V value of 0.185, indicating a small effect size. This suggests that the internship experience, while beneficial, may not drastically alter the perceived importance of the course for all students.

For the *Construction Discipline* course, the pattern is somewhat similar but less pronounced. Students undertaking internships are more inclined to perceive the course as very significant (37.8% vs. 32.5%). Nonetheless, the proportion of students rating the course as 'Important' is slightly higher among those without internships (26.9% vs. 22.2%). The allocation in the lower categories ('Not important at all' to 'Little important') is also more balanced between the two groups. The statistical analysis reveals a subtle difference. The Chi Square value of 4.431 and the p-value of 0.351 suggest that the observed differences are not statistically significant. This conclusion is supported by the Cramer's V of 0.351, signifying a small effect size.

The *Legislation in construction* course exhibits a significant contrast in perceptions. Specifically, 48.3% of students who completed an internship, viewed it as 'Very important', a substantial improvement from the 35.9% in the non-internship group. Similarly, there was a discernible difference in the 'Little important' category, with figures of 12.9% and 24.8% respectively. The Chi Square value of 9.780 with a p-value of 0.044 exceeds the threshold of statistical significance, indicating that students' perception of the course's usefulness is significantly influenced by their internship experience. However, the low Cramer's V value of 0.044 suggests a small effect size.

Notably, the *Elaboration of technical documentation in construction* course exhibits the most pronounced variation in perceptions. There is a noteworthy divergence between surveyed students with and without internships, as 49.3% with internships ranked this course as 'Very important' in comparison to 31.6% without internships. Similarly, those with internships rated it as 'Little important' at a lower rate than those without (12.9% vs. 25.6%). A Chi Square value of 13.451 and a p-value of 0.009 provide statistical significance and further support the notion that internships have a meaningful influence on students' valuation of this course. Additionally, Cramer's V of 0.009 indicates a small effect size.

The trend observed in the *Urban Engineering and Regional Development* course is similar to that of previous courses, but less marked. A higher percentage of students with internships found the course 'Very important' (36.8% vs. 27.4%), but the difference in other categories was less significant. The Chi-Square value of 7.783 and a p-value of 0.100

indicate that the trend, while present, is not statistically significant. The interpretation is supported by a small effect size, as indicated by Cramer's V of 0.100.

Additionally, there is a discernible difference in perceptions identified by the *Construction behavior tracking over time*. Of note, a significant proportion of students with internships (46.8%) rated the construct as 'Very important', compared to only 31.6% of those without such experiences. The distinction is further evident in the 'Little important' category (16.4% vs 29.9%). The Chi Square value of 12.431 and a p-value of 0.014 reveal a statistically significant dissimilarity between the two groups. The effect size is small, with a Cramer's V of 0.014.

Table 2: Student evaluations of course utility for career development based on internship experience

	They did an internship	They did not do an internship	
How useful do you think the Urban Planning course is for your career?			
Not important at all	3%	4.3%	
Very little important	3%	5.1%	
Little important	21.9%	29.9%	
Important	31.8%	32.5%	
Very important	40.3%	28.2%	
N	201	117	318
Chi Square			6.198
P			0.185
Cramer's V			0.185
How useful do you think the Construction Discipline course is for your career?			
Not important at all	6.5%	7.7%	
Very little important	7.0%	12.8%	
Little important	21.9%	24.8%	
Important	26.9%	22.2%	
Very important	37.8%	32.5%	
N	201	117	318
Chi Square			4.431
p			0.351
Cramer's V			0.351
How useful do you think the Legislation in construction course is for your career?			
Not important at all	4.5%	5.1%	
Very little important	8.0%	11.1%	
Little important	12.9%	24.8%	
Important	26.4%	23.1%	
Very important	48.3%	35.9%	
N	201	117	318
Chi Square			9.780
p			0.044
Cramer's V			0.044
How useful do you think the Elaboration of technical documentation in construction course is for your career?			
Not important at all	5.0%	6.8%	
Very little important	6.5%	9.4%	
Little important	12.9%	25.6%	
Important	26.4%	26.5%	
Very important	49.3%	31.6%	

