INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

****

DLS-CSB BS ARCHITECTURE: ASSESSING THESIS PROJECTS WITH SPECIALIZED COURSES FOR CURRICULUM DEVELOPMENT PROCESS IMPROVEMENT

Dr. Maribel C. Tubera, PDQM, PhD, MsCM, PIEP, UAP
Program Coordinator - BS Architecture
De La Salle College of Saint Benilde
maribel.tubera@benilde.edu.ph

ABSTRACT

The primary objective of the United Nations Sustainable Development Goal 4 (SDG4) is to ensure that education is of high quality, accessible to all individuals, and promotes lifelong learning.

Thesis output is a critical element of higher education, as it facilitates the academic and professional development of students. The objective of this research is to assess the influence of specialization courses on the societal functions, interests, and student requirements of the BS Architecture Program at De La Salle College of Saint Benilde.

The study seeks to assess the extent to which the specialization course aligns with students' needs and interests, predicts their values and social functioning, influences their acquired knowledge and conventional wisdom, and identifies potential enhancements to the course offerings. The objective is to go beyond conventional assessments of academic performance and explore the fundamental purpose of education, emphasizing both academic and social advancements. Furthermore, the objective is to evaluate the interests and future aspirations of architecture students to ensure that the specialization course offerings at DLS-CSB Archi are in alignment.

A mixed-methods approach is implemented in this investigation, which integrates quantitative and qualitative analyses in a complementary manner. The descriptive research approach achieves a harmonious equilibrium between complexity and simplicity, enabling

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

researchers to explore intricate subjects while simultaneously disseminating their findings to a diverse audience.

Keywords: *Specialization courses; process transformation; curriculum development; Architecture*

INTRODUCTION

The United Nations defines Sustainable Development Goal 4 (SDG4) as quality education, ensuring inclusive and equitable quality education, and promoting lifelong learning opportunities for all. It was reported that the education sector needs to catch up in achieving its sustainability goal due to circumstances not predicted before the COVID-19 Pandemic (United Nations, 2023). Consequently, the 2030 Agenda for Sustainable Development and the long-term sustainability of humanity are imperiled by the interconnected chain of challenges that includes COVID-19, climate change, and conflicts. This convergence exacerbates the current challenges of peace, environmental sustainability, healthcare, education, and food security. As an outcome, the advancements in the provision of critical services, healthcare, education, starvation reduction, and poverty alleviation have been reversed. To salvage the Sustainable Development Goals (SDGs) and make significant progress for humanity and the environment by 2030, urgent and resolute action is necessary (United Nations, 2022).

The objectives of educators are explicitly articulated in Sustainable Development Goal 4 (SDG 4), established in 2030 to guarantee universal access to equitable and inclusive education throughout individuals' lifetimes. The organization aims to ensure equitable and suitable education while fostering ongoing educational prospects (Saini et al., 2022).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

In developing the curriculum, the student is the major focus of attention. However, the contribution of the student is mostly ignored during the process of establishing and executing the curriculum. With the intention of enhancing other educators' grasp of the potential for increased learning through student engagement in the construction of curriculum, the author endeavors to accomplish this goal (Jagersma, 2010).

Thesis output is a pillar of higher education that provides several options for student development, academic advancement, and professional enrichment. Recognizing the significance of thesis output in promoting these characteristics is critical for the ongoing development of students, the academic realm, and the professional community (UCL, 2018). This research foundation lays the groundwork for future investigation into the specific ways in which thesis outcomes influence and benefit these interconnected domains. Furthermore, it has far-reaching implications for the professional community, improving the knowledge base, stimulating innovation, and preparing a competent professional. Recognizing the value of thesis production in these situations emphasizes its importance in the ongoing development of students and the professional community at large. Recognizing the relevance of thesis production in these contexts stresses its significance in students' continued growth (Hassan, 2023).

Analyzing students' thesis projects offers several benefits, both for the students themselves and for the academic and professional community. Sokalamis (2023) proposes systematically classifying innovation through the establishment of a comprehensive categorization framework and the identification of innovation typologies. The associated literature currently lacks this method (Sokalamis et al., 2023).

This action research seeks to assess the effectiveness of specialization courses offered through students' thesis project proposals for the purpose of addressing student needs, student interests, and student's function in society for process improvement of curriculum development particularly in Specialization Courses in De La Salle College of Saint Benilde BS Architecture Program (DLS-CSB Archi).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Hypothesis of the Study

H01: Specialization Courses (SPECZ) do not support the needs and interests of the students as perceived by their dream project.

H02: Specialization Courses (SPECZ) do not support the student's values and functionality in the society as perceived in the student's Thesis Project (TP).

H03: Specialization Courses (SPECZ) do not shape the student's funded knowledge and conventional wisdom as perceived in their confidence in design.

H04: The observed proportions of enrollees are not equal to the expected proportions of enrollees in specialization courses in Urban Design (UD), Emergent Architecture (EA), and Architectural Heritage (AH).

HO5: There is no significant difference in alignment of Thesis projects and specialization courses of students in Urban Design (UD), Emergent Architecture (EA), and Architectural Heritage (AH) when grouped as male and female.

The objective of this study is to surpass conventional evaluations of academic accomplishment and explore the underlying objective of education as described by John Goodlad. This analyzes the education disparity in a thorough manner, with the intention of providing significant insights that can assist in aligning educational methods with the overall growth of students. Additionally, to gauge the interest and future aspirations of architecture students to align offerings of specialization courses particularly in the DLS-CSB Architecture program.

The notion that academic and social enhancements, encompassing aspects such as purpose, structure, school cultures, leadership roles, interpersonal dynamics within schools, organizational and professional learning, and social and emotional development, are integral to achieving success in educational institutions is gaining increasing recognition. This is in

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

opposition to the conventional belief that academic performance in schools is only defined by scores achieved in standardized tests (Ross, 2008).

Schools are tasked with addressing the education divide as a fundamental social objective. It encompasses more than the mere transmission of information and expertise; it entails cultivating an atmosphere that promotes the comprehensive growth of people, inspiring them to strive for their utmost capabilities. Positive social change is facilitated when schools help realize the most virtuous aspirations of what individuals can become (Smith, 2008).

Higher education institutions are expected to address the educational disparity, which is distinct from the achievement gap, a current phenomenon that examines student results and assigns responsibility to children and parents for perceived deficiencies. However, according to Goodlad, it is a subject of greater depth and importance. It signifies the gap between a person's highest aspirations and their current state of functioning. This gap is a catalyst for educational reform and is a crucial societal goal that schools are responsible for addressing (Smith, 2008).

