

Learning by Doing: Why Project-Based Learning Proves to Be an Effective Method for Developing Self-regulation and Other Emotional Competencies in Gen Z Students

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Martin Sviatko*

Department of Education, CamEd Business School, Phnom Penh, Cambodia

***Corresponding Author:** Martin Sviatko, Department of Education, CamEd Business School, Phnom Penh, Cambodia.

Abstract

Purpose: This research paper aims to analyze a project-based learning method and its positive effects on building emotional competencies in Gen Z students. In its initial part, the paper outlines project-based learning as a long-established teaching practice, whose origins can be traced back to antiquity. The paper then narrows its focus onto a method of project-based learning occurring outside of the classroom settings, namely the one adopting the form of community service projects. At its core, the paper concentrates on the effects of community service projects on the development of emotional competencies in project participants, with an added focus on self-regulation, motivation, and social skills in leadership and conflict management.

Design/methodology/approach: This quantitative research paper uses a descriptive research design, centered on a survey developed in line with the related literature. The research data was collected through a self-administered questionnaire, delivered in paper-and-pen format in November and December 2023. In total, 221 full-time university students, aged 17-20, participated in the survey.

Findings: Based on the findings, the paper contends that community service projects not only provide Gen Z students with ample opportunities for social and emotional learning, but more crucially, project implementation proves to have positive effects on students' emotional competencies, which include self-regulation, motivation, leadership, and conflict management.

Originality/value/implications: In its conclusion, the paper argues that project-based learning is an effective teaching method that allows project participants to acknowledge and cultivate feelings about themselves, their peers, or the communities they serve. When considering its maximum potential, project-based learning can also be viewed as a vital tool in combating those social and emotional deficiencies that may prevent members of this recently emerged demographic cohort from realizing their full potential.

Keywords: project-based learning; gen Z students; self-regulation; motivation; social skills; leadership; conflict management

Introduction

From the global pandemic to learning losses incurred due to school closures, from rising costs of living to elevated school drop-out rates, from the excessive use of digital devices by students to AI-driven plagiarism woes of tutors, from surging mental health problems of the education workforce to diminishing soft skills of students - there has been no shortage of challenges confronting the global academic community over the past few years.

Some of these challenges emerged without prior warnings and left academia with no choice but to adjust to a new reality as quickly as possible. We now know that the creativity and resourcefulness of educators, who also had to acquire roles of IT or administration personnel swiftly, coupled with the proper physical infrastructure that was put in place, played a critical role in keeping educational services going when an emergent change was incorporated into the life of educational institutions by external forces.

Other challenges, however, confront educational institutions at a much slower pace, and the changes they bring along can be irreversible - as they are part of a natural order of things. Perhaps not as quickly, but here, too, educators are compelled to write and adopt a new playbook, while dressing it in a 'Work in Progress' cover - implying the variable character of such changes. If the subsiding pandemic represents a passing category of challenges, then catering to the diverse learning needs of Generation Z students - a major global topic of the current academic discourse - represents the next.

As we aspire to be part of the continuing discussion, our objectives in the presented paper are simple. We are not seeking to elevate the significance of one teaching method over another when it comes to the active engagement of Gen Z students; neither are we trying to adopt a 'one-size-fits-all approach' while referring to the deployment of the teaching method we examine on the following pages.

In a nutshell, what we set out to do is to determine whether project-based learning, as a long-established teaching method, retains any academic relevance in a modern-day era, particularly when we consider the fact that a major generational transformation has been underway, affecting industry and academia alike. In practice, this means that not only providers of primary and secondary education but increasingly the ones offering tertiary education as well, are compelled to resolve the challenges revolving around understanding and catering to the learning needs of the newly emerged demographic segment, popularly known as Gen Z.

Even though our primary attention centers on academia, solving such a challenge extends beyond it, concerning businesses as well. According to some estimates, Gen Z is, by 2025, set to account for nearly a third (27 %) of the global workforce (James, 2023). While businesses are expected to retain training and development as an integral part of their HR practices in the foreseeable future, they noticeably prefer those candidates who are ready to take on their job roles and responsibilities forthright. Research into the skills and competencies of members of this demographic cohort is, therefore, valuable for both entities.

