Education that upskills: Community service project as a critical enabler of students' self-confidence growth

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Abstract

The purpose of this study is to elucidate how undergraduate students in Cambodia develop self-confidence through their involvement in a specific project-based learning activity. The study defines project-based learning as an academic method used by educators to provide students with meaningful, real-world learning experiences that facilitate the acquisition of essential skills and competencies. At its core, the paper focuses on a community service project, highlighting its role as a key enabler of self-confidence growth among participants. This quantitative study employs a descriptive research design and uses two surveys for data collection. Applying the convenience sampling method, the first self-administered Likert-scale questionnaire, conducted in a paper-and-pen format in May 2024, was distributed to 190 full-time university students to establish a baseline assessment of their self-confidence before the community service project. The second survey, consisting of a Likert-scale question and one open-ended question designed to gather storytelling insights, was administered to the same respondents in June 2024, shortly after the completion of the project. In addition to serving debriefing purposes, this survey formed the basis for comprehensive data analysis. To track changes in respondents' perceptions over time and provide a single summary measure, the study utilized the mean in the Likert-scale analysis. The research findings from both surveys revealed a 14.93 percent increase in the mean self-confidence score due to the students' involvement in project-based learning activities. Consistent with the findings of similar studies, this paper contends that a thoughtfully integrated community service project not only serves as a key enabler of self-confidence growth but also establishes a solid foundation for developing this and other emotional competencies in learners. Because this form of learning equips students with a lasting learning dividend that extends beyond their academic life and performance, the paper contributes to the ongoing pedagogical discourse on the pivotal role educational institutions play in upskilling students enrolled in undergraduate programs and other tertiary education courses. Furthermore, as relevant data stemming from similar projects in Cambodia are scarce, the study provides a window into understanding how a community service project can serve as the foundation for self-confidence growth in undergraduate students in Cambodia.

1. Introduction

One of the hotly debated topics in post-pandemic academic discourse within higher education institutions worldwide is the alignment of graduates' skills with the demands of a rapidly evolving global economy. These discussions are not without merit. A combination of factors, including abrupt economic shifts, changing work patterns, accelerated automation, digital transformation, the emergence of new job roles, disruptions in global supply chains, escalating geopolitical tensions, and trade conflicts, not to mention a growing indebtedness of countries, enterprises, and households, continues to weigh heavily on and significantly shape labor markets worldwide. Looking beyond 2025, it is reasonable to expect that some of these forces will only intensify in the coming years.

Such notions are now widely shared by economists, lawmakers, and decision-makers on a global stage. As Singapore's president, Tharman Shanmugaratnam, stated at the World Economic Forum's annual meeting in 2025 in Davos, Switzerland, the rise of Artificial Intelligence (AI) fuels the prospect of mass displacement of workers with far-reaching consequences. In his view, a global job crisis is brewing, as roughly 1.2 billion people from developing and emerging nations are set to enter the global workforce over the next decade, while only 400 million new jobs are projected to be created during that period – potentially generating a crisis of hope, self-belief, dignity, and solidarity [1].

But no matter how vocal elected officials may be in voicing such concerns, governments' regulatory frameworks alone will not suffice to solve complex economic problems, let alone resolve the issue of the ever-widening skills gap that has come to the forefront of labor markets. Amid growing calls for broader structural changes in tertiary education and a paradigm shift in modern learning facilitation, it has become markedly evident that the involvement of higher education institutions is indispensable.

Consequently, this emerging reality across labor markets, coupled with the intrinsic need to preserve relevance and vitality, compels numerous tertiary education providers to embrace the continuous improvement process. Continuous improvement, in turn, provides new impetus for reimagining or rethinking academic processes in terms of their effectiveness and efficiency. Although strategies for implementing this process vary from one university to another and are often determined by several factors, one domain attracts considerable attention: a university's engagement with its stakeholders.

Since every institution of higher learning is surrounded by multiple stakeholders, engagement tends to be a lengthy and complex process. This often requires a delicate balance between the needs of various stakeholders. Striking an equilibrium between procedural and bureaucratic requirements on the one hand and the industry's wish lists on the other can be a practical example of how laborious the entire process is.

For the purposes of this paper's introduction, however, we will focus only on a university's three main stakeholders: prospective employers (industry participants), students (learners), and educators (instructors) – with an added emphasis on the academic methods teachers devise to bolster skills acquisition among learners, which is the main point of our inquiry. Even though the three stakeholders differ considerably, the impending macroeconomic realities and job market trends urge us to shed light on them jointly.

After all, in times when economic growth does not necessarily translate into job creation, while economic downturns almost certainly result in job cuts, nothing can be more damaging for higher education institutions than seeing their graduates become a statistic in unemployment rates. As a result, equipping graduates with professional skills and competencies sought by employers in a progressively globalized labor market is perhaps the most crucial factor driving the profound changes universities are currently undergoing, steadily providing industry participants with more opportunities to shape the internal processes of educational institutions.

Data collected from various surveys broadly support these views. For instance, a PwC survey revealed that 74 percent of CEOs worldwide were concerned about finding the right skills to grow their businesses, while an online poll of 40,000 young people in over 150 countries disclosed that many young people – more specifically, 31 percent – felt their current education was not preparing them with the skills they needed to get jobs [2].

Thus, graduates' abilities to secure employment and make an impact in the workplace and beyond inevitably underpin a university's capability to attain a unique market position. These factors also support universities in their efforts to articulate a distinctive competitive advantage. Additionally, it is important to remember that presenting students with employability skills concerns both ends of a university's educational process – not just the output. The success of student intake programs is also affected. Because the quality of tertiary education is typically perceived as the single most

important solution to the problems of social mobility, youth unemployment, and, increasingly, as a future-proof necessity, choosing the right university is, for young people, a decision of utmost significance with potentially lifelong implications.

However, prospective students must contend with more than just economic considerations. Beyond the choices young individuals face, in countries plagued by the issue of a rapidly aging population compounded by the absence of adequate social safety nets, gaining admission to a university that produces future-ready graduates becomes a multigenerational concern, especially when such a decision involves private tuition costs. Thus, it is precisely this area that directly strengthens or undermines a university's academic currency.

As we have touched on the topic of professional skills acquisition from the perspectives of both employers and students, we now turn to include one final stakeholder in our preliminary analysis – educators. Tasked with leading the process of competency acquisition as a direct outcome of their day-to-day activities, teachers oversee this process at every stage. Given their influence over how knowledge is disseminated and skills are enhanced, educators' contributions to the ongoing academic debate concerning the role of educational institutions in upskilling students enrolled in tertiary education programs are invaluable. In other words, for internal change efforts to bear fruit, educators must be part of the equation.

Briefly alluding to the indispensable role of educators allows us to examine a final point of our introductory framework, which looks at the scholarly procedures educators have at their disposal. More specifically, we are referring to the student-centered academic method, designed to equip learners with the skills and competencies that are typically endorsed and validated at the end of the educational process by employers and industry professionals.

In an era where digital literacy, AI, and big data skills are rising to prominence, it is essential to point out that, according to the findings of the World Economic Forum's *Future of Jobs Report* released in 2023, the top ten skill priorities for 2027 will include soft skills such as leadership and social influence, resilience, flexibility and agility, motivation and self-awareness, empathy and active learning [3].

Drawing on interdisciplinary research is, therefore, critical to addressing such an emerging reality. While behavioral probing in competency development reminds us that the hierarchy of social skills can hardly be scaffolded without a sense of self-worth, self-esteem, and self-confidence, pedagogical groundwork readily documents the existence of academic instruments that serve as a suitable vehicle for instilling some of these capacities in learners.

Among the wide range of academic tools available, project-based learning is particularly well-suited to provide learners with various social skills and emotional competencies. As an educational method devised to offer students meaningful, real-world learning experiences that foster the acquisition of essential skills and competencies, project-based learning has a proven track record. Due to its student-centered nature and focus on real-world challenges, project participants are typically provided with a learning dividend that extends well beyond the boundaries of academic life and performance.