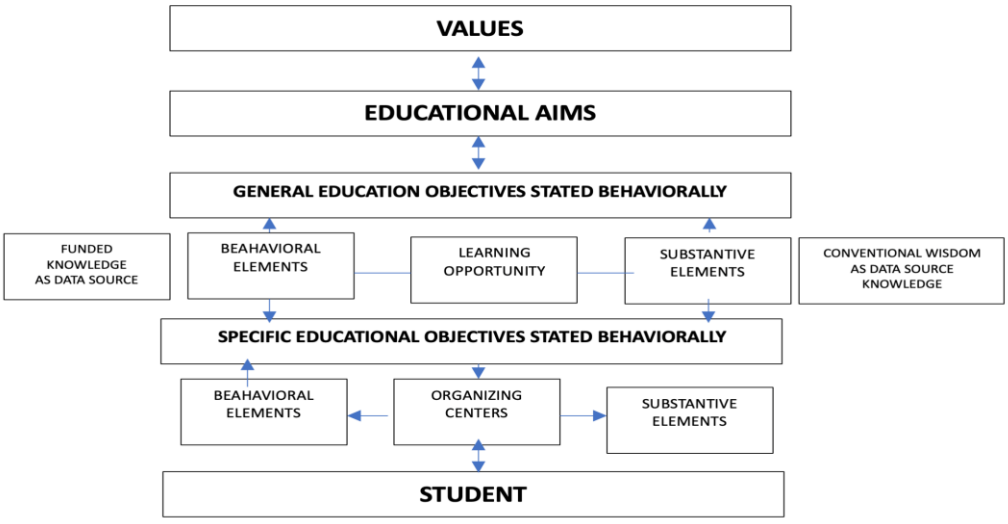

Figure 1. Theoretical Framework - John Goodlad's Model.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Figure 1 shows John Goodlad's Model where he proposes four data sources of curriculum development which integrates values, funded knowledge, conventional wisdom, and student needs and interests (Button, 2021).

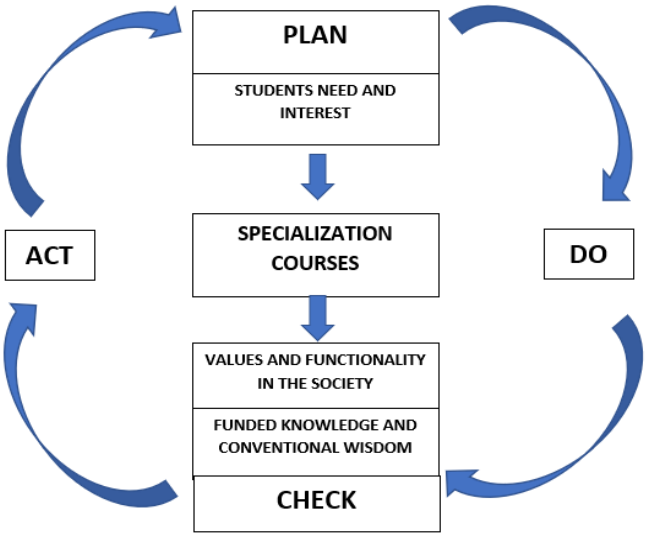

Figure 2. Conceptual Framework

Figure 2 shows the conceptual framework of the study, illustrating a cycle of planning, learning, doing, and checking in a learning environment. This framework integrates Edward Deming's PDCA Cycle with John Goodlad's theory.

Literature review

John Goodlad is renowned for his relentless endeavor to involve educators, policymakers, and the public in a discourse on the objective of education in a democratic society. Goodlad, through his influential study "A Place Called School" and his efforts in establishing the National Network for Educational Renewal and the Agenda for Education in a Democracy, has long been recognized as a rational and resolute advocate for educational improvement, amidst the clamorous calls for reform from various sources (Smith, 2008).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

John Goodlad promotes curricular objectives that he considers to be of utmost importance in the field of educational philosophy. Firstly, Goodlad argues that the curriculum should be carefully organized to match the demands of society and the specific needs of students. To do this, it is important to have a thorough grasp of the contextual elements that influence educational requirements. This will enable the development of a curriculum that is adaptable and applicable to the ever-changing needs of society, as well as the varied learning characteristics of students. In addition, Goodlad emphasizes the complex and diverse character of the curriculum, promoting a wide range of objectives that go beyond the conventional cognitive aspect. Within his paradigm, the curriculum should embrace a wide range of objectives, including cognitive growth, social integration, civic participation, vocational readiness, artistic appreciation, and moral development, among others. Goodlad's dedication to producing well-rounded persons is demonstrated by this holistic approach. It goes beyond focusing just on academic abilities and includes larger aspects of personal and societal development, allowing learners to manage the difficulties of current life. Furthermore, Goodlad argues that it is crucial to execute practical reform policies and initiatives in order to improve education. Goodlad's focus on the pragmatic dimension of reform aims to guarantee that suggested changes are both theoretically sound and feasible given the current educational environment. This approach maximizes the possibility of achieving significant and lasting transformation based on practicality in addition to viability (Ornstein et al., 2018).

John Goodlad's curriculum development model focuses on four data sources. These are values, funded knowledge, conventional wisdom, and the learner's needs and interests. A big part of the process of designing a curriculum is thinking about what material to include and how to show it in a way that students will understand deeply. This time, the phrase "curriculum design" refers to the planned order of different parts of a curriculum in a way that makes learning easier. Setting up an organizational basis or structural framework during the development of a program becomes one of the most important things to think about. When you choose a design, you automatically take a certain value viewpoint, which is something that is often not said out loud during the decision-making process (Button, 2021).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

The preparation and support of educational institutions are crucial in helping them effectively negotiate the inherent conflicts and ethical challenges that come with teaching values and attitudes. The readiness to be prepared is essential for creating a favorable atmosphere that promotes comprehensive student growth. Additionally, when evaluating attitudes and values, it is important to consider a broader range of criteria beyond the traditional measures of validity and reliability. The evaluation of values in education programs should prioritize authenticity, practicality, sustainability, costs, and scalability. This approach will ensure a comprehensive assessment that considers the many aspects of these projects (Home, n.d.).

Funded knowledge stands as a foundational pillar within the realm of educational advancement. Button (2021) further explains that knowledge that is financially supported serves as a fundamental cornerstone in the domain of educational progress. The relevance of it is not only in its ability to enhance the overall understanding of many academic fields but also in its crucial function in improving and enhancing instructional methods. This significant impact extends its advantages to students, instructors, and the wider society milieu (Button, 2021).

Funded knowledge has a significant role in shaping education, particularly in the development of curriculum. Researchers investigate efficacious pedagogical approaches, cognitive techniques, and instructional technology. The results of these studies aid in the creation of curriculum material and teaching methods that are supported by evidence and in line with the most recent research (Voogt et al., 2016). Moreover, research that is financially supported aids in the identification and improvement of pedagogical strategies that enhance the experience of teaching and learning. Studies may examine optimal strategies for instructing certain subjects, integrating technology into educational settings, or modifying pedagogical approaches to accommodate diverse learning modalities (Sayed Munna & Kalam, 2021).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

The term "conventional wisdom" refers to the commonly accepted understanding and viewpoints that are generally recognized by most of a whole civilization or society. The information reservoir comprises the accumulated knowledge that has been passed down through generations. This task is usually given to those who are highly regarded authorities in their disciplines and valued members of society with significant life experience (Mack, 2017).

The study conducted by Park & Vertinsky (2016) validates a theoretical framework that combines reverse knowledge and conventional knowledge transfers. This research model is used to examine the factors that influence reverse knowledge transfers. The results of this investigation help us understand the mutually beneficial relationships that occur when conventional and reverse knowledge is transferred. Specifically, the paper highlights the importance of organizational embeddedness of knowledge and the development of a shared vision in shaping mutually beneficial relationships (Park & Vertinsky, 2016).