Shaped by distinct external and environmental factors, equipped with a particular set of traits and attributes, and displaying unique behavioral styles, Generation Z is markedly different from previous generations. Many educators, psychologists, or behavioral scientists familiar with the topic will readily attest to it.

Initially used to describe only Americans, the term 'Generation Z' was quickly popularized and applied globally to young people belonging to the same age category regardless of their geographical, ethnic, religious, or social backgrounds. Born during the late 1990s and early 2000s, with some referring to the specific year range of 1997-2012 - although the years spanned are sometimes contested and debated - Generation Z is the generation following the millennial generation, also known as Gen Y (Eldridge, 2024).

Empowered by rapid technological changes that coincided with its emergence, the Gen Z cohort - or digital natives, as they are also recognized - is known for its mobility and ability to reside in multiple realities. Its members value individual expression, avoid labels, and mobilize for various reasons. What they also seem to share across different geographical regions, is that they are comfortable with not having only one way to be themselves. Their search for authenticity generates greater freedom of expression and greater openness to understanding different kinds of people (Francis & Hoefel, 2018).

But just as a unique array of characteristics and strengths sets members of this generation apart from the rest, their weaknesses, too, seem to highlight the striking differences with preceding generations. Native digital skills appear to come at the expense of interpersonal communication and dynamics, which do not come easy to them (Cohen, 2023).

A short attention span is yet another of many apparent weaknesses Gen Z displays - although sudden distractedness and a loss of control are certainly problems affecting other demographical cohorts as well, as some studies indicate (Hunt, 2023).

A glance at this cohort, however, raises an important question of whether it is meaningful to include a project-based learning method in the academic portfolio of active engagement instruments for Gen Z students, particularly where the curriculum of tertiary institutions is concerned.

This paper proposes that a project-based learning method not only retains its academic relevance in the complex context of a rapidly changing educational landscape; it will also show that this educational instrument can facilitate a conducive learning environment by allowing full-time university students - all of whom happen to be part of the same demographical cohort, Gen Z - to develop a unique set of capacities. In addition, it is also important to emphasize that some of these capacities appear to be highly sought-after by employers.

For this reason, we examine the effects of a project-based learning method occurring outside of the classroom settings, namely the one adopting the form of a community service project, on the development of emotional competencies in project participants which include: self-regulation, motivation, and social skills in leadership and conflict management.

In doing so, we draw on the findings of previous research in neuroscience, psychology, pedagogy, and mental as well as emotional intelligence, which are detailed in the paper's second part. This quantitative research paper uses a descriptive research design centered on a survey, developed in line with related literature after consultations with a behavioral scientist, which constitutes the paper's third part. The collected data are analyzed, summarized, and presented in the paper's fourth and fifth parts, which are then followed by the paper's final parts dedicated to the concluding thoughts and references.

Literature review

Before we concentrate our attention on project-based learning, let us recall what neuroscience and psychology have to say about learning. Thanks to modern-day research, we now know with certainty that all learning implies a change in the brain, in the form of strengthening of synaptic connections (Goleman, 1995). As learning experiences change the functional circuitry that is used to process and remember a given learning event, learning programs the brain (Klemm, 2020).

This effectively means that not only do our brains change physically whenever we learn something new, but they continue to be molded by experience and learning throughout our lives (Cunnington, 2019). Because the brain is home to cognition and emotion alike (LeDoux, 1998), any form of learning leaves a lasting footprint on linear, analytical, and logical thinking as well as on emotional and intuitive impulses. As a result, learning provides us with opportunities to become cognitively and emotionally adept.

When student engagement and factors hindering its effectiveness become a topic of academic discussions, inevitably, school projects appear to draw significant attention. Though the nature of school projects tends to differ from country to country - and is often determined by wider socio-cultural and religious settings - they have their role to play.