N	201	117	318
Chi Square			13.451
p			0.009
Cramer's V			0.009
How useful do you think the Urban Engineering and Regional Development course is for your career?			
Not important at all	4.5%	6.0%	
Very little important	8.0%	6.0%	
Little important	21.9%	35.0%	
Important	28.9%	25.6%	
Very important	36.8%	27.4%	
N	201	117	318
Chi Square			7.783
p			0.100
Cramer's V			0.100
How useful do you find the Construction behavior tracking in time course to your career?			
Not important at all	4.5%	6.8%	
Very little important	6.5%	9.4%	
Little important	16.4%	29.9%	
Important	25.9%	22.2%	
Very important	46.8%	31.6%	
N	201	117	318
Chi Square			12.431
p			0.014
Cramer's V			0.014

The general trend in these courses indicates that internship participation enhances students' understanding of the value and significance of their studies for their future careers. This outcome can be attributed to various factors. Firstly, internships offer practical, real-life experiences, enabling students to apply their academic knowledge directly and appreciate its relevance. Secondly, internships could enhance understanding and retention of course material as students can relate theoretical concepts to practical experiences.

The varying nature of the courses and their relation to real-world application may account for statistical significance in some courses but not others. Courses such as Technical Construction Documentation, with direct practical application, may be more evidently valuable to those with internship experience.

The Cramer's V values indicate small effect sizes across all courses. This implies that while internships do impact perception, they are not the only determining factor. Other elements, including teaching quality, individual interest, and career aspirations, are likely to play significant roles in shaping students' opinions of their courses.

In summary, internships appear to positively influence students' perception of the relevance of their courses to their career advancement, but their impact is moderate and varies based on the type of course and faculty specialization. The importance of practical experience in education is stressed, along with the need for a thorough approach to increase the perceived value of academic programs in equipping students for their future careers.

Hypothesis 2: Students' opinion on the usefulness of certain courses varies significantly with involvement in the realisation of real projects within the faculty.

Table 3 examines the perceived effectiveness of different courses in terms of students' involvement in projects that are relevant to their future career development.

A marked disparity in opinion is observed among students enrolled in the *Urban Planning* course, with 47.4% of those who undertook projects considering the course to be of 'Very important' significance in comparison to the 33.3% who did not partake in projects. Additionally, the proportion of students who determined the course to be of 'Little important' value or less is notably lower among project participants (20.8%) relative to non-participating students (34.4%). These findings suggest that engagement in projects heightens the perceived relevance of the course. The statistics show that the difference is not statistically significant, as the Chi Square value of 5.464 and a p-value of 0.243 suggest. Moreover, the Cramer's V value of 0.243 reveals only a small to moderate effect size, indicating a trend rather than a conclusive result.

For the *Construction Discipline* course, students who participate in projects are more inclined to rate the course as "very important" (42.1%) compared to those who do not (34.5%). Furthermore, a smaller proportion of students who are involved in projects rate the course as "little important" or less (24.6%) in comparison to those who are not involved in projects (42.1%). Statistical measures indicate a Chi Square value of 7.299 and a p-value of 0.121, which suggest a trend but not a statistically significant distinction. The Cramer's V value indicates a small effect size of 0.121.

The course on *Legislation in construction* reveals a more distinct contrast. A noteworthy 59.6% of students who engage in projects find the course 'Very important', as opposed to 40.2% of those who do not. This significant gap implies that project participation significantly augment the perceived usefulness of this course. This finding holds statistical significance, demonstrated by a Chi Square value of 12.921 and a p-value of 0.012. Nevertheless, the insignificant Cramer's V value of 0.012 implies a negligible impact.

The *Elaboration of technical documentation in construction* course exhibits a notable variance in viewpoint. An impressive 61.4% of students who participated in projects rated the course as 'Very important', compared to 38.7% of those who did not participate. This indicates that practical involvement in projects substantially enhances the perceived value of the course. The statistical tests confirm the significance of this finding. Specifically, the Chi Square value of 15.568 and a p-value of 0.004 underscore this difference. Additionally, the Cramer's V value indicates a small effect size (0.004), but highlights the trend.

In the course of *Urban Engineering and Regional Development*, there is a comparable pattern, with a greater proportion of students actively participating in projects indicating a perception that the course is 'Very important' (42.1% vs. 31.4%). Nevertheless, variations among other categories are not as remarkable. The calculated Chi Square value of 5.986 and a p-value of 0.200 indicate a pattern but not a statistically influential difference. The Cramer's V value of 0.200 suggests a minor effect size.