Although our research primarily concerns university students, it would be a mistake to confine the ramifications of project-based learning solely to academic settings. Its influence extends to multiple stakeholders, not just students enrolled in undergraduate programs. When taking the form of a community service project – one of its many variations – project-based learning can produce a meaningful, direct, and at times tangible impact on the communities in which such projects are carried out. Consequently, local communities and society at large must be considered, as they, too, become beneficiaries of this educational instrument. In a world where societal impact can be observed, measured, and quantified, certain instructional approaches can facilitate positive outcomes faster than others, encompassing a multitude of stakeholders.

What we aim to achieve with this paper is to understand and evaluate the impact of a project-based learning method on competency development in learners. Accordingly, the objective of this study is to examine how undergraduate students' self-confidence is enhanced as a direct result of their involvement in a specific project-based learning activity conducted within a local community. The presented paper incorporates findings from various research endeavors conducted in the fields of psychology, neuroscience, pedagogy, and organizational behavior. Structurally, the paper is divided into several parts. Following the introduction, the literature review examines community service projects as one of many project-based learning variations, emphasizing their critical role in skill attainment and competency development among participants.

The third part of the paper presents the design and methodology, defining this study as quantitative research that employs a descriptive research design using two surveys for data collection. It also highlights the use of the convenience sampling method in selecting participants for the surveys. The research findings, along with the study's limitations, are presented and discussed in the fourth section. The overall summary is provided in the paper's fifth and concluding part. This is followed by the references and soft copies of the surveys.

2. Literature Review

Before delving into project-based learning and its key characteristics, it is important to note that the narrative of this paper is guided by Edmonds' educational philosophy, which proposes that students know how to learn in more ways than educators know how to teach them [4]. In practice, understanding education through this prism naturally paves the way for the integration and widespread adoption of project-based learning and similar educational approaches in academic settings. This, in turn, lays the foundation for student-centered education across all levels, regardless of an institution's geographical location.

Because project-based learning inherently complements student-centered approaches – gradually rendering obsolete the teacher-centered philosophy that once underpinned the industrial society model and its compartmentalized production – many higher education institutions now place student-centered learning at the core of their educational philosophy. But what exactly is project-based learning, and what makes it such a compelling student-centered instrument?

Even though project-based learning lacks a universally accepted definition, academics frequently use this teaching method to facilitate learning, resulting in its diverse descriptions, portrayals, and definitions. Markham, et al. [5] suggest that project-based learning integrates knowing and doing, as students acquire knowledge and elements of the core curriculum. Students also apply what they know to solve authentic problems and produce meaningful results. Consequently, project-based learning is often referred to as learning by doing.

Also recognized as learning through experience, project-based learning is an academic method frequently employed by instructors at all levels of education, not just in tertiary settings. During project-based learning activities, students work in groups to solve challenges that are authentic, curriculum-based, and often interdisciplinary. Students decide how to approach a defined challenge and what activities to pursue. They gather information from various sources, synthesizing, analyzing, and deriving knowledge from it. Their learning is inherently valuable because it is connected to something real, involving skills such as collaboration and reflection [6].

To ensure alignment with the educational processes of higher learning institutions, academic projects must meet certain criteria: students must perceive their work as personally meaningful, and the project must serve an educational purpose [7].

Allowing students to take charge of their own learning is, therefore, a key factor that distinguishes this academic technique from other commonly applied educational methods [8]. Thanks to these attributes, project-based learning is considered an effective approach for improving student engagement [9]. Some theorists assert that learners' enhanced autonomy and independence are also fostered during its implementation [10].

In his study, Aldabbus [11] contends that project-based learning typically includes the following steps: content should be carefully chosen to meet the learners' needs and capture their attention; the selected topic should be introduced in a way that activates students' prior knowledge through short discussions, with the aim of stimulating their interest and sparking their eagerness to learn about the topic; and, finally, students should be encouraged to formulate a driving question to help them stay focused and provide a clear purpose for conducting the project.

While this scholastic method naturally brings students and their work to the forefront, the role of educators in this process cannot be overlooked, particularly when project-based learning becomes an integral part of the academic curriculum. Given that a single project may span a longer period – ranging from one to four weeks, for example – and that each project may yield various products, such as posters, short films, or essays, teachers remain vital to the process [12].

By adopting the role of facilitators [13] rather than transmitters of content [14] teachers are required to develop new classroom management skills and learn how to best support their students throughout the learning process. They must also believe that their students are fully capable of learning through this approach [15]. It is also important to bear in mind that the 'one-size-fits-all' approach to applying project-based learning in academia is not viable [16]. Since some materials need to be taught in more structured or algorithmic ways, it would be a mistake to consider projects a solution for all educational challenges [17].

Moreover, just as the needs of educational institutions determine the extent to which incorporating project-based learning into their curricula is desirable, it is the very nature of each academic discipline – and the set of competencies it aims to instill in learners – that ultimately decides whether, and in what form, the use of this method is suitable [18].

Undeterred by the lack of a universally recognized definition of the examined method, we can still outline some of its varied forms, keeping in mind that while some project-based learning arrangements take place in classrooms, others occur outside traditional educational settings. Solomon [19] identifies a wide range of project-based learning formats, including cybersecurity, 3D printing, AI, augmented reality, virtual reality (VR), and coding projects – all designed to enhance learners' digital skills and cyber literacy – as well as public speaking and debate class projects, which aim to improve participants' communication and public speaking abilities. The varied formats also include human development projects and community service initiatives, intended to cultivate a range of cognitive, social, and emotional competencies in students. As Acar [20] asserts in his study, various project-based learning configurations contribute directly to the development of higher-order thinking skills.

Aside from the skills and competencies fostered by its various formats, this academic tool also enhances students' psychomotor and social skills, such as information gathering from diverse sources, critical thinking, problem-solving, self-evaluation, and delivering presentations – essential components of lifelong learning [21].

The emergence of AI and the digitalization of learning understandably place cyber literacy at the forefront of technology-related educational content. However, due to the unique skills and competencies this interdisciplinary teaching method instills, project-based learning remains widely used across various academic disciplines such as science, economics, and the humanities [22].

The contextualized knowledge disseminated by some of these disciplines, namely the humanities, reminds us that neither personal nor social capacities can be acquired without prior introspection, encompassing self-esteem, self-worth, and self-confidence. As we will document in the following pages, evidence shows that when integrated into the curriculum of social science disciplines, project-based learning appears to be a suitable vehicle for instilling a host of behavioral competencies in learners, further strengthening their overall employability prospects.

This is especially true for projects that take the form of community service, which can be characterized as a set of activities that meet genuine community needs, in addition to the application of knowledge, skills, and reflection time. It is vital to emphasize that service activities are designed to attain learning objectives, not merely to provide service [23]. It is precisely these kinds of activities that often facilitate emotional buy-in among project participants, regardless of the educational level at which such undertakings occur. Due to their ability to induce emotional presence and evoke

introspection in participants, community service projects can also be seen as external stimuli that trigger broader behavioral changes, particularly when these efforts occur outside the classroom.

Accordingly, community service projects carried out at the tertiary level of education are considered some of the most relevant academic tools educators have at their disposal for developing numerous emotional competencies in learners – and rightfully so. Successive research endeavors conducted in this field consistently reach the same conclusion: community service projects have highly positive effects on the development of emotional competencies in participants, particularly when emotional capacities such as self-awareness, self-regulation, motivation, empathy, and social skills in communication, teamwork, leadership, and conflict management are involved [24].

For that reason, the diverse nature of competencies brought about by community service projects allows us to evaluate various domains of intelligence, including emotional intelligence. More broadly, self-confidence, as a component of self-awareness, is an integral aspect of emotional intelligence – an evolving domain that develops throughout life as we learn from experience [25].