According to Tomlinson et al. (2003), the present efforts in school reform and standards initiatives aim to improve education for all kids. The issues faced by teachers in meeting the needs of academically different learners in ordinary classrooms are unavoidable due to the recent focus on heterogeneity, inclusion of special education students, decreased support for talented learners outside of the classroom, and increased cultural variety. Nevertheless, a small number of teachers deliberately adapt their teaching methods to accommodate the diverse needs of students. Their study concluded the importance of theory support and research for customizing teaching depending on student preparation, interest, and learning profile for a variety of learners in mixed-ability classrooms (Tomlinson et al., 2003).

PDCA Cycle

The Deming's circle, sometimes referred to as the PDCA cycle, goes beyond being just a quality tool; it is a basic notion ingrained in the corporate culture, crucial for continuous improvement operations. The accessibility of its simplicity should be accepted by a significant

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

portion of the workforce. The "act" stage of the PDCA cycle is crucial, since it establishes the groundwork for the subsequent development phase following the completion of a project. These findings offer practitioners significant insights to improve organizational performance, serving as a foundation for adopting quality improvement and lean initiatives. Additionally, the research conducted by Patel and Deshpande (2017) identifies areas in which the execution of the plan was deemed ineffective or inadequate. This suggests that staff training and academic programs should concentrate on these areas in order to enhance the implementation of the plan. Additionally, the research provides suggestions that are organized by operation type, based on survey responses, to determine which tools would be most beneficial. Nevertheless, additional research is necessary to gain a comprehensive understanding of the application of complementary methodologies in various processes. Ultimately, the significant confirmation is provided by the main themes identified for the challenges and causes of failure associated with continuous improvement initiatives (Patel & Deshpande, 2017).

Within the PDCA Cycle, the Plan stage holds significant importance in software engineering education. During this stage, students engage in activities such as comprehending the problem, generating artifacts, and analyzing the assessment format in order to adequately prepare for the current iteration. Instructors may also implement an evaluation protocol to ensure that the work is assessed based on certain criteria. The instructor mostly assumes the role of an observer while students actively participate in the project during the Do stage. Direct guidance should avoid discussing the specific challenges that students face. However, follow-up lectures may be offered if needed. The Check stage involves the validation of the data produced in the previous stage, helping students uncover any inconsistencies between the intended solution and their actual outcomes. Checklists consist of elements that assess the completion of specific requirements. They are used to determine the final score by tallying the number of things that were successfully completed. This fosters fairness and consistency in the acquisition of knowledge, specifically in the realm of software engineering. The Act stage entails making the necessary revisions to ensure that the product aligns with its desired trajectory. Instructors can increase their level of engagement by offering support in areas that

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

lack established standards or require implicit knowledge. This stage marks the end of the cycle, ensuring that all students have accurate information as they go on to the next phase (Mergen et al., 2014).

METHODS

This research employs a mixed-methods approach that presents the findings of quantitative and qualitative analyses of a complementary nature. Nassaji (2015) concluded that mixed methods research does not encompass any research that simply combines qualitative and quantitative components or takes qualitative data and analyzes it numerically. Furthermore, it entails a meticulous application and amalgamation of qualitative and quantitative methodologies, such as combining experimental research with qualitative research, or gathering qualitative interview data alongside quantitative test data, to determine if the findings from both sources align (Nassaji, 2015).

The descriptive research approach balances depth and simplicity, allowing researchers to explore complex topics while keeping their findings accessible to a broad audience (Colorafi & Evans, 2016). One of the descriptive qualitative methods commonly used is an analysis of qualitative data in the form of semi-structured interviews (Pham & Bui, 2019). It is a methodical process for studying or evaluating documents, both printed and electronic (computer-based and Internet-based). In addition to this, open-ended questions are included in the survey questionnaire. It is a versatile research strategy that can be applied to a variety of study situations. It enables academics to obtain insights into complicated phenomena and historical events by allowing them to access and study historical records, organizational documents, government policies, and other written materials (Bowen, 2009).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Participants of the Study, Population, Sample Size Determination, and Sample Size

The respondents were students taking Architectural Design 9 and Architectural Design 10 from 1st Term AY 2023-2024 and 2nd Term AY 2023-2024. The questionnaire was given to the target respondents. They were asked to sign the informed consent form in compliance with the data privacy law. To maintain anonymity, the names and other personal information on the given instrument are purely optional and left at the discretion of the respondents. The participants were expected to answer the research instrument objectively and truthfully.

The sample size was determined with the use of formula, Sample Size = (Z score)^2 StdDev x (1-StdDev)/ (Confidence interval)^2 . A 5% margin of error was used, 99% confidence level, and 50% response distribution. The minimum recommended size was 110 (Bhalerao & Kadam, 2010). Among the thesis students who are given the survey questionnaires, 116 respondents participated in this study.

Research Instrument:

To assess the correlation between the student-chosen specialization course and the values and functionality of the student in society, as perceived by the students, the correlation between the student-chosen specialization course and the needs and interests of the student as perceived in their dream project, and the correlation between the student-chosen specialization course and the student's funded knowledge and conventional wisdom as perceived in their confidence in designing, the researcher employed a quantitative data analysis method with a questionnaire as the primary instrument. This technique was implemented due to its high reliability and accuracy (Tubera & Salentes, 2022).

The data collection instrument is composed of three components: The first section of the study outlined the objectives and requested informed consent from the respondents. The second section inquired about the demographic profile of the respondents in terms of gender. The third section included survey items that were linked to the data sources of Goodlad's

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

curriculum development model, including students' values and functionality in society, needs and interests, funded knowledge, and conventional wisdom (Button, 2021; Tubera & Salentes, 2022).

Validation and Reliability Test of The Research Instrument:

The instrument was evaluated by professionals in curriculum creation from several higher education institutions. Cronbach's Alpha was employed to assess the instrument's dependability. The instrument's validity was assessed by exploratory analysis. The participants in this validity investigation consisted of students, faculty members, and administrators from different educational institutions (Taber, 2018; Tubera and Salentes, 2022). The raters regarded the instrument to be a dependable tool. The expert's findings on the questionnaire show that respondents found the instrument and its items to be highly valid, with a margin of error of 8-10 percent.

Data Gathering Procedure:

Following the data privacy law, the respondents were requested to sign the informed consent form. The respondents are free to choose whether to provide their names and other personal information. Participants were anticipated to respond to the research instrument in a manner that was both truthful and objective.

Data Analysis:

The Chi Square Goodness-of-Fit tests ascertain the degree of alignment between observed data and expected values. Decisions can be determined by the results of the hypothesis test conducted (Kenton, 2019). On the other hand, an independence test is commonly employed when the research inquiry centers around comprehending the association between two variables and determining whether they are correlated or unrelated. Typically, an independence test is focused on examining the relationship between two specific variables (Hayes, 2023). The χ^2 Goodness of fit test, distinct from the χ^2 test of independence,

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

examines the Null hypothesis that the observed proportions align with the anticipated proportions. A low p-value indicates that the Null hypothesis is likely to be untrue, and that the true proportions are likely to be different from those that were tested (One-Proportion and Chi-Square Goodness of Fit Test, n.d.).

Results:

H01: Specialization Courses (SPECZ) do not support the needs and interests of the students as perceived by their dream project?