The *Construction behavior tracking over time* course shows a noticeable disparity in perception. A considerable 52.6% of students engaged in the projects appraise it as 'Very important', as opposed to 38.7% of those uninvolved. This indicates a firm association between project participation and perceived course significance. The statistical relevance is emphasised by a Chi Square value of 15.741 and a p-value of 0.003. Despite the small value of Cramer's V (0.0003), it indicates an obvious trend.

Table 3: Students' evaluation of the course's efficacy in promoting their professional development through their involvement in projects

	They participated in projects	They did not participate in projects	
How useful do you think the Urban Planning course is for your career?			
Not important at all	1.8%	3.8%	
Very little important	3.5%	3.8%	
Little important	15.8%	26.8%	
Important	31.6%	32.2%	
Very important	47.4%	33.3%	
N	57	261	318
Chi Square			5.464
p			0.243
Cramer's V			0.243
How useful do you think the Construction Discipline course is for your career?			
Not important at all	1.8%	8.0%	
Very little important	5.3%	10.0%	
Little important	17.5%	24.1%	
Important	33.3%	23.4%	
Very important	42.1%	34.5%	
N	57	261	318
Chi Square			7.299
P			0.121
Cramer's V			0.121
How useful do you think the Legislation in construction course is for your career?			
Not important at all	0.0%	5.7%	
Very little important	5.3%	10.0%	
Little important	7.0%	19.5%	
Important	28.1%	24.5%	
Very important	59.6%	40.2%	
N	57	261	318
Chi Square			12.921
P			0.012
Cramer's V			0.012
How useful do you think the Elaboration of technical documentation in construction course is for your career?			
Not important at all	0.0%	6.9%	
Very little important	3.5%	8.4%	
Little important	7.0%	19.9%	
Important	28.1%	26.1%	
Very important	61.4%	38.7%	
N	57	261	318
Chi Square			15.568
P			.004
Cramer's V			.004
How useful do you think the Urban Engineering and Regional Development course is for your career?			
Not important at all	0.0%	6.1%	
Very little important	5.3%	7.7%	
Little important	22.8%	27.6%	
Important	29.8%	27.2%	
Very important	42.1%	31.4%	

N	57	261	318
Chi Square			5.986
P			0.200
Cramer's V			0.200
How useful do you find the Construction behavior tracking in time course to your career?			
Not important at all	0.0%	6.5%	
Very little important	3.5%	8.4%	
Little important	8.8%	24.1%	
Important	35.1%	22.2%	
Very important	52.6%	38.7%	
N	57	261	318
Chi Square			15.741
p			0.003
Cramer's V			.0003

Involvement in significant projects within the two faculties leads students to positively perceive the relevance of their courses to their career development. This findings supports the second hypothesis and emphasizes the importance of practical, experiential learning in improving the perceived relevance of academic studies.

The differences in statistical significance and effect sizes observed among courses can be linked to the distinctive characteristics of each course and how learners interpret the relevance of project participation vis-à-vis theoretical knowledge. Courses that have a more practical focus, for instance, Elaboration of technical documentation in construction, demonstrate a stronger correlation, presumably due to the direct applicability of project skills to the course content.

The generally small effect sizes (Cramer's V) across most courses suggest that although projects involvement does have an impact on perception, it is not the sole factor. Other factors, such as individual interests, teaching methodology and career aspirations, are also likely to play significant roles.

To conclude, the data supports the idea that practical experience, in the form of real projects, enhances the understanding of the relevance of one's courses among students. This highlights the significance of incorporating practical experiences into academic curricula in order to enhance student preparation for the workforce and raise the perceived worth of educational programs in urban planning and construction.

Hypothesis 3: Students' opinion on the usefulness of particular courses vary significantly with how they value this experience.

In the realm of higher education, particularly in domains such as urban planning and construction, the alignment of curricular content with real-world applicability is a essential factor shaping students' perceptions of course utility (Table 4).