Self-confidence can be defined as the inner strength that arises from preparation and expertise, enabling an individual to overcome difficult tasks [26]. As such, it is more than just a skill, which is often understood as technical expertise confined to a certain field. Rather, it is an individual's judgment of one's own capability to achieve something [27].

People with self-confidence typically see themselves as efficacious and able to take on challenges and master new jobs or skills. They believe themselves to be catalysts, movers, and initiators, and feel that their abilities stack up favorably in comparison to others. From such a position of inner strength, they are better able to justify their decisions or actions, staying unfazed by opposition [25].

Evaluating it from this perspective, it is not far-fetched to consider self-confidence a prerequisite for lifelong personal and professional growth. After all, it is only in the absence of self-confidence, coupled with various confidence issues – resulting in debilitating effects on one's self-worth and, more broadly, on mental health – that we can fully understand and appreciate the value of self-confidence in both private and workplace settings.

Finally, and just as importantly, because self-confidence – like any other emotional competence – can be enhanced, we aim to explore how undergraduate students' self-confidence is improved through their involvement in a specific project-based learning activity in the form of a community service project.

3. Research Design and Methodology

The presented study is a quantitative research paper that employed a descriptive research design. Using a convenience sampling method, it relied on two anonymous surveys for data collection. To track changes in respondents' answers over time and provide a single summary measure, the methodology used the mean in a Likert-scale analysis. This approach served as the basis for the successive evaluation of the mean scores from both surveys. The selection of the mean allowed the two Likert-scale questionnaires to function not only as pre- and post-project assessments but, more crucially, as point-based surveys for determining whether the community service project played any role in the increase or decrease of the respondents' self-confidence levels. This approach proved important for the subsequent manual statistical analysis, which involved a percentage-based comparison to observe changes in self-confidence levels. The detailed findings of this analysis are presented in the next section of the paper.

As outlined in the preceding pages, the study aimed to explore the effects of a community service project, which forms an integral part of the academic syllabus, on the students' self-confidence development. Since the project was a component of the Leadership course, an academic discipline taught at the university's foundation level, it provided ample opportunity for the thoughtful integration of the project-based learning concept into the bachelor's degree curriculum.

We want to note that, in line with the principles of vertical alignment between the course and program learning outcomes, one of the key academic objectives of the course was to develop students' competencies through community service, which took place outside of classroom settings. It is also worth mentioning that the examined project was not the only form of academic assessment used for overall grading in this module. To meet the course requirements, students were also required to actively participate in lectures, sit for exams, take quizzes, and deliver assignment presentations – each representing a different form of academic assessment within classroom settings.

Constituting 20 percent of the overall grade and thereby playing a significant role in the course's academic assessment, the project was the only element in the academic portfolio designed to take place outside the university's academic premises. This integration of the community service project into the academic curriculum also supported the subsequent use of the convenience sampling method, which, while practical, was not without its limitations.

One of the key motivations behind this undertaking was to facilitate social interactions among students during the project's planning and execution. While some students had prior experience with project-based learning, most had limited exposure, and many lacked experience with community service projects. Given this fact, implementing such a project at the foundation level was both relevant and timely. In this context, project-based learning was seamlessly integrated into the university's undergraduate program.

Guided by the overall course specifications, Year 1 students enrolled in the undergraduate program at CamEd Business School College, a private institution of higher learning located in Cambodia's capital, Phnom Penh, were introduced to the Leadership course at the beginning of the semester in March 2024, with an added emphasis on the community service project. Allowing these full-time university students ample time to interact and build connections, the community service project was fully introduced in May 2024, the third month of their studies. At this stage, the project's key purposes and objectives were outlined, and general guidelines, along with a specific deadline, were provided. This was followed by information sharing, including examples of community service projects carried out by previous batches of students.

Additionally, the students were informed about common challenges and difficulties that typically arise at various stages of the project implementation.

In alignment with these objectives, the instructional design of the assigned task required five different groups of Year 1 students, divided based on class allocation, to identify a primary school outside the capital – preferably in a rural area. Using surveys, the students were encouraged to assess the educational needs of the chosen schools and develop a realistic yet effective strategy to address them. With economic disparities between the capital and rural communities widening, the lack of modern school facilities in rural areas remains a pressing issue. Unsurprisingly, after their initial visits to the selected primary schools, all five groups independently chose the same approach: fundraising. Each group was given four to six weeks to complete a community service project, resulting in the implementation of five separate initiatives. Of the 215 Year 1 students still enrolled in Leadership classes as of May 2024, 190 expressed interest in participating.

Before the project-related activities commenced, a self-administered Likert-scale questionnaire in a paper-and-pen format was distributed to 190 students between May 13 and 16, 2024. This initial assessment aimed to establish a baseline measurement of their self-confidence levels. Since the students were selected from the Leadership class rather than through random sampling, the study employed a convenience sampling method. In addition, oral consent was obtained from the students for data collection through an anonymous survey. The students were also informed that a second assessment would follow after the completion of the project.

The questionnaire consisted of two main sections: one focusing on the students' demographic characteristics and another on their self-confidence levels. The first section collected demographic details such as gender, age, religion, nationality, academic year, and student status. Figures 1-4 display the demographic data, while Table 1 provides a summary. The research findings are discussed in the following section of the paper. To ensure clarity and avoid ambiguity, the second part of the survey, which addressed characteristics associated with the students' self-confidence levels, included only one question. This question was formulated in line with the relevant literature and drew on the definition of self-confidence provided by Manning and Curtis [26] describing it as the inner strength that arises from preparation and expertise, enabling an individual to overcome difficult tasks. The survey then posed the following question: "What is the current level of your self-confidence?"

The survey instructed the participants to indicate their self-confidence levels using the following scale: 1 = Low, 2 = Below Average, 3 = Average, 4 = Above Average, and 5 = High. They were also instructed to select only one option. Accompanying each Likert-scale response, the numerical values that ranked chronologically from one to five played a crucial role in data analysis and in determining the findings, which are detailed in the next section of the study.

The chosen methodology adhered to the standard approach for five-point Likert-scale questionnaires. In other words, the context of the study allowed us to treat the Likert-scale questionnaires as a point-based survey, enabling us to measure the respondents' perceptions of their self-confidence levels. Next, as noted above, the study utilized Likert-scale questionnaires with a five-point structure, which permitted us to focus on central tendency analysis using the mean score. This approach helped track changes in the respondents' perceptions over time while providing a single summary measure. Therefore, applying the mean in Likert-scale analysis became our preferred method. Accordingly, we used the following formula to calculate the mean score:

$$\text{Mean Score} = \frac{\sum X}{N}$$

Where:

X = individual responses of students

N = total number of respondents.

Prior to the community service project, the first round of self-assessment, conducted in May 2024, was significant both for the students and for the broader purposes of the study. Echoing previous research in this field, which emphasized students' roles as drivers of their own learning during the examined initiatives, we asserted that the first survey would allow the participants to reflect on how they felt about themselves in anticipation of the upcoming project. For the general purposes of the study, data from the first survey were intended to establish a benchmark for comparison with the second and final survey, which was scheduled to take place only after the completion of the project. Since our research employed the mean score from two Likert-scale questionnaires, we aimed to measure the impact of the community service project on the participants' responses.

In the aftermath of the first survey, all five groups of undergraduates completed their community service projects on June 22 and 23, 2024. In addition to donating the raised funds, which amounted to $9,500 collected in just over one month – matching the amount raised by previous student groups – the participants also provided school supplies, including textbooks, exercise notebooks, backpacks, and, in some cases, other equipment such as school uniforms. In some instances, donated funds were used to build toilet facilities, as the lack of such amenities had led parents to discourage their children from attending school.