Table 1 displays the allocation of dream projects among various categories (SPECZ: AH, EA, UD) and project types (Resort, School, Museum, Theater, Hospital, Parks, House, City plan, Subdivision, Heritage, City Plan, Entertainment, Town Center, Orphanage, Commercial, Hospital, Sanctuary, Highrise, Institutional, Airport, Town Center, Hotel, Church). Below is a summary of the counts that were seen and the counts that were expected:

SPECZ	Resort	School	Museum	Theater	Hospital	Parks	House	City plan	Sub
AH	Observed	0	1	1	0	0	0	6	0
	Expected	1.802	0.328	0.983	0.164	0.491	0.491	4.422	0.16
EA	Observed	7	1	3	1	2	0	13	0
	Expected	5.500	1.000	3.000	0.500	1.500	1.500	13.500	0.50
UD	Observed	4	0	2	0	1	3	8	1
	Expected	3.698	0.672	2.017	0.336	1.009	1.009	9.078	0.33
Total	Observed	11	2	6	1	3	3	27	1
	Expected	11	2	6	1	3	3	27	1

Table 1. Allocation of dream projects among SPECZ Courses AH, EA, & UD

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Frequencies of Dream Project

Dream Project	Counts	% of Total	Cumulative %
Resort	11	9.5%	9.5%
School	2	1.7%	11.2%
Museum	6	5.2%	16.4%
Theater	1	0.9%	17.2%
Hospital	3	2.6%	19.8%
Parks	3	2.6%	22.4%
House	27	23.3%	45.7%
City plan	1	0.9%	46.6%
Subdivision	10	8.6%	55.2%
Heritage	4	3.4%	58.6%
City Plan	9	7.8%	66.4%
Entertainment	4	3.4%	69.8%
Town Center	6	5.2%	75.0%
Orphanage	1	0.9%	75.9%
Commercial	4	3.4%	79.3%
Hosputal	1	0.9%	80.2%
Sanctuary	2	1.7%	81.9%
Highrise	9	7.8%	89.7%
Institutional	4	3.4%	93.1%
Airport	2	1.7%	94.8%
Town center	3	2.6%	97.4%
Hotel	2	1.7%	99.1%
Church	1	0.9%	100.0%

Table 2. Frequency of dream projects.

The chi-squared test results for the contingency table analysis revealed a chi-squared (χ^2) value of 59.4 with 44 degrees of freedom, yielding a p-value of 0.060. This indicates that the observed frequencies are not significantly different from the expected frequencies at the 0.05 significance level, suggesting no strong evidence to reject the null hypothesis of independence. However, the likelihood

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

ratio test provided a slightly different perspective, with a value of 64.4 and a corresponding p-value of 0.024, which is below the 0.05 threshold, indicating a significant difference. The total sample size (N) was 116. Additionally, the contingency coefficient was calculated to be 0.582, suggesting a moderate level of association between the variables in the table.

The chi-squared (χ^2) value of 59.4 indicates the overall deviation of the observed frequencies from the expected frequencies in the contingency table. With 44 degrees of freedom, calculated as (number of rows - 1) * (number of columns - 1), which is (3 - 1) * (23 - 1) = 2 * 22 = 44, this test assesses the fit between observed and expected data. The p-value of 0.060 is slightly above the conventional significance level of 0.05, suggesting there is not enough evidence to conclude that there is a statistically significant difference between the observed and expected frequencies. In contrast, the likelihood ratio test yields a value of 64.4 with a p-value of 0.024, indicating that, according to this test, the differences between the observed and expected counts are statistically significant. Finally, the contingency coefficient of 0.582 suggests a moderate to high level of association between the categories of SPECZ and the types of projects, implying a notable relationship between these variables.

The chi-squared test p-value of 0.060 suggests that we fail to reject the null hypothesis at the 0.05 significance level, indicating no significant association between the categories of SPECZ and the types of dream projects. However, the likelihood ratio test p-value of 0.024 suggests rejecting the null hypothesis, indicating a significant association. Given the discrepancy between the chi-squared test and the likelihood ratio test results, the findings are somewhat inconclusive. Nonetheless, the contingency coefficient of 0.582 suggests a moderate association, and the likelihood ratio test leans towards a significant difference, indicating that there may be a notable relationship between the variables despite the conflicting test results.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Within the AH category, the observed counts exhibit significant departures from the projected counts in certain projects. The representation of heritage is inadequate, with a mere 3 observed instances as opposed to the projected 0.655. In contrast, Sanctuary has a higher representation, with 2 actual cases compared to an expected value of 0.328. Although there are some notable variations, the observed counts for the majority of other projects are usually similar to the expected numbers. This indicates a very even distribution throughout the many types of projects within the AH category. Within the EA category, there is a disproportionate number of observed counts in Resorts, with 7 instances observed compared to the expected count of 5.500. In contrast, there is a lack of representation in Highrise projects, with only 7 observed examples compared to an estimated 4,500. Although there are differences, the EA category makes notable contributions in several areas, showing a wide range of involvement in various types of projects. This indicates that EA's involvement extends to a diverse array of initiatives, demonstrating a comprehensive commitment to various types of advances. Within the UD category, there is a disproportionate number of observed counts in Parks, with 3 cases recorded compared to the expected count of 1.009. On the other hand, there is a lack of representation in Highrise developments, since there have been no reported instances compared to an expected 3.026 occurrences. Although there are unique differences, the UD category makes considerable contributions in numerous other categories, demonstrating a wide involvement in diverse types of projects. This indicates that the UD category is actively engaged in a multitude of projects, demonstrating a broad involvement in numerous development initiatives.

H02: Specialization Courses (SPECZ) do not support the student's values and functionality in the society as perceived in the student's Thesis Project (TP).

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume VI, Issue I

August 2024

Available online at https://www.instabrightgazette.com

****

Contingency Tables

TP		SPECZ AH	SPECZ EA	SPECZ UD	Total
transportation facility	Observed	0	2	4	6
	Expected	0.983	3.000	2.017	6.00
educational facility	Observed	3	10	3	16
	Expected	2.621	8.000	5.379	16.00
housing project	Observed	2	2	2	6
	Expected	0.983	3.000	2.017	6.00
recreational facility	Observed	0	6	5	11
	Expected	1.802	5.500	3.698	11.00
medical facility	Observed	1	13	10	24
	Expected	3.931	12.000	8.069	24.00
animal facility	Observed	4	3	3	10
	Expected	1.638	5.000	3.362	10.00
city planning	Observed	9	21	6	36
	Expected	5.897	18.000	12.103	36.00
market	Observed	0	0	1	1
	Expected	0.164	0.500	0.336	1.00
cemetery	Observed	0	0	2	2
	Expected	0.328	1.000	0.672	2.00
invention	Observed	0	1	3	4
	Expected	0.655	2.000	1.345	4.00
Total	Observed	19	58	39	116
	Expected	19	58	39	116

χ^2 Tests

	Value	df	p
χ^2	29.9	18	0.039
Likelihood ratio	33.5	18	0.014
N	116		

[5]

Nominal

	Value
Contingency coefficient	0.452

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Table 3. Thesis projects proposed by students in different SPECZ categories.