For the *Urban Planning* course, a distinct gradient in students' perceived worthiness based on their experience categorization is perceptible. Notably, 61.5% of students who found their experience vocationally beneficial regarded the course as 'Very important', in contrast to 33.3% among those who found it irrelevant. It is worth noting that the course was mainly rated as 'important' (50.0%) by students who found the experience interesting but not necessarily practical. The results demonstrate statistical significance, with a Chi Square

value of 16.99 and a p-value of 0.030. Furthermore, the Cramer's V value of 0.030 confirms the variation in perceptions resulting from experience utilization despite a small effect size.

Similarly, the *Construction Discipline* course exhibits comparable trends, with a substantial 51.3% of students who possess professionally exploitable experiences ranking the course as 'Very important' in contrast to 34.5% in the lack of relevance group. A majority of respondents in the "interesting but not necessarily useful" group rated the Legislation in Construction course as "Important" (44.4%). The Chi Square value is 12.846 with a p-value of 0.117, suggesting a trend but without statistical significance. The Cramer's V value of 0.117 indicates a small effect size.

Notably, the *Legislation in Construction* course exhibits one of the most significant distinctions. The course was deemed 'Very important' by a remarkable 69.2% of students with professionally exploitable experiences - a significant increase from the 40.2% in the group lacking relevance. Even those who found the experience interesting but not necessarily useful rated it 'Very important' (38.9%) or 'Important' (50.0%). The statistical significance is demonstrated by a Chi Square value of 22.279 and a p-value of 0.004. The Cramer's V score of 0.004 indicates a small effect size, but it demonstrates noteworthy differences in perspectives.

For the *Elaboration of technical documentation in construction* course, the pattern is even more pronounced. 74.4% of students who viewed their experience as professionally exploitable rated the course as 'Very important', compared to only 38.7% of those who found it lacking relevance. This difference is statistically significant, with a Chi Square value of 27.251 and a p-value of less than 0.001. The result displays a small yet statistically significant effect size, as evident from the Cramer's V value being below 0.001.

Similarly, the *Urban Engineering and Regional Development* course reveals a comparable but less prominent trend. Among those who have conducive professional experiences, a high proportion of students rate the course as 'very important' at 48.7%. However, the Chi-Square and p-value of 11.253 and 0.188, respectively, imply a mere inclination rather than statistical significance. The Cramer's V value of 0.188 indicates a small effect size.

In the *Construction behavior tracking over time* course, 59.0% of students with professionally exploitable experiences found the course to be 'Very important', a statistically significant increase when compared to the 38.7% in the lack of relevance group. This is evidenced by the Chi Square value of 20.028 and a p-value of 0.010. The Cramer's V value of 0.010, while small, indicates a notable difference in perceptions.

Table 4 Students' evaluation of the usefulness of certain courses depending on how this experience is appropriately utilized

	Lack of relevance	Interesting, but not necessarily useful	Professionally exploitable
How useful do you think the Urban Planning course is for your career?			
Not important at all	3.8%	5.6%	0.0%
Very little important	3.8%	5.6%	2.6%
Little important	26.8%	22.2%	12.8%
Important	32.2%	50.0%	23.1%
Very important	33.3%	16.7%	61.5%

N	261	18	39	318
Chi Square				16.99
p				0.030
Cramer's V				0.030
How useful do you think the Construction Discipline course is for your career?				
Not important at all	8.0%	0.0%	2.6%	
Very little important	10.0%	11.1%	2.6%	
Little important	24.1%	22.2%	15.4%	
Important	23.4%	44.4%	28.2%	
Very important	34.5%	22.2%	51.3%	
N	261	18	39	318
Chi Square				12.846
p				0.117
Cramer's V				0.117
How useful do you think the Legislation in construction course is for your career?				
Not important at all	5.7%	0.0%	0.0%	
Very little important	10.0%	11.1%	2.6%	
Little important	19.5%	0.0%	10.3%	
Important	24.5%	50.0%	17.9%	
Very important	40.2%	38.9%	69.2%	
N	261	18	39	318
Chi Square				22.279
p				0.004
Cramer's V				0.004
How useful do you think the Elaboration of technical documentation in construction course is for your career?				
Not important at all	6.9%	0.0%	0.0%	
Very little important	8.4%	11.1%	0.0%	
Little important	19.9%	5.6%	7.7%	
Important	26.1%	50.0%	17.9%	
Very important	38.7%	33.3%	74.4%	
N	261	18	39	318
Chi Square				27.251
p				<0.001
Cramer's V				<0.001
How useful do you think the Urban Engineering and Regional Development course is for your career?				
Not important at all	6.1%	0.0%	0.0%	
Very little important	7.7%	11.1%	2.6%	
Little important	27.6%	16.7%	25.6%	
Important	27.2%	44.4%	23.1%	
Very important	31.4%	27.8%	48.7%	
N	261	18	39	318
Chi Square				11.253
p				0.188
Cramer's V				0.188
How useful do you find the Construction behavior tracking in time course to your career?				
Not important at all	6.5%	0.0%	0.0%	
Very little important	8.4%	11.1%	0.0%	