In total, five separate community service projects were carried out, engaging hundreds of students and community members. By completing these projects, the initial academic goal was attained. The public schools where the projects took place include Angkor Chey in Kampot Province, Oppak Som Poun Kos Ko in Svey Rieng Province, Angkor Pun Lei in Takeo Province, Kiri Andaet in Kompong Thom Province, and Don Soy in Kampot Province. All selected schools are located in rural areas, within driving distance from the capital, Phnom Penh.

Shortly after the completion of the community service projects, the second anonymous survey was administered from June 24 to 27, 2024. It included a Likert-scale question and an open-ended question designed to gather storytelling insights.

Once again, the students were asked to provide oral consent for data collection. Only those who completed the first survey and participated in the community projects were invited to ensure consistency in demographic data. In total, 190 students participated in this post-project survey. They were the same students who completed the first questionnaire in May 2024 and attended their respective community service projects. Thus, the demographic characteristics recorded in the first survey also applied to the second. We would like to note that the students were not presented with the results of the first survey or given copies of the questionnaire. By adopting this approach, we intended to prevent any influence from the findings of the initial survey. Finally, the second survey used the same definition of self-confidence and the same sampling method – convenience sampling.

The second Likert-scale survey posed the following question: "Having completed the community service project, what is the current level of your self-confidence?" As with the first questionnaire, the students were instructed to select only one of the presented options. The survey offered the same range of response options: 1 = Low, 2 = Below Average, 3 = Average, 4 = Above Average, and 5 = High. Once again, the numbers attached to the Likert-scale responses were assigned in increasing order from one to five, and since they provided specific numerical values, they played a pivotal role in the subsequent data analysis. The research findings are presented in the next section of the paper and are detailed in Figure 6.

In addition to serving debriefing purposes and allowing participants to reflect on the completed projects in their own words, the second questionnaire also featured one open-ended question. The question presented to the respondents was: "How did the community service project affect your self-confidence?" Since open-ended questions typically provide valuable storytelling insights, we concluded that it would be more meaningful to include such a question in the second questionnaire, after the completion of the project, rather than in the first survey. The respondents were assigned a number, and their selected responses are presented in Table 3 in the following section of the paper. The questions posed by the post-project survey formed the basis for the final stage of data analysis. The collected data were analyzed in January and February 2025. Given that several project participants were foreign nationals, both questionnaires were presented in English and Khmer. Copies are provided in the appendix of the paper.

Lastly, by completing five separate projects, the undergraduate students demonstrated their ability to meet stringent academic requirements in their first semester of university studies. However, this was not the only conclusion drawn. Perhaps more importantly, as documented in the next section of the paper, their engagement with one another, as well as with donors and various community members, appears to have led to noticeable shifts in their self-reported confidence levels.

4. Results and Discussion

To provide a comprehensive summary of the study's findings, we begin with an overview of the students' demographic characteristics. As shown in Figure 1, of the 190 students who participated in both surveys, 68.4 percent of the respondents were female, while the male respondents comprised 31.6 percent. It is important to note that the observed gender disparity reflects the gender composition of classes at the university's foundation level.

Meanwhile, Figure 2 reveals that the respondents' age distribution varied, with the 18-year-olds representing the largest demographic group (50 percent), followed by the 19-year-olds (31.6 percent). Two cohorts – the 17-year-olds and the 20-year-olds – were of equal size (7.9 percent). The smallest demographic group was the 21-year-olds, who accounted for 2.6 percent of the total number of respondents.

Exhibiting the religious composition of respondents, Figure 3 highlights the prevalence of Buddhism. The vast majority of students (97.8 percent) identified with this religion. The students who identified as Christians made up 1.1 percent, while those respondents who were affiliated with Islam also accounted for 1.1 percent. No other religious affiliations were reported by the survey participants.

Lastly, Figure 4 presents the nationality composition of the respondents. The overwhelming majority of students identified themselves as Cambodians (98.9 percent). Only 1.1 percent of the respondents identified as foreign nationals, more specifically, nationals of the United States (US). No other nationalities were specified by the survey participants.

The summary of the demographic characteristics is presented in Table 1. Considering that the students were free to indicate their answers regarding the demographic characteristics in the questionnaire, it is noteworthy that none of the surveyed students identified as transgender. In addition, with regard to the religious composition of the respondents, another trend emerged: none of the participants identified as atheists or agnostics. As mentioned in the methodology section of the paper, in addition to the key demographic characteristics, which constituted the first part of the pre-project survey, the second part of this questionnaire focused on the students' self-confidence levels.
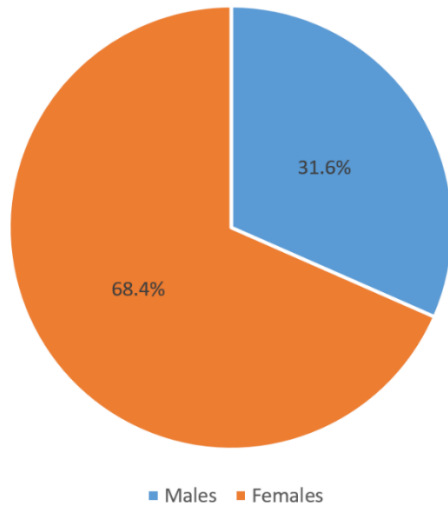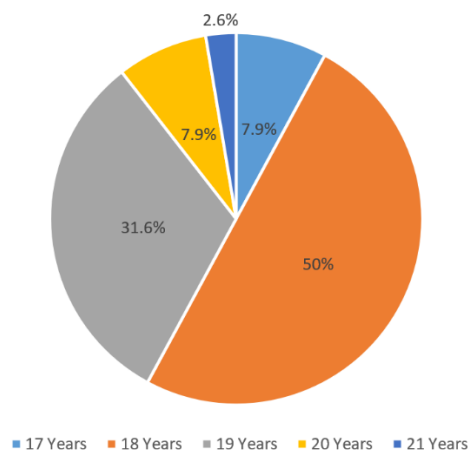
Figure 1.
Gender composition of respondents.

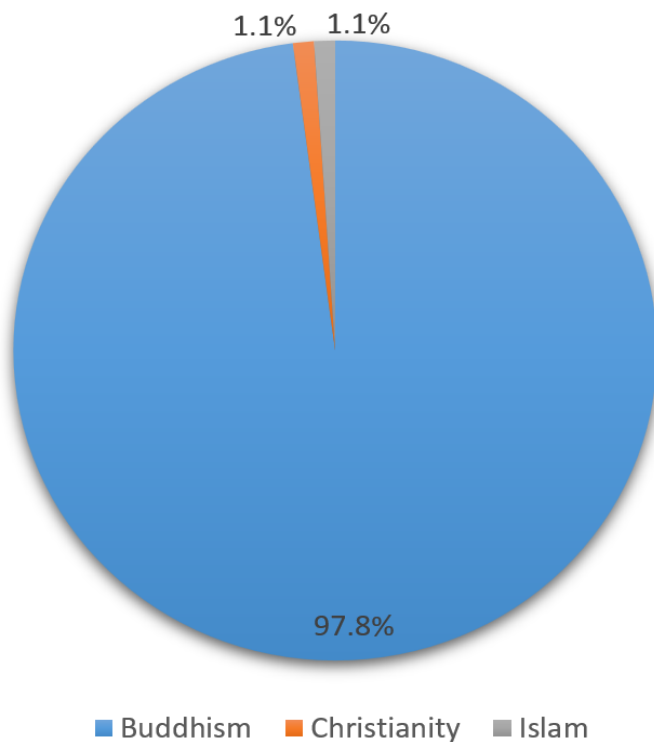**Figure 2.**
Age composition of respondents.