It would be a mistake to consider projects a panacea for all education ills or as the royal road to a nirvana of knowledge. Some materials need to be taught in more disciplined or algorithmic ways. But at their best, projects can serve several purposes well. They engage students over a significant period, spurring them to produce drafts, revise their work, and reflect on it. They foster positive cooperativeness in which each student can make a distinctive contribution. They model the kind of useful work that is carried out in the wider community. They allow students to discover their areas of strength and to put their best foot forward. They engender a feeling of deep involvement. Thus, projects appear to be highly motivating and can be memorable as many students remember best those

projects in which they invested much time and effort. Accordingly, educators must do the best they can to continue to feature them in the curriculum (Gardner, 2006).

Placing a project at the very center of an academic approach to facilitate learning in project participants is what a project-based learning method aims to achieve. Although appearing like a new approach, whose popularity has risen only in the past few decades, project-based learning has a long history - its origins can already be traced back to classical times (Lift Learning, 2021). The findings provided by modern-day neuroscience and psychology make a strong case as to why this academic instrument has remained in existence from ancient times until today.

What was once conceived as an intellectual enlightenment of ancient philosophers, project-based learning has, thanks to its benefits, become a commonly used teaching method educators often deploy. Irrespective of their geographical locations, educators use it primarily because of the method's ability to engage students in learning (Almulla, 2020).

One of its undisputed strengths lies in its ability to create a hands-on approach to learning while placing learners at the very center of it - inevitably modifying the traditional roles of teachers and students in the learning process (Bell, 2010). As such, project-based learning can also be recognized as learning by doing (Krajcik & Blumenfeld, 2006), or learning through doing (Turk & Berman, 2018).

The variations in its name point to the fact that a precise and universally agreed definition of project-based learning is absent. However, we can describe it as a collaborative, inquiry-based teaching method where students integrate, apply, and construct their knowledge as they work together to create solutions to complex problems (Guo et al., 2020).

Others (Loyens et al., 2015) distinguish it as a form of cooperative and research-based learning technique characterized by active student engagement and comparative learning. Hazard (2023) defines project-based learning as an approach designed to extend beyond knowledge acquisition to competency development, enabling real-world action coupled with a focus on authenticity, inclusiveness, and common impact.

Project-based learning can be used as an effective way to develop twenty-first-century capabilities in learners by promoting critical thinking as well as problem-solving, interpersonal communication, information and media literacy, cooperation, leadership, teamwork, innovation, and creativity (Häkkinen et al., 2017). On top of it, better preparation of students for the workplace reality (Jollands et al., 2012) is seen as yet another of its crucial benefits.

In addition, some of the most common hallmarks assigned to this instructional method are a driving question, a focus on learning goals, participation in educational activities, collaboration among students, the use of scaffolding technologies, and the creation of tangible artifacts (Krajcik & Shin, 2014).

Adding to the list of skills it fosters, others (Lee et al., 2015) state that project-based learning promotes the development of collaboration skills, critical thinking, creative thinking, and complex problem-solving. It also encourages the transfer of learning and positive attitudes towards tasks.

In their study, Yuliani and Lengkanawati (2017) showed that project-based learning promotes learning autonomy, especially in the area of self-instruction and self-direction at each stage of a project-based activity, namely in the planning, implementation, and monitoring processes.

It is, therefore, the method's ability to bring forth a wide range of competencies in project participants that provides a rationale for the integration of project-based learning into the curricula of a wide range of educational institutions globally - including the ones providing higher education (Sviatko, 2023).

But before we proceed further, we wish to add two more points. Firstly, the area of competency development represents a point of convergence between industry and academia. Owing to the realities of skill-based hiring, businesses have become more active in

recent years in the academic processes surrounding the creation of a competency framework, often participating in discussions as to which academic subjects are relevant, and which are not. Aligning the needs of industry and academia, which is achieved by the vertical alignment between an academic program and the relevant learning outcomes of its courses, has become the cornerstone of the educational philosophy many educational institutions pursue globally. To some degree, this also determines the use of project-based learning methods in academia.