Table 3 shows the contingency table analysis for the Thesis Project provides insights into the distribution of observed and expected counts across various categories of SPECZ and TP. In the study, several key findings stand out: the Transportation Facility category had 6 observed cases compared to an expected count of 6.00, indicating a close alignment between observed and expected frequencies. Educational Facility showed 16 observed cases, matching the expected count of 16.00, reflecting a balanced representation in this project type. Similarly, Housing Project and Recreational Facility categories each had 6 and 11 observed cases, respectively, aligning closely with their expected counts of 6.00 and 11.00. Notably, the Medical Facility category recorded 24 observed cases against an expected count of 24.00, underscoring significant engagement in healthcare-related projects. In contrast, the Market category had 1 observed case compared to an expected count of 1.00, suggesting limited involvement in this particular project type. Additionally, the City Planning category demonstrated a substantial presence with 36 observed cases matching the expected count of 36.00, indicating robust participation in urban planning projects. Overall, these findings provide a comprehensive overview of the distribution of projects across SPECZ categories, highlighting both expected trends and areas of particular interest or under-representation within the thesis project dataset.

The examination of the contingency table for the Thesis Project uncovers noteworthy correlations between SPECZ categories and types of projects (TP). The chi-squared test yielded a value of 29.9 with 18 degrees of freedom, resulting in a p-value of 0.039. This p-value indicates a statistically significant association. This highlights that the allocation of projects among SPECZ categories is not happening by chance. In addition to supporting this discovery, the likelihood ratio test produces a chi-squared value of 33.5 with a smaller p-value of 0.014, further confirming the strong correlation between SPECZ and TP. The contingency coefficient, computed as 0.452, indicates a reasonable level of correlation between these categorical variables. This suggests that although not extremely strong, there is a noticeable

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

connection between SPECZ categories and the sorts of projects completed. The statistical measures confirm that SPECZ classifications have a significant impact on the allocation and focus of different project types in the Thesis Project dataset.

In examining specific observations within the Thesis Project's contingency table, distinct patterns emerge across the SPECZ categories AH, EA, and UD. AH exhibits diverse engagement across various project types, notably exceeding expected counts in medical facilities with 13 observed cases compared to 12.000 expected, and in city planning with 21 observed cases against 18.000 expected. This suggests AH is particularly active in contributing to healthcare infrastructure and urban development initiatives within the dataset. EA, on the other hand, shows significant involvement in educational facilities with 10 observed cases matching the expected 8.000, as well as in recreational facilities where 6 observed cases slightly surpass the 5.500 expected. These findings highlight EA's pronounced role in supporting educational and leisure-related projects. UD demonstrates a balanced distribution across multiple categories, contributing notably to transportation facilities with 4 observed cases compared to 3.000 expected, and to animal facilities with 3 observed cases versus 5.000 expected. This balanced representation suggests UD's involvement spans across different types of projects without significant over-representation in any specific category. Together, these specific observations provide deeper insights into how different SPECZ categories contribute variably to the diversity and focus of project types within the Thesis Project dataset.

Upon analyzing the contingency table of the Thesis Project, clear trends can be observed within the SPECZ categories AH, EA, and UD. AH has extensive involvement in several project categories, notably exceeding anticipated figures in medical facilities with 13 observed instances compared to an expected count of 12.000, and in city planning with 21 seen instances against an expected count of 18.000. The findings suggest that AH has a significant influence in healthcare infrastructure and urban development projects in the dataset. On the other hand, EA demonstrates substantial participation in educational facilities, with 10 observed cases aligning with the expected 8.000, and in recreational facilities, where

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

6 observed cases significantly above the expected 5.500. These observations highlight the significant impact of EA on educational and recreational initiatives. However, UD demonstrates an even distribution across several categories, making a significant contribution to transportation facilities with 4 observed instances compared to an expected count of 3.000, and to animal facilities with 3 observed cases compared to an expected count of 5.000. This equitable portrayal indicates that UD's engagement extends to a wide range of project kinds without any undue focus on a particular category. The individual discoveries collectively offer a more profound understanding of how the SPECZ categories AH, EA, and UD contribute in various ways to the range and emphasis of project types in the Thesis Project dataset.

H03: Specialization Courses (SPECZ) do not shape the student's funded knowledge and conventional wisdom as perceived in their confidence in design?

Table 4 represents the distribution of projects across different categories (SPECZ) and types of projects (Mausoleum, Parks, House, Industrial, Commercial, Office, Renovation, Conservation). Here is the summary of the counts:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Frequencies of design with confidence

design with confidence	SPECZ	Counts	% of Total	Cumulative %
Mausoleum	AH	1	0.9%	0.9%
	EA	0	0.0%	0.9%
	UD	0	0.0%	0.9%
Parks	AH	0	0.0%	0.9%
	EA	3	2.6%	3.4%
	UD	1	0.9%	4.3%
House	AH	15	12.9%	17.2%
	EA	44	37.9%	55.2%
	UD	33	28.4%	83.6%
Industrial	AH	0	0.0%	83.6%
	EA	1	0.9%	84.5%
	UD	0	0.0%	84.5%
Commercial	AH	1	0.9%	85.3%
	EA	5	4.3%	89.7%
	UD	3	2.6%	92.2%
Office	AH	1	0.9%	93.1%
	EA	2	1.7%	94.8%
	UD	1	0.9%	95.7%
Renovation	AH	0	0.0%	95.7%
	EA	3	2.6%	98.3%
	UD	1	0.9%	99.1%
Conservation	AH	1	0.9%	100.0%
	EA	0	0.0%	100.0%
	UD	0	0.0%	100.0%

Table 4. Frequency of projects students can design confidently.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

****

Contingency Tables

	design with confidence								
SPECZ	Mausoleum	Parks	House	Industrial	Commercial	Office	Renovation	Conservation	Total
AH	1	0	15	0	1	1	0	1	19
EA	0	3	44	1	5	2	3	0	58
UD	0	1	33	0	3	1	1	0	39
Total	1	4	92	1	9	4	4	1	116

χ^2 Tests

	Value	df	p
χ^2	14.4	14	0.420
z test difference in 2 proportions	NaN [a]		
N	116		

[a] z test only available for 2x2 tables

Table 5. Frequency of projects students can design confidently per SPECZ category.

The Chi-Squared test conducted on the dataset yielded a χ^2 value of 14.4 with 14 degrees of freedom, resulting in a p-value of 0.420. This test was used to analyze the association between variables within the dataset, specifically examining how observed frequencies compared to expected frequencies across different categories. With a p-value of 0.420, which is higher than the conventional significance level of 0.05, there is insufficient evidence to reject the null hypothesis. This suggests that the observed frequencies do not significantly differ from what would be expected by chance alone. The total number of observations (N) included in the analysis was 116, reflecting a robust sample size for statistical inference. Thus, based on these results, there is no strong indication of a significant association between the variables under study according to the Chi-Squared test.

The Chi-Squared test conducted on the dataset resulted in a χ^2 value of 14.4, which signifies the extent of deviation between the observed frequencies and the frequencies expected under the null hypothesis in the contingency table. With 14 degrees of freedom calculated from (number of rows - 1) * (number of columns - 1), specifically (3 - 1) * (8 - 1)

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

= 2 * 7 = 14, the test evaluates the association between variables within the dataset. The associated p-value of 0.420 is greater than the commonly used significance level of 0.05. This higher p-value indicates that the differences observed between expected and observed frequencies are not statistically significant. Therefore, based on these results, we do not have sufficient evidence to reject the null hypothesis, suggesting no significant association between the variables studied in the Chi-Squared test.