Figure 3.
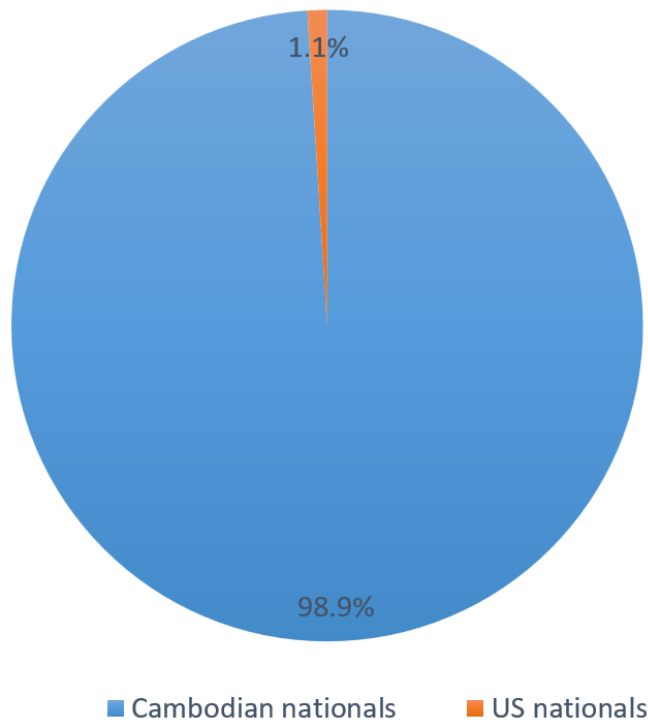Religious composition of respondents.

Figure 4.
Nationality composition of respondents.

Table 1.
Summary of Respondents' Demographic Characteristics.

Characteristics	Frequency (n)	Percentage
Gender		
Male	60	31.6
Female	130	68.4
Total	190	100
Age		
17 years old	15	7.9
18 years old	95	50
19 years old	60	31.6
20 years old	15	7.9
21 years old	5	2.6
Total	190	100
Religion		
Buddhism	186	97.8
Christianity	2	1.1
Islam	2	1.1
Total	190	100
Nationality		
Cambodian nationals	188	98.9
US nationals	2	1.1
Total	190	100
Academic Year		
Year 1	190	100
Academic Status		
Full-time students	190	100

The respondents were requested to indicate their level of self-confidence on a Likert-scale questionnaire, choosing one of five options. To reiterate, the following question was asked: "What is the current level of your self-confidence?"

Figure 5 reveals that the students who rated their self-confidence as low accounted for 1.1 percent of all the respondents, representing the smallest segment of the survey. Those who identified their self-confidence as below average accounted for 5.8 percent of the total participants, forming the third-largest cohort. The respondents who selected the survey's average option represented 55.3 percent of all participants, making it the largest group. The students who rated their confidence as above average accounted for 33.1 percent, forming the second-largest cohort. Finally, only 4.7 percent

of the respondents reported high self-confidence at the time the pre-project survey was conducted. This was the second-smallest group in the survey.
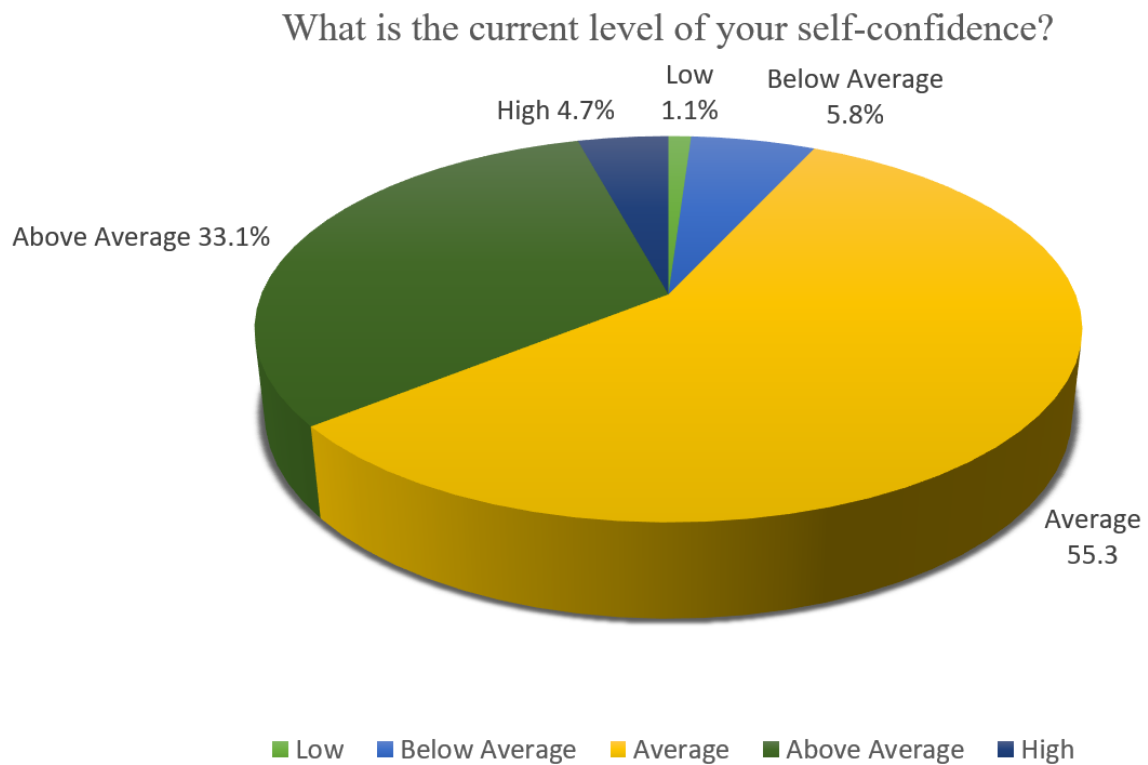

Figure 5.
Participants' self-confidence levels before the community service project (first survey).

Table 2.
Mean Score of the First Survey.

Likert-Scale Score	Frequency (Number of Participants)	Cumulative score (Likert-Scale Score x Frequency)
1 (Low)	2	2
2 (Below Average)	11	22
3 (Average)	105	315
4 (Above Average)	63	252
5 (High)	9	45
Total	190	636

Note: The Mean Score: 3.35

Moreover, consistent with the methodology outlined earlier in this paper, Table 2 presents the mean score from the first survey, calculated by dividing the total value of each Likert-scale option by the number of students who selected it. The mean score of the first survey was 3.35. This indicates that the 190 respondents in this research sample perceived their self-confidence levels as slightly higher than average.

As noted earlier, the recorded data served as a benchmark for comparing the mean score of the second survey, aiming to assess any improvement or decline in self-reported confidence levels. Once the undergraduate students completed their community service projects, they received the second questionnaire to assess their self-confidence levels post-project. Participation in this second self-assessment was limited to the students who completed the first questionnaire and actively participated in their respective projects. In total, 190 students participated in the second survey. In short, these were the same students who took part in the first questionnaire.

The second questionnaire focused solely on characteristics related to the students' self-confidence levels, thereby omitting demographic attributes that were included in the first survey. The second survey featured one Likert-scale question and one open-ended question. The Likert-scale assessment applied to the following question: "Having completed the community service project, what is the current level of your self-confidence?" As before, the participants were asked to indicate their self-confidence level using a scale that ranged from one to five. They were instructed to select only one option. The second survey also included the following open-ended question: "How did the community service project affect your self-confidence?" The respondents' answers were matched with numbers, and an overview of the selected answers provided by the students is included in Table 3.

As Figure 6 depicts, 0 percent of the respondents reported low self-confidence, making it the smallest group in the survey. Next, only 1 percent described their self-confidence as below average, which was the second-smallest category.