Secondly, as mentioned earlier, perceiving project-based learning as the only viable solution educators have at their disposal when it comes to solving the variety of problems plaguing academia nowadays, would be a flawed approach. Furthermore, it would be a mistake to promote a 'one-size-fits-all approach' towards the use of project-based learning. Just as the needs of educational institutions determine to what extent project-based learning is desirable to incorporate in their curricula, it is the very nature of each academic subject - and the sets of capacities it wishes to imprint in learners - that ultimately decides whether, and in which form, the use of this method is suitable.

For instance, as preceding studies have documented, if project-based learning employed by STEM subjects (Science, Technology, Engineering, Mathematics) influenced the cognitive development of students during problem-solving activities (Marino, et al., 2010), in social sciences, project-based learning, which took the form of community service projects - effectively taking students outside of classroom settings to meet the needs of specific communities - had highly positive effects on the development of emotional competencies in the project participants, which included self-awareness, empathy, and social skills in communication and teamwork (Sviatko, 2023).

Project-based learning's ability to promote the development of emotional competencies is largely determined by the fact that different tasks call on different intelligences or combinations of intelligences (Gardner, 2006).

As Goleman (1998) asserts, technical training is easy compared to developing emotional intelligence as our entire system of education is geared toward cognitive skills. Capacities like empathy or flexibility differ crucially from cognitive abilities, they draw on different areas of the brain. Because intellectual learning differs from behavioral change in fundamental ways, the models of education for each are significantly different. For intellectual skills, the classroom is an appropriate setting; simply reading about or hearing a concept once can be enough to master it. Strategic thinking and computer programming can be taught effectively in this mode. On the other hand, for behavioral change, life itself is the true arena for learning. Learning emotional competencies requires that we engage our emotional circuitry, where our social and emotional habits are stored. Changing such habits - learning to approach people positively instead of avoiding them, to listen better, or to give feedback skillfully - is a more challenging task than simply adding new facts to old ones.

In addition, based on both the findings in this paper, as well as those of previous research, we wish to state that a project-based learning practice that adopts the form of a community service project appears to be a suitable vehicle to facilitate a conducive learning environment by making learners emotionally present. More specifically, it allows full-time university students - all of whom happen to be part of the same demographical cohort, Gen Z - to develop a unique set of emotional capacities.

The 2023 Leadership Community Service Project

As part of their academic studies, 221 full-time university students studying at CamEd Business School, located in Cambodia's capital, Phnom Penh, carried out their community service projects by late 2023. Assigned to the students at the beginning of November as part of their Leadership subject - an academic course taught at the Year 1 level - the overriding goal of the community service projects was to engage the students in rural, and often underdeveloped communities. In this process, the students, whose age permits us to place them into the Gen Z segment, were tasked with the development of an effective strategy that would allow them to meet the needs of selected communities.

The instructional design relied on a participative decision-making model, as a result of which the students were able to make their own decisions as to how a specific community service project was to be carried out. The students were divided into five different groups according to their class allocations. In total, there were five different community service projects; all of them were completed in November and December 2023.

What the five community service projects, carried out in late 2023, had in common was that the students decided to raise money through donations - and that the main community recipients turned out to be primary schools located in rural areas of the country. The five schools where the community service projects were completed are as follows: Moha Prom Primary School, Bos Trabek Primary School, Snam Puk Primary School, Krahuang Primary School, and Chi Brorng Primary School. All are located in the rural areas of Cambodia.

Overall, up to USD 10,000 was raised - an impressive amount, given the fact that the country's GDP per capita was just USD 1,759.60 in 2022 (World Bank, n.d.). Apart from purchasing much-needed school supplies, in the case of one community service project that was carried out at Chi Brorng Primary School, the raised funds were used for constructing a brand-new classroom, and new toilet rooms.

Academically, the completion of community service projects also marked the fulfillment of both the program's learning outcome as well as the subject's two learning outcomes, which included the development of skills through project-based learning, and the ability to operate effectively in a team.

But perhaps more crucially, thanks to informal discussions with the project participants, we were able to make several interesting observations. Apart from displaying clear commitment and obligation, increased proactivity, and heightened communication, we were also able to witness that the project participants were emotionally present - particularly when the collected supplies and funds were being distributed at the specific community sites.