Little important	24.1%	5.6%	10.3%	
Important	22.2%	44.4%	30.8%	
Very important	38.7%	38.9%	59.0%	
N	261	18	39	318
Chi Square				20.028
p				0.010
Cramer's V				0.010

The data analysis provides support for Hypothesis 3, which suggests that students' evaluations of course utility are heavily impacted by their perceptions of practical application. A consistent trend observed across various courses indicates a notable relationship between how much value students place on their practical experiences and how highly they rate course importance. These results reiterate the significance of hands-on, real-world applications within the realm of education.

The varying levels of statistical significance and effect sizes can be attributed to the nature of each course and the degree to which practical experience is incorporated into the curriculum. Courses with direct practical applications, such as the Elaboration of technical documentation in construction, display a more robust correlation, likely due to the immediate relevance of the skills and knowledge obtained to the students' professional aspirations.

In conclusion, the data strongly indicates that academic courses in urban planning and construction field are more relevant and useful when students have the opportunity to apply their learning directly in professionally meaningful contexts. This underscores the importance of experiential learning and practical application in higher education, especially in fields where practical skills are important. Integrating real-world projects and experiences into the curriculum not only enriches learning but also significantly boosts students' perceptions of the usefulness and relevance of their courses, ultimately contributing to their preparedness for the workforce.

Moreover, the data provides a valuable insight into the viewpoints of the 261 participants who did not engage in project-based learning as part of their curriculum. The majority of these students believe that the functional training provided in their courses is not pertinent to their future professional growth. This perspective reveals a substantial discrepancy between academic curricula and occupational environment needs and standards. This underscores the importance for educational institutions not only to incorporate practical learning opportunities into their programmes but also to emphasise how these experiences can be directly beneficial and applicable to students' career prospects. The data thus serves as a compelling call to action for re-evaluating and enhancing the practical components of academic programs to better prepare students for the challenges and opportunities of the professional arena they are about to enter.

5. Conclusions

This research highlights the imperative for educational programs in the fields of urban planning and construction to effectively combine practical experience with theoretical knowledge and to align with professional requirements and labour market standards. Urban planning specifically demands a balance between theoretical perceptions and practical abilities to efficiently tackle the intricacies of land utilisation and construction feasibility.

These competencies are necessary to meet both legal and practical standards in construction projects.

Moreover, the study spotlights the roles of construction engineers and public administration professionals. Their responsibilities, spanning from project inception to completion, necessitate a thorough comprehension of practical restraints and legal provisions. This points to the need for thorough planning and adherence to legal and practical norms in their education. Preparing students in these disciplines should focus on developing adaptability and proficiency to ensure legal and practical viability of urban projects and to implement construction regulations effectively by local authorities.

In this regard, the research highlights the current academic climate's emphasis on aligning educational curricula with workforce needs. This is supported by findings that indicate the significance of integrating practical experiences, such as internships and real project involvement, into educational programs. Such integration prepares graduates more effectively for their professional fields, as shown by the students' perceptions of the usefulness of their courses, especially in relation to practical experiences.

Internships and real project participation, in particular, have been found to enhance students' appreciation of the relevance and utility of their courses for their future careers. While the impact of these practical engagements varies among different courses and is moderate in effect size, the overall trend is clear: hands-on, real-world experiences enhance students' understanding of the relevance and value of their courses.

In summary, the study underlines the essential need for incorporating practical experiences into academic curricula in urban planning and construction. The findings suggest that such experiences, though varying in impact across different courses, significantly contribute to a more effective educational experience that is better aligned with the professional requirements and expectations in these fields.

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