Having completed the community service project, what is the current level of your self-confidence?
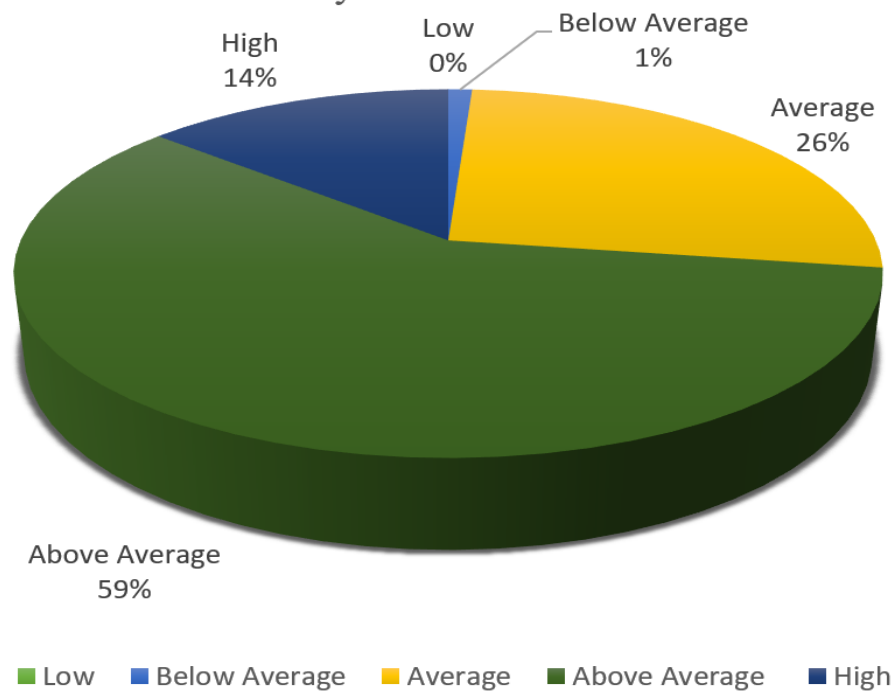

Figure 6.
Participants' self-confidence levels after the community service project (second survey).

Meanwhile, 26 percent identified their self-confidence as average, making it the second-largest segment. The above average level was reported by 59 percent of the respondents, constituting the largest category in the survey. Finally, 14 percent of the respondents reported high self-confidence post-project. This was the survey's third-largest segment. Regarding the respondents' answers to the question of how the community service project affected their self-confidence, Table 3 provides an overview of the selected responses. Although these responses represent only about one-fifth of the total, the remaining answers were strikingly similar. Overall, they offered valuable insights into how the project participants felt about themselves, their peers, and the members of the communities where the projects took place.

Table 3.
Selected Responses of Students After the Community Service Project.

How did the community service project affect your self-confidence?
1. "I can share what I have with people around me. I feel I am a useful person."
2. "This project helped me a lot to improve my self-confidence."
3. "It made me feel new. And it made me feel happy because I can help others."
4. "This project helped me to be a better person, have more self-confidence, and improve my social skills."
5. "I can see myself expressing my inner leadership skills. The project helped me acquire self-esteem."
6. "I have a better sense of my personal responsibility as a result of this project."
7. "It helped me to improve my self-confidence. It also helped me to see that my actions make other people happy."
8. "The community service helped me become more confident because I can now communicate with a lot more people than before."
9. "After completing the community service, I gained the confidence to go out there and work with new people. It made me feel grateful for what I have and made me realize how fortunate I am."
10. "I can finally feel proud of myself. My confidence has definitely improved."
11. "I see myself as an independent person, a useful person of our society. I see many kids happy because of the gifts they received. Being a useful person is the best feeling ever."
12. "The project helped me to improve my communication skills, and I am proud that I can help others."
13. "I can share what I have with others. I can see myself in a really different way now."
14. "I was braver than I expected."
15. "I feel satisfied as my confidence increased thanks to this project."
16. "The project helped me to get out of my comfort zone and experience the real world. I feel more confident in communicating and approaching people for the first time."
17. "Participating in this project and meeting new people helped me build my self-confidence."
18. "My confidence was developed to another level. Also, I have mustered up my courage."

19.	"I have done a community project before, but everything was done by our teachers. This time, I have learned to be more independent and hands-on. Therefore, I would say that my confidence level has increased."
20.	"Personally, it helped me become more open-minded. It also gave me a life-changing perspective."
21.	"When I saw other people appreciating our efforts, I gained a lot of self-confidence."
22.	"Starting from the preparation process, I had a lot of worries, thinking I was not good enough to handle something this huge. But my friends helped me work through this. I was able to communicate and work with all my classmates, which made us grow closer. I was also able to express my opinions openly and improve my decision-making and problem-solving skills. In the end, the project went better than I initially thought. Thank you for giving us this opportunity. I have learned so much from this project, personally and professionally."
23.	I learned how to work together as one team. This made me feel more confident about myself."
24.	"Thanks to this project, I no longer feel anxious when meeting new people."
25.	"The community service project helped me realize that I can do much more than I imagined before we started."
26.	"It is clear to me now that there are many people who need our support. I now know how lucky I am."
27.	"I have always been confident in my abilities. This project is just to remind me that I still got it."
28.	"This project is a life lesson for me."
29.	"The project helped me get to know myself better. My self-confidence improved."
30.	"I have learned to work with other people more effectively. When I work and get along with them, my self-confidence level is boosted."
31.	"This was a big project for me, but I learned a lot. I learned how to make connections with other people. I also learned how difficult life can be for poor people. I can now help my own community without any fear. The project has boosted my self-confidence."
32.	The project helped me understand what kind of life people have in different locations. I am happy to help those in need. I am proud of myself because I was able to help them."

If a glance at the data visualization documented in, Figure 6 coupled with the selected responses of students provided in Table 3, suggests noticeable shifts in the students' responses, the mean score of the second survey, shown in Table 4 validates the occurrence of the anticipated changes.

The second survey's mean score was 3.85, indicating that the 190 respondents in the research sample perceived their self-confidence as significantly higher than in the first survey. With more than two-thirds reporting above average or high self-confidence, the shift in the students' responses is apparent.

Table 4.
Mean Score of the Second Survey.

Likert-Scale Score	Frequency (Number of Participants)	Cumulative score (Likert-Scale Score x Frequency)
1 (Low)	0	0
2 (Below Average)	2	4
3 (Average)	50	150
4 (Above Average)	112	448
5 (High)	26	130
Total	190	732

Note: The Mean Score: 3.85.

Reflecting on the first survey's mean score of 3.35 and comparing it with the second survey's mean score of 3.85, as displayed in Figure 7 it is evident that a 0.5-point increase in the mean score occurred after the completion of the community service project, revealing a shift toward above average and high levels of self-confidence.

Since the mean captures the central tendency of the research data, it also indicates that the survey respondents, as a whole, improved. By converting the 0.5-point increase in the mean to a percentage, we divided the registered difference by the mean score of the first survey and then multiplied the result by one hundred. Accordingly, the research data showed an improvement of approximately 14.93 percent in the respondents' self-confidence. The stated improvement leads us to classify it as a modest one. Nonetheless, we still consider it a meaningful finding of our study.

While the increase in self-confidence levels may not have occurred in every single project participant, the 14.93 percent increase in the respondents' self-confidence reflects the average improvement across all participants. As a result, the mean self-confidence scores from both surveys document the positive impact of the community service project on participants, particularly regarding their self-confidence.