Such an emotional presence led many of the students to express their feelings that ranged from self-discovery to a sense of appreciation for opportunities given in life - feelings we did not see them sharing earlier - either during their scheduled classes or in other conversations. This can be attributed to the fact that most of them were undertaking community service projects for the first time in their lives. Thus, community service projects appear to generate favorable conditions for spurring emotional presence in project participants. Echoing some findings of preceding research, we can say that once learners face real-life situations, the very nature of such situations often makes the actual learning more genuine.

Encouraged by what we have seen, we decided to 'quantify' emotions, or rather assess the impact of community service projects on the emotional development of students, with an added focus on self-regulation, motivation, and social skills in leadership and conflict management - as these competencies appear to be indispensable for modern-day life. More on how we fared, and what we uncovered will be detailed in the following sections of the paper.

Finally, in our attempt to assess the impact of community service projects on the development of emotional competencies of Gen Z students who carried them out in late 2023, we draw on Goleman's ground-breaking concept of the emotional competence framework - with an added focus on self-regulation, motivation, leadership, and conflict management.

While defining emotional competence as a learned capability based on emotional intelligence that results in outstanding performance at work, Goleman (1998) names five fundamental emotional competencies: self-awareness, self-regulation, motivation, empathy, and social skills. Self-awareness is defined as knowing one's internal states, preferences, resources, and intuitions. It also encapsulates a strong sense of one's capabilities. Thanks to its element of conscientiousness, which implies taking responsibility for personal performance, self-regulation is defined as managing one's internal states, impulses, and resources. Motivation is then defined as emotional tendencies that guide or facilitate reaching goals. Empathy is described as the awareness of others' feelings, needs, and concerns, and taking an active interest in their concerns. Lastly, social skills are described as adeptness at inducing desirable responses in others. Social skills include several elements, including leadership, defined as inspiring and guiding individuals and groups, and

conflict management, defined as negotiating and resolving disagreements.

Methodology

This paper deploys a descriptive research design and relies on data collected through a self-administered questionnaire. The survey was developed after consultations with a behavioral scientist, while the survey statements were formulated in line with the related literature.

The research data were collected through a self-administered questionnaire, delivered in paper-and-pen format in November and December 2023, within forty-eight hours after the completion of each and every single community service project. In total, 221 full-time university students participated in the survey. The questionnaire was presented in both English and in the Khmer (Cambodian) language; the soft copy is provided in the paper’s appendix. The collected data were evaluated in February 2024.

The questionnaire consists of two major parts. The first part refers to the demographic characteristics of students, namely age and gender. It also refers to their academic status and academic year. The second part refers to the characteristics related to the selected emotional competencies of students we decided to assess, such as self-regulation, motivation, leadership, and conflict management, all of which were defined in the paper’s previous part.

The survey’s demographic characteristics are displayed in Table 1. As Table 1 documents, of the total number of 221 participants, the majority of respondents, 157 of them were female (71%). By contrast, only 64 of the respondents were male (29%). We would like to note that the registered gender disparity stems from the fact that the survey’s gender ratio mirrors the overall gender composition of the class group. In short, the majority of Year 1 students enrolled at CamEd Business School are female.

<i>Characteristics</i>		<i>Frequency n=221</i>	<i>Percentage</i>
Gender	Male	64	29%
	Female	157	71%
Age (years)	17	9	4%
	18	62	28%
	19	113	51%
	20	37	17%
Academic Year	Year 1	221	100%
Academic Status	Full-Time students	221	100%
<i>Source: Data from the survey</i>			

Table 1: Demographic Characteristics of Leadership Community Service Project.

Bearing in mind the specific year range of 1997-2012, which is crucial for its demarcation, a glance at the demographic characteristics displayed in Table 1 shows that the specific age of all respondents places them firmly into the Gen Z cohort.

The data also show that in terms of the ages of participants, 19-year-olds were the largest cohort (51%), followed by the 18-year-olds (28%), and the 20-year-old group (17%). Finally, 9 respondents were 17 years old (4 %).