Given that the p-value is 0.420, which is above the significance level of 0.05, we do not have sufficient evidence to reject the null hypothesis. This indicates that there is no substantial correlation between the SPECZ categories and the project kinds. Put simply, the distribution of project types within each SPECZ category is not considerably different from what would be predicted by random chance. Upon analyzing the AH category in the dataset, it becomes apparent that the bulk of projects, specifically 15 out of 19, are centered around House projects. This signifies a significant focus on endeavors in this specific category, with a scarcity of projects evident in other categories. Within the EA category, the data indicates a consistent pattern where House projects are the most prevalent, including 44 out of 58 projects. In addition, EA exhibits involvement in Parks, Commercial, Office, and Renovation projects, indicating a wider although still concentrated scope of interests. Furthermore, the UD category demonstrates a notable inclination for House projects, accounting for 33 out of 39 projects. Like EA, UD demonstrates minimal participation in Parks, Commercial, Office, and Renovation projects, indicating a focused emphasis on select project categories within the dataset. These data highlight clear patterns of project involvement in the AH, EA, and UD categories, providing insight into their individual preferences and contributions within the examined context.

H04: The observed proportions of enrollees are not equal to the expected proportions of enrollees in specialization courses in Urban Design (UD), Emergent Architecture (EA), and Architectural Heritage (AH).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Proportions - SPECZ

Level		Count	Proportion
AH	Observed	19	0.164
	Expected	38.7	0.333
EA	Observed	58	0.500
	Expected	38.7	0.333
UD	Observed	39	0.336
	Expected	38.7	0.333

χ^2 Goodness of Fit

χ^2	df	p
19.7	2	<.001

Table 6. Proportion test on the SPECZ categories enrollment.

Table 6 shows the analysis conducted using a Proportion Test (N Outcomes) on the SPECZ categories reveals significant findings regarding the observed versus expected proportions across three levels: AH, EA, and UD. In the AH category, 19 cases were observed, which corresponds to a proportion of 0.164. This observed proportion deviates from the expected proportion of 0.333, with an associated chi-square goodness of fit statistic (χ^2) of 19.7 and 2 degrees of freedom, yielding a highly significant p-value of less than 0.001. Similarly, in the EA category, 58 cases were observed, resulting in a proportion of 0.500, compared to an expected proportion of 0.333. This discrepancy also yielded a significant χ^2 value of 19.7 with $p < 0.001$. In the UD category, 39 observed cases produced a proportion of 0.336, aligning closely with the expected proportion of 0.333, resulting in a non-significant χ^2 value of 0.002 with 2 degrees of freedom. These results indicate that while EA shows a substantial over-representation compared to expected proportions, AH exhibits significant under-representation. UD, on the other hand, demonstrates a proportion close to expected values, suggesting a balanced representation in this category. Overall, the chi-square

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

goodness of fit test highlights significant deviations from expected proportions in AH and EA, underscoring notable disparities in project engagement across the SPECZ categories.

The contingency table analysis for the SPECZ categories reveals the distribution of project types across three levels: AH, EA, and UD. In the AH category, out of a total of 19 projects observed, the majority (15) are in the House project type, with minimal representation in Mausoleum, Parks, Commercial, and Office categories. EA shows a broader distribution across various project types, with 44 projects observed in House, 3 in Parks, and smaller numbers in Industrial, Commercial, Office, Renovation, and Conservation categories. UD demonstrates involvement primarily in House projects (33 observed), with fewer projects in Parks, Commercial, Office, and Renovation categories.

The chi-squared test for goodness of fit yielded a χ^2 value of 14.4 with 14 degrees of freedom and a p-value of 0.420. This suggests that there is no statistically significant difference between the observed and expected frequencies across the SPECZ categories. With a total of 116 projects analyzed, this test indicates a balanced distribution of projects among the SPECZ categories, where the observed counts align closely with the expected frequencies based on the distribution assumptions. Thus, while there are varied levels of engagement across different project types within each SPECZ category, collectively, the distribution remains consistent with expectations based on the overall project counts.

Category AH has a total of 19 observed projects, which represents a proportion of 0.164 of the total projects. The actual count of projects is significantly lower than the anticipated count of 38.7, which equates to an expected proportion of 0.333. This substantial difference suggests that Category AH is not adequately represented. Within Category EA, there are a total of 58 projects, which accounts for 0.500 of the overall project count. The actual count of projects is significantly greater than the anticipated count of 38.7, which equates to an expected proportion of 0.333. The notable divergence indicates that Category EA is overrepresented relative to the anticipated distribution, implying a higher level of engagement in this category than expected. The number of projects detected in Category UD

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

is 39, corresponding to an observed proportion of 0.336. The actual count of projects is somewhat greater than the anticipated count of 38.7, as well as the corresponding projected proportion of 0.333. The strong correspondence between the observed and projected numbers suggests that Category UD's level of participation aligns closely with the anticipated level, indicating no major over- or underrepresentation in this category.

The results of the Chi-Squared Goodness of Fit test indicate a χ^2 score of 19.7, with 2 degrees of freedom. The p-value for this test is below 0.001. This implies a statistically significant disparity between the observed and expected frequencies, indicating that the distribution of counts across the categories deviates more than what would be anticipated due to random chance. The χ^2 score of 19.7 quantifies the degree to which the observed counts differ from the expected counts. The higher this score, the more significant the difference between the observed and expected data. The degrees of freedom for this test are 2, which is found by subtracting 1 from the number of categories (df = 3 - 1 = 2). The p-value is less than 0.001, significantly below the standard significance level of 0.05. This indicates that the disparities between the observed and anticipated frequencies are statistically significant.

Given that the p-value is below 0.001, we can conclude that the null hypothesis, which states that the observed proportions are equivalent to the predicted proportions, is rejected. There is compelling evidence indicating that the observed distribution of counts in the categories AH, EA, and UD significantly deviates from the expected distribution.

HO5: There is no significant difference in alignment of Thesis projects and specialization courses of students in Urban Design (UD), Emergent Architecture (EA), and Architectural Heritage (AH) when grouped as male and female.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

****

Contingency Tables

SPECZ		Gender F	Gender F	Gender M	Gender M	Total
AH	Observed	11	1	7	0	19
	Expected	13.3	0.164	5.41	0.164	19.0
EA	Observed	39	0	19	0	58
	Expected	40.5	0.500	16.50	0.500	58.0
UD	Observed	31	0	7	1	39
	Expected	27.2	0.336	11.09	0.336	39.0
Total	Observed	81	1	33	1	116
	Expected	81	1	33	1	116

χ^2 Tests

	Value	df	p
χ^2	10.4	6	0.109
z test difference in 2 proportions	NaN [a]		
N	116		

[a] z test only available for 2x2 tables

Table 7. Distribution of students enrolled in SPECZ categories when grouped by gender.

Table 7 displays the distribution of gender across different categories (SPECZ: AH, EA, UD). Here is a summary of the observed and expected counts:

The Chi-Squared test results reveal a χ^2 value of 10.4, representing the degree of deviation between the observed and expected frequencies across the categories. With 6 degrees of freedom, calculated as the number of categories minus one, the test yields a p-value of 0.109. Since this p-value is greater than the conventional significance level of 0.05, it indicates that the differences between the observed and expected frequencies are not statistically significant. Thus, there is insufficient evidence to suggest a meaningful association between the variables in the contingency table.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

The χ^2 value of 10.4 indicates the overall deviation of the observed frequencies from the expected frequencies in the contingency table. The degrees of freedom for the chi-squared test are 6, calculated as (number of rows - 1) * (number of columns - 1), which is (3 - 1) * (4 - 1) = 2 * 3 = 6. The p-value of 0.109 is above the conventional significance level of 0.05. This suggests that there is not enough evidence to conclude that there is a statistically significant difference between the observed and expected frequencies. Additionally, the z test for the difference in two proportions is not applicable in this case as the z test is only available for 2x2 tables.