Additionally, the summary of the research findings presented in Figure 8 illustrates the results of both surveys across all examined levels of the respondents' self-confidence. As shown in Figure 8, a comparison of the results from both surveys reveals that the 'Low,' 'Below Average,' and 'Average' categories registered significant decreases in the respondents' responses before and after the project. In contrast, both the 'Above Average' and 'High' categories recorded noticeable increases.
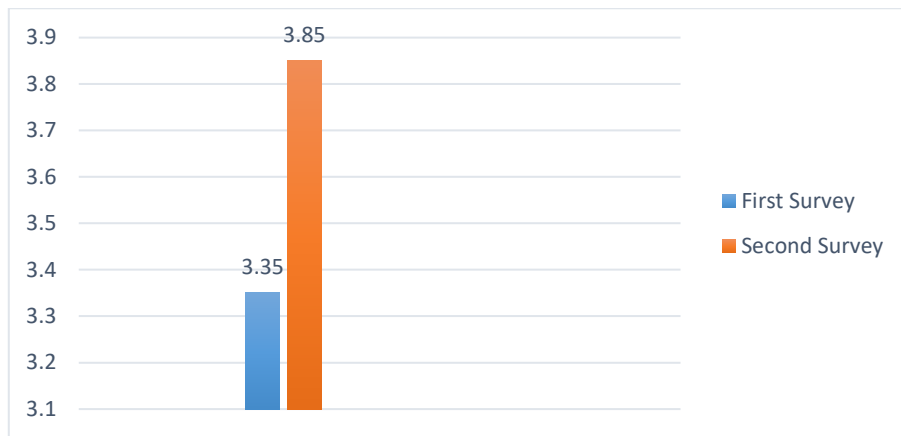
Figure 7.
Mean scores of both surveys.

An equally intriguing picture emerges when we look at the distribution of the responses in both surveys, as shown in Table 5, which offers an overview of the percentage change for each of the examined categories. As displayed in Table 5, the 'Low', 'Below Average,' and 'Average' responses recorded significant drops of -100 percent, -81.8 percent, and -52.4 percent, respectively. By contrast, the 'Above Average' responses registered a +77.8 percent rise, while the 'High' responses indicated a +188.9 percent increase.

Finally, and just as importantly, taking into account the selected responses from the students, it becomes clear that the community service project served multiple purposes. While our primary research focus concentrated on documenting self-confidence growth in the project participants, it appears that other emotional competencies, such as empathy, teamwork, and communication, also underwent some degree of re-evaluation by the respondents during the project implementation process.

That being said, we must bear in mind that, for some participants, the community service project became a stage for self-expression, allowing them to utilize existing qualities and talents. For others, it became a tool to reinforce or modify existing values – hallmarks of the introspection process. Finally, some students simply wished to be reminded that the skills and competencies they once acquired are still readily available to be utilized in a new setting.

Another noticeable element that many respondents often referred to in their questionnaire responses was the overwhelming feeling of appreciation and gratitude. Holding special undertones, gratitude is deeply ingrained in the social system of Cambodia, partly due to the country's turbulent political history and partly due to the broader cultural context of Asian societies.

Furthermore, economic factors must also be considered. During the project implementation, two different worlds essentially came together as the undergraduate students enrolled in a private university, located in an urban setting, catered to the needs of public school pupils studying in rural areas. Given these circumstances, it is not surprising that the project participants naturally expressed feelings of gratitude and appreciation in their responses with regard to the post-project survey.

Next, owing to the storytelling insights supplied by the survey's open-ended question, the selected responses from the students testify to the fact that, at the very least, the project made them emotionally present, engaged, and attentive to their own thoughts and feelings. At the very most, it elevated their self-confidence levels and appeared to have strengthened a number of other competencies. Thus, the findings from the post-project survey's open-ended question broadly support the research findings derived from the quantifiable data we discussed in the preceding pages.
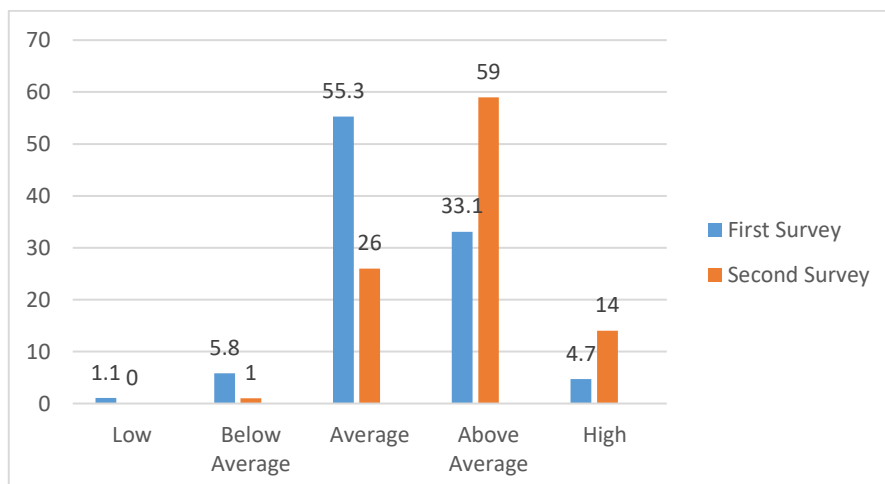

Figure 8.
Summary of the research findings.

Table 5.
Distribution of Participants' Responses in Both Surveys.

Category	First Survey	Second Survey	Percentage Change
Low	2	0	-100%
Below Average	11	2	-81.8%
Average	105	50	-52.4%
Above Average	63	112	+77.8%
High	9	26	+188.9%
Total	190	190	

Before we move to the concluding part of the paper, however, we wish to turn our attention to one more evaluation method that we used to assess the students' self-confidence growth: the participants' total scores for each survey. The fact that both surveys included Likert-scale questions, which provided respondents with a range of options from low to high, accompanied by numbers from one to five, enabled the calculation of the participants' total scores for both surveys and their subsequent comparison. In other words, using Likert-scale questions in both questionnaires allowed us to treat them as point-based surveys – a supplementary tool for detecting shifts in reported self-confidence levels before and after the project. This approach proved vital for unveiling the paper's final set of research findings.

As displayed in Table 6 in the first survey, the respondents collectively scored 636 out of 950 – the highest possible score. This result indicates that on average, the respondents attained 66.95 percent of the maximum attainable self-confidence score. On the other hand, the total number of points attained by the respondents in the second survey differed, as the students scored 732 out of a possible 950 points. Accordingly, the percentage of points recorded in the second survey was 77.05 percent. Once again, echoing our previous research findings, the post-project survey permitted the respondents to come closer to the maximum total score.

Table 6.
Participants' Total Score for Both Surveys.

Category	Total Points Achieved	Maximum Points	Percentage
First Survey	636	950	66.95%
Second Survey	732	950	77.05%

Although the highlighted difference of 96 points between the two surveys is not substantial, it further validates our previous findings, which indicate that the community service project had positive effects on the students' self-confidence.

Overall, our research findings compel us to argue that, while adopting the form of community service, project-based learning has a genuinely transformational effect on students. Given the students' limited exposure to the examined academic method, the integration of community service into the university's curriculum successfully created a platform for recognizing students' self-efficacy. In addition, an effective environment for developing the examined competency of self-confidence in undergraduate students was also facilitated.

The 20 percent academic score that the community service project contributed to the overall grading assessment can be considered one of the key performance indicators that students need to achieve during their Year 1 studies. Aside from effectively emulating corporate environments that many students enter post-graduation, such an approach generated other significant ramifications.

Looking at the community service project from the participants' perspective, we can state that at the very least, the students become aware that their performance is measured by a specific metric and that various key performance indicators typically constitute an inseparable part of their academic or workplace performance. At the very most, empowering the students with the responsibility to design the project from scratch and execute it in line with the needs of a specific community provides them with the opportunity to look beyond the attitudes of their time.

From an educator's perspective, introducing a community service project or similar initiatives to undergraduates involves creating the necessary space and time for project participants to execute the assigned tasks effectively. This allows them to rise to the challenge while demonstrating confidence in completing the work. In other words, students of diverse backgrounds, genders, ages, or religions unite under a common goal and coordinate their activities to achieve the same objective, with occasional encouragement from educators. In this collaborative environment, reaching consensus seems to go hand in hand with successful project implementation. Thus, in the context of this study, it is not unrealistic to say that providing students with more autonomy is decidedly conducive to learning.