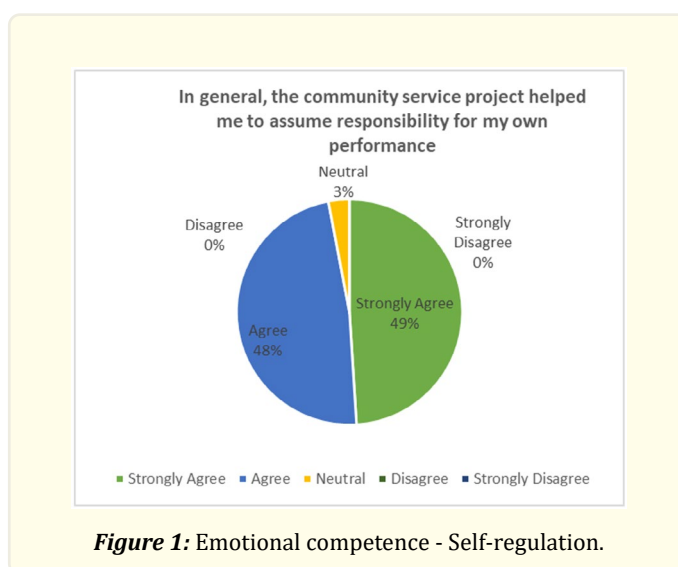
The survey’s second part, which refers to the characteristics related to specific emotional competencies we decided to assess in project participants, requested the participants to identify themselves with a presented statement. The respondents were instructed to choose only one option per statement on the following scale: Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree.

Overall, there were four statements presented in the questionnaire. Self-regulation - being the first emotional competence - was evaluated through the survey’s first statement: “In general, the community service project helped me to assume responsibility for my

own performance.” The second emotional competence - motivation - was evaluated through the survey’s second statement: “On the whole, the community service project helped me to become more motivated when it comes to pursuing my goals and aspirations.” The third emotional competence - leadership - was assessed through the survey’s third statement: “For the most part, the community service project helped me to inspire, guide, and influence others.” Finally, the last emotional competence - conflict management - was evaluated in the survey’s fourth statement: “To a large extent, the community service project helped me to negotiate and resolve disagreements with others more effectively.” The research findings are presented in the paper’s following section.

Findings

As Figure 1 displays, the vast majority of respondents either strongly agreed (49%) or agreed (48%) with the statement assessing the first emotional competence, which was self-regulation. The survey also revealed that only 3% of respondents chose the neutral option. In addition to this, none of the respondents disagreed (0%) or strongly disagreed (0%) with the first statement presented in the research survey.

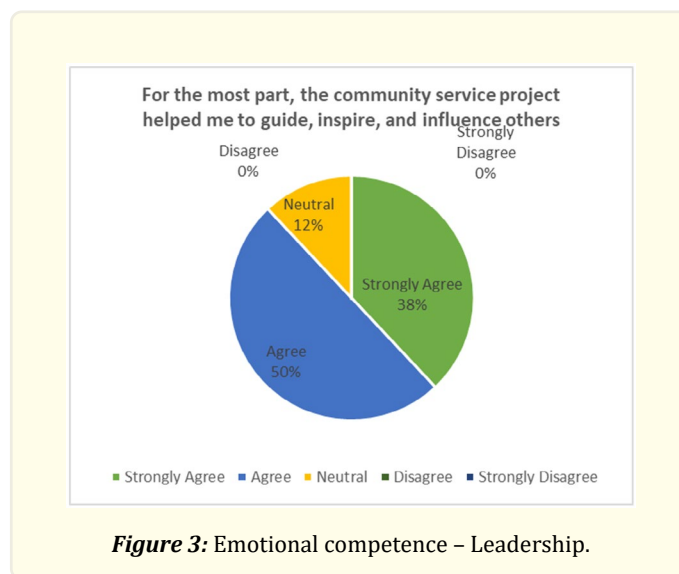
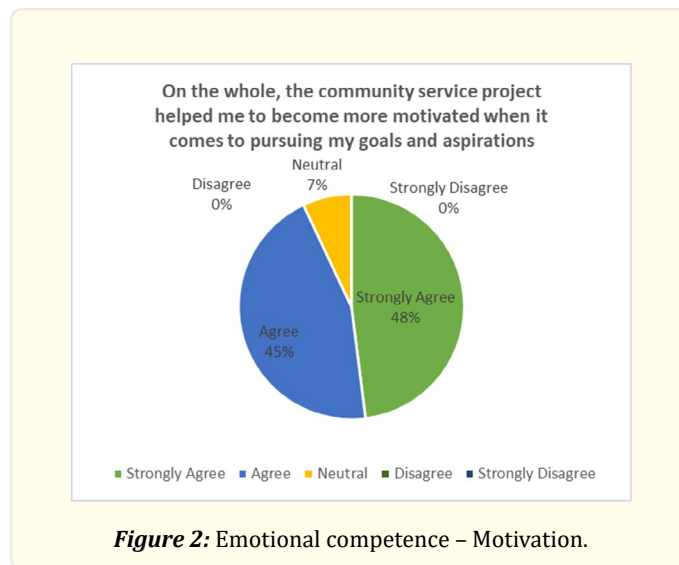