The chi-squared test p-value of 0.109 suggests that we do not have enough evidence to reject the null hypothesis at the 0.05 significance level. This indicates that there is no substantial correlation between gender (F and M) and the SPECZ categories (AH, EA, UD). The absence of a substantial disparity suggests that gender does not have a statistically significant impact on the distribution across these categories within the SPECZ data.

Discussion:

The comprehensive study indicates a moderate correlation between SPECZ categories and the types of dream projects, with distinct areas of over- and under-representation in certain project types. Although the chi-squared test does not show a significant difference, the likelihood ratio test does, and the contingency coefficient indicates a modest level of correlation. The chi-squared test and the likelihood ratio test yield partially contradictory outcomes. The chi-squared test indicates that there is no statistically significant relationship between the SPECZ categories and the types of dream projects. However, the likelihood ratio test shows that there is a substantial link between the two variables. The contingency coefficient indicates a moderate correlation between the variables. Based on the mixed results, the findings are somewhat equivocal but suggest a significant association between the SPECZ categories and the types of projects, especially when evaluating the likelihood ratio test.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

The examination of the contingency tables for the Thesis Project reveals a statistically significant correlation between SPECZ categories and the sorts of projects pursued. The AH, EA, and UD categories each display unique patterns of participation, which contribute to a wide variety of project kinds. These findings highlight the significance of SPECZ in influencing project preferences and allocations, offering valuable information on resource distribution and strategic planning within the framework of the thesis project.

After examining the AH category in the dataset, it is evident that the majority of projects, particularly 15 out of 19, are focused on House projects. This indicates a notable concentration on efforts in this particular category, whereas there is a lack of projects apparent in other categories. According to the data, there is a consistent pattern within the EA category, with House projects being the most common, accounting for 44 out of 58 projects. Furthermore, EA demonstrates engagement in Parks, Commercial, Office, and Renovation projects, suggesting a broader although still focused range of interests. In addition, the UD category shows a significant preference for House developments, with 33 out of 39 projects falling into this group. Similar to EA, UD has limited involvement in Parks, Commercial, Office, and Renovation projects, suggesting a concentrated focus on specific project categories within the dataset. This data reveals distinct patterns of project participation in the AH, EA, and UD categories, offering valuable insights into the specific preferences and contributions of individuals within the analyzed setting. The chi-squared test reveals that the variations in project types across different SPECZ categories are not statistically significant. Hence, the observed fluctuations may be attributed to stochasticity rather than a consistent disparity in the distribution of SPECZ categories among different project types.

The allocation of participants among different project categories in three SPECZ courses: AH, EA, and UD. Out of the 19 projects seen in the AH category, the House project type is the most prevalent, with 15 projects. There is limited representation in the Mausoleum, Parks, Commercial, and Office categories. EA exhibits a wider dispersion among different project types, with 44 projects noted in the House category, 3 in Parks, and lesser numbers

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

in Industrial, Commercial, Office, Renovation, and Conservation categories. UD's main focus is on House projects, with a total of 33 seen. They also have fewer projects in the Parks, Commercial, Office, and Renovation categories. The proportion of 0.164 observed in Category AH is much lower than the expected proportion of 0.333, indicating a notable underrepresentation. However, in Category EA, the observed proportion of 0.500 is significantly higher than the expected proportion of 0.333, suggesting an over representation. Within the UD category, the observed proportion of 0.336 closely corresponds to the expected proportion of 0.333, indicating a well-balanced representation of values between the observed and expected. The significant χ^2 value and low p-value indicate that the observed frequencies in the AH, EA, and UD categories deviate from the predicted distribution. The primary source of this disparity is mostly attributed to the notable discrepancies observed in the AH and EA categories.

In the AH category, the observed counts for females (11) and males (7) are in close proximity to the expected counts (13.3 for females and 5.41 for males), suggesting that there is no major divergence. In the EA category, the observed numbers for females (39) and males (19) are in close proximity to the anticipated values (40.5 for females and 16.50 for males), indicating a balanced distribution. In the UD category, the observed numbers for females (31) and males (7) exhibit minor variations from the expected counts (27.2 for females and 11.09 for males), but these differences are not substantial enough to suggest a relationship. In summary, the study indicates that there is no substantial correlation between gender and the SPECZ categories. The observed counts closely align with the expected counts in all categories, hence emphasizing the absence of major variance.

Conclusion and Recommendations:

Based on the comprehensive study of SPECZ categories and their association with dream project types, several key findings emerge. Although the chi-squared test first indicates that there is no statistically significant difference between SPECZ categories and project types, the likelihood ratio test contradicts this finding and suggests a strong association between the

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

variables. The contingency coefficient highlights a moderate association. The conflicting results suggest a complex relationship in which the statistical significance differs depending on the specific test used.

Analyzing the contingency tables of the Thesis Project offers a more profound understanding of how SPECZ impacts project preferences. Categories such as AH, EA, and UD display clear patterns: AH is primarily centered around House projects, EA demonstrates a wide range of projects including House, Parks, and Commercial, while UD has a preference for House projects with minimal involvement in other categories.

More precisely, AH demonstrates a strong emphasis on House projects, as 15 out of 19 projects belong to this category, suggesting a concentrated endeavor. EA demonstrates a wider range of involvement in various types of projects, including those related to residential buildings, parks, commercial spaces, offices, and renovations. This showcases their diverse yet focused approach. UD places a high emphasis on House projects, while allocating fewer resources to Parks, Commercial, Office, and Renovation categories. This indicates a focused and deliberate approach.

The chi-squared test indicates that the observed differences in project types among SPECZ categories are not statistically significant. This lack of significance may be attributed to random fluctuations rather than deliberate distinctions. This emphasizes the significance of utilizing numerous statistical tests to accurately capture intricate interactions.

Furthermore, while analyzing the distribution of gender among SPECZ categories, it is evident that there is a strong correlation between the observed and expected counts in AH, EA, and UD. This suggests that there is no substantial discrepancy based on gender when it comes to project preferences within the dataset.

To summarize, whereas the chi-squared test first indicates no significant relationship between SPECZ categories and project types, additional examination using the likelihood ratio test and contingency coefficient uncovers subtle connections. The results highlight the

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

intricate relationship between SPECZ categories and project choices, underlining the necessity for thorough statistical methodologies to provide significant insights in future studies.