Finally, in a society whose social fabric was torn by past political upheavals, such as civil war and genocide, and which continues to be plagued by prevalent economic problems, such as poverty, this form of social and emotional learning is of significant relevance [18]. Therefore, implementing the community service project, unconfined by ideological dogmas or political doctrines, has its merits, as this paper chronicled. By helping the selected rural communities, the students learn to become contributing members of the society to which they belong, and at the same time, they can refine their skills and capacities, including self-confidence.

While elaborating on the study's key findings, we also wish to note that, because each class of students was divided into smaller teams during the various project stages, with each team responsible for different project operations – such as logistics, finance, drone operation, and media – pinpointing the exact moment that triggered self-confidence growth in each

project participant during the month-long activities surrounding the community service project was not feasible for us. Instead, we concentrated on community projects as a whole and the effects they tend to have on project participants.

The comparison of the mean scores from both surveys clearly shows that self-confidence growth in students coincides with their involvement in community service. Thus, the research findings presented earlier allow us to conclude that the community service project serves as a critical enabler of students' self-confidence growth.

Before concluding this section of the paper, it is worth noting that whether other academic methods or forms of assessment incorporated into the academic syllabus – such as lectures, active participation during lectures, quizzes, or final exams – would have also facilitated the students' self-confidence growth, and to what extent, remains undetermined. This is because the remaining instructional methods did not constitute the focal point of our research.

The study's fundamental limitation is that it concentrated solely on undergraduate students enrolled in tertiary education in a developing country. If a similar project were conducted in a different economic setting, not only could the findings differ, but the circumstances surrounding the implementation of the project would also vary significantly, possibly taking place in a more urban environment. Therefore, the survey results might deviate considerably from those presented in our study. Accordingly, the findings should not be generalized or applied to different demographics.

Another limitation is that the study's surveys excluded the primary recipients of community service – members of the communities, particularly primary school pupils in the locations where individual community projects were carried out. In the absence of research data, it is difficult to objectively assess the impact of these undertakings on pupils and other community members beyond observable expressions of gratitude and appreciation. This, too, warrants further investigation.

Our final limitation concerns the inherent nature of the questionnaires used for data collection, as self-administered questionnaires are known to be subject to bias. In addition, the convenience sampling method is also prone to bias. While we acknowledge this limitation, we maintain that, given the educator's reduced role as a project observer, we found no better method for meaningfully assessing students' self-confidence levels than self-administered surveys.

5. Conclusion

The ongoing seismic shifts in the labor markets necessitate innovative approaches to education. To meet the demands of an increasingly competitive labor market, academic institutions should become both industry-focused and student-centered. Project-based learning meets these requirements, as it is widely recognized as an effective academic method educators use to prepare students for real-world challenges. In doing so, it equips learners with relevant competencies deemed indispensable for their academic, personal, and professional growth. Perhaps unsurprisingly, project-based learning finds itself at the forefront of research inquiries.

While project-based learning is, as a pedagogical tool, suitable for all levels of education, our research focused primarily on its application in tertiary settings, with an added emphasis on the development of emotional skills and competencies in undergraduate students. Unlike our previous research endeavors, which concentrated on a variety of capacities brought about by project-based learning activities, this study adopted a different approach. Rather than focusing on several emotional competencies induced in project participants by community service projects, we chose to focus on just one such competency – self-confidence.

Regardless of its varied forms and the number of competencies assessed, this study affirms the practicality of the examined academic method: as a result of the community service project implementation, the participants reported a modest 14.93 percent increase in their self-confidence levels. Thus, the community service project positions itself as a critical enabler of students' self-confidence growth.

On the surface, the reported growth in self-confidence may not seem like a quantum leap in developing competencies among project participants. However, considering that the increase occurred in a relatively short period of time – just one month – it is clear that community service projects integrated into the university's academic curriculum are certainly worth analyzing. It is also noteworthy that our research sample consisted of undergraduate students of varying genders, ages, religions, and nationalities, making it a diverse demographic cohort rather than a homogeneous one.

Furthermore, to contextualize our research findings, we must examine the country's standing in terms of the academic performance of its students compared to their global peers. This, however, reveals a sobering reality. Among the numerous international assessments available to illustrate this point, we refer to the Programme for International Student Assessment (PISA) tests, which evaluate how well students can solve complex problems, think critically, and communicate effectively. The results of these tests, released in 2022, showed that Cambodian students scored below the OECD average in mathematics, reading, and science [28].

In addition, comparing Cambodia with regional peers does not yield positive results either. According to the World Population Review results, released in 2025, the country's education system is ranked the lowest in the Association of Southeast Asian Nations (ASEAN) [29].

These results provide valuable insights into how well the country's education prepares its students for real-life situations. More broadly, they shed light on the overall quality of education offered in the country. In the absence of stellar academic performance, project-based learning, due to its student-centered nature and its implementation in tertiary settings, can partially address some academic shortcomings, although the learning losses incurred during students' formative years cannot be fully erased. Our study documents that integrating community service as a specific form of project-based learning into the curriculum of higher education institutions appears to be a step in the right direction. Although the examined initiative does not go as far as a 'living in community' project, in terms of time spent in a community and the extent of collaboration it fosters, tertiary education providers should not shy away from using this academic method,

particularly in countries where primary and secondary education often fail to adequately prepare students for workplace realities.

As stated earlier, a wide range of personal and social skills can hardly be developed without a healthy dose of self-confidence. This competency, as we have shown, can be cultivated in students by reorienting their focus and channeling their personal energy toward addressing the needs of various communities.

We also noted that the deployment of this prolific method benefits students, communities, and other key stakeholders. As demonstrated, undergraduate students from diverse backgrounds proved capable of planning, organizing, and implementing the community service project with minimal guidance from educators. Thus, diversity does not constitute an impediment to reaching a consensus, which, in turn, proves vital for the project implementation. Considering the academic implications of this study and in view of its results, a recalibration of the overall grading for the Leadership subject occurred, increasing the score for the community service project from 20 to 30 percent for students enrolled in Leadership classes from April 2025 onwards. Therefore, aside from theoretical aspects, the study's findings had clear practical implications.

Furthermore, because relevant data stemming from similar projects in Cambodia are scarce, our study aimed to measure the development of self-confidence, seeking to fill the existing research gap in the country. Consequently, the study provides a window into understanding how a community service project can serve as the foundation for self-confidence growth in undergraduate students in Cambodia.

In conclusion, we assert that the community service project – if properly integrated into a university's curriculum – not only serves as a key enabler of self-confidence growth but also lays the groundwork for the development of this and other emotional competencies in learners. As this form of learning equips students with lasting benefits that can extend beyond their academic life, we hope this study contributes to the ongoing academic discourse on the pivotal role educational institutions play in upskilling students enrolled in undergraduate programs or other tertiary education courses.

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Appendices

Appendix A
The First Survey of the Community Service Project
Date: _____

Demographics
Gender: _____
Age: _____
Religion: _____
Nationality: _____

Self-Confidence
Instructions: Self-confidence is defined as the inner strength that arises from preparation and expertise, enabling an individual to overcome difficult tasks. Please indicate (√) the degree of your self-confidence. Choose only one option.

Question	1 Low	2 Below Average	3 Average	4 Above Average	5 High
1. What is the current level of your self-confidence?					

Appendix B
The Second Survey of the Community Service Project
Date: _____

Self-Confidence
Instructions: Self-confidence is defined as the inner strength that arises from preparation and expertise, enabling an individual to overcome difficult tasks. Please indicate (√) the degree of your self-confidence. Choose only one option per question.

Question	1 Low	2 Below Average	3 Average	4 Above Average	5 High
1. Having completed the community service project, what is the current level of your self-confidence?					
2. How did the community service project affect your self-confidence?					