As Figure 2 reveals, the respondents perceived the project’s ability to impact their motivation along the same lines. The vast majority of them either strongly agreed (48%) or agreed (45%) with the statement assessing the second emotional competence - motivation. Although the number of those respondents, who chose the neutral option slightly increased to 7 % as compared to self-regulation, none of the students disagreed (0%) or strongly disagreed (0%) with the statement assessing motivation.

As Figure 3 documents, the majority of students indicated that the community service project helped them to develop their leadership skills, which was the third emotional competence assessed by the survey: 38% of them strongly agreed, while 50% agreed with the statement.

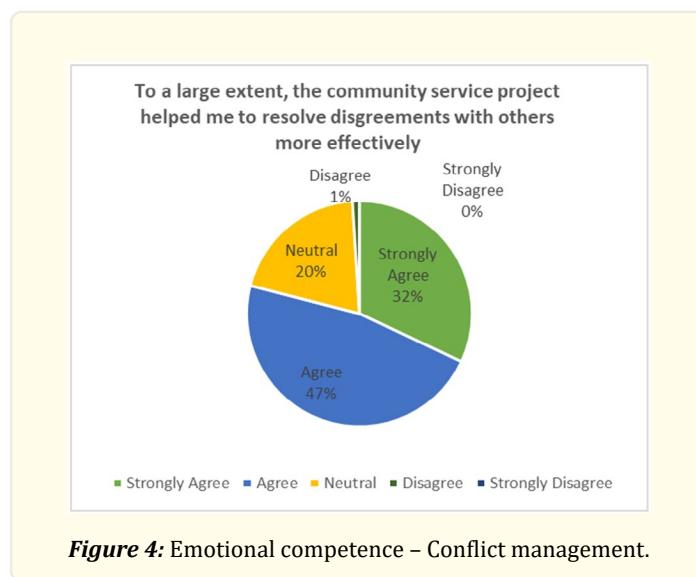
Although the number of respondents, who selected the neutral option increased yet again to 12%, none of the respondents disagreed (0%) or strongly disagreed (0%) with the statement assessing leadership. Here, too, the project’s effect on the development of leadership skills was, according to the respondents, predominantly positive.

Finally, when it comes to conflict management - the last emotional competence evaluated by the survey - Figure 4 shows that 32% of respondents strongly agreed and a further 47% of respondents agreed with the survey’s fourth statement.



The number of respondents who said that the project had a neutral effect on their ability to resolve disagreements with others was 20%. The number of those who disagreed with the survey’s fourth statement was 1%. Once more, the number of those who strongly disagreed was 0%. Yet again, according to the survey’s respondents, the community service project had a positive impact, in this case, on the development of conflict management skills.

Beyond the research data and quantitative analysis, this community service project provides us with very valuable information. Leaving aside the fact that the project implementation marked the achievement of intended learning outcomes, the community service project was able to shed some light on the daily life of rural school-goers in Cambodia. Judging by the