Further investigation could explore the causal relationships between project types and SPECZ categories. Deeper insights into the decision-making processes within the context investigated could be gained by determining whether certain SPECZ categories result in preferences for specific project types or vice versa. Additionally, longitudinal studies could demonstrate the evolution of project types within SPECZ categories. This method would assist in the identification of trends and changes in project preferences that are influenced by demographic shifts, societal changes, or policy interventions.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

References

Bhalerao, S., & Kadam, P. (2010). Sample size calculation. *International Journal of Ayurveda Research*, *1*(1), 55–57. https://doi.org/10.4103/0974-7788.59946

Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27–40. https://doi.org/10.3316/QRJ0902027

Button, L. (2021). Curriculum Design, Development and Models: Planning for Student Learning. *Oer.pressbooks.pub*, *5*. https://oer.pressbooks.pub/curriculumessentials/chapter/curriculum-design-development-and-models-planning-for-student-learning-there-is-always-a-need-for-newly-formulated-curriculum-models-that-address-contemporary-circumstance-an/

Friendly, M., Turner, H., Zeileis, A., Murdoch, D., & Firth, D. (2023). *vcdExtra: 'vcd' Extensions and Additions*. [R package]. Retrieved from https://cran.r-project.org/package=vcdExtra.

Fox, J., & Weisberg, S. (2023). *car: Companion to Applied Regression*. [R package]. Retrieved from https://cran.r-project.org/package=car.

Hassan, M. (2023, April 12). *Research Contribution - Thesis Guide*. Research Method. https://researchmethod.net/research-contribution/

Hayes, A. (2023, May 22). How the Chi Square Statistic Works. Investopedia. https://www.investopedia.com/terms/c/chi-square-statistic.asp

Home. (n.d.). Www.oecd-Ilibrary.org. Retrieved December 12, 2023, from https://www.oecd-ilibrary.org/sites/aee2adcd-en/index.html?itemId=/content/publication/aee2adcd-en#:~:text=The%20attitudes%20and%20values%20articulated

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Jagersma, J. (2010). *Empowering Students in Curriculum Decisions Empowering Students as Active Participants in Curriculum Design and Implementation*. https://files.eric.ed.gov/fulltext/ED514196.pdf.

Kenton, W. (2019). Goodness-Of-Fit Definition. Investopedia. https://www.investopedia.com/terms/g/goodness-of-fit.asp

Mack, P. (2017). Learning and transforming conventional wisdom: Reading and rhetoric in the Elizabethan grammar school. *Renaissance Studies*, *32*(3), 427–445. https://doi.org/10.1111/rest.12326

Mergen, S. L. S., Kepler, F. N., Silva da Silva, J. P., & Cera, M. C. (2014). Using PDCA as a General Framework for Teaching and Evaluating the Learning of Software Engineering Disciplines. *ISys - Brazilian Journal of Information Systems*, *7*(2), 5–24. https://doi.org/10.5753/isys.2014.249

Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research*, *19*(2), 129–132. ResearchGate. https://doi.org/10.1177/1362168815572747

Ornstein, A., Hunkins, F., GLOBAL EDITION Harlow, G., London, E., New, Boston, Y., San, Toronto, F., Dubai, S., Singapore, & Kong, H. (2018). *Curriculum Foundations, Principles, and issues Seventh Edition Tokyo • Seoul • Taipei • New Delhi • Cape Town • Sao Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan*. http://daneshnamehicsa.ir/userfiles/file/manabeh/francis_p_hunkins_allan_c_ornstein.pdf.

One-proportion and chi-square goodness of fit test. (n.d.). Stats and R. Retrieved June 19, 2024, from https://statsandr.com/blog/one-proportion-and-goodness-of-fit-test-in-r-and-by-hand/

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Pham, T. N., & Bui, L. T. P. (2019). An exploration of students' voices on the English graduation benchmark policy across Northern, Central and Southern Vietnam. *Language Testing in Asia*, *9*(1). https://doi.org/10.1186/s40468-019-0091-x.

Park, C., & Vertinsky, I. (2016). Reverse and conventional knowledge transfers in international joint ventures. *Journal of Business Research*, *69*(8), 2821–2829. https://doi.org/10.1016/j.jbusres.2015.12.051.

R Core Team (2023). *R: A Language and environment for statistical computing*. (Version 4.3) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from CRAN snapshot 2024-01-09).

Ross, C. (2008). *Digital Commons@Georgia Southern Case Study of an Urban Elementary School's Transition from Failing to Distinguished School Status*. https://digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=1496&context=etd.

Saini, M., Sengupta, E., Singh, M., Singh, H., & Singh, J. (2022). Sustainable Development Goal for Quality Education (SDG 4): A study on SDG 4 to extract the pattern of association among the indicators of SDG 4 employing a genetic algorithm. *Education and Information Technologies*, *28*(2). https://doi.org/10.1007/s10639-022-11265-4

Sayed Munna, A., & Kalam, A. (2021). Teaching and learning process to enhance teaching effectiveness: a literature review. *International Journal of Humanities and Innovation (IJHI),* 4(1), 1–4. https://files.eric.ed.gov/fulltext/ED610428.pdf.

Smith, A. (2008). Number 1 Schooling as if Democracy Matters Article 23 2008 Part of the Education Commons Recommended Citation Recommended Citation Smith. *Journal of Educational Controversy Journal of Educational Controversy*, *3*(1), 23. https://cedar.wwu.edu/cgi/viewcontent.cgi?article=1077&context=jec.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

Smith, A. (2008). What Schools are For by John Goodlad. *Journal of Educational Controversy*, *3*(1). https://cedar.wwu.edu/jec/vol3/iss1/23.

Sokalamis, R., Mcvie, A., & Urb&regplan, M. (2023). *A Methodology for Identifying Typologies to Improve Innovation District Outcomes: The Case of South East Queensland*. https://eprints.qut.edu.au/239356/1/Rosemary_S_Adu_McVie_Thesis.pdf.

Taber, K. (2018). The use of Cronbach's alpha when developing and reporting research instruments in Science education. Research in Science Education. 48. 1-24. 10.1007/s11165-016-9602-2.

The jamovi project (2024). *jamovi*. (Version 2.5) [Computer Software]. Retrieved from https://www.jamovi.org.

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., Conover, L. A., & Reynolds, T. (2003). Differentiating Instruction in Response to Student Readiness, Interest, and Learning Profile in Academically Diverse Classrooms: A Review of Literature. *Journal for the Education of the Gifted*, *27*(2-3), 119–145. https://doi.org/10.1177/016235320302700203.

Tubera, M., & Salentes, V. (2022). Corporate Social Responsibility: A Framework of Strategies for the Sustainability of Higher Education Institutions (HEIs) [Review of Corporate Social Responsibility: A Framework of Strategies for the Sustainability of Higher Education Institutions (HEIs)]. UE Research Bulletin, 24, 124–186.

UCL. (2018, August 8). *Students learn to produce outputs – assessments directed at an audience: Dimension five*. Teaching & Learning. https://www.ucl.ac.uk/teaching-learning/research-based-education/students-learn-produce-outputs-assessments-directed-audience-dimension-five.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VI, Issue I
August 2024
Available online at https://www.instabrightgazette.com

United Nations. (2022). *The Sustainable Development Goals Report 2022*. Unstats.un.org; United Nations. https://unstats.un.org/sdgs/report/2022/

United Nations. (2023). *Goal 4 | Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All*. United Nations; United Nations. https://sdgs.un.org/goals/goal4

Vasantha Raju N. (2016, February 2). *Online survey tools ppt 30-01-2016*. https://www.slideshare.net/Vasanthrz/online-survey-tools-ppt-30012016.

Voogt, J. M., Pieters, J. M., & Handelzalts, A. (2016). Teacher collaboration in curriculum design teams: effects, mechanisms, and conditions. *Educational Research and Evaluation,* 22(3-4), 121–140. https://doi.org/10.1080/13803611.2016.1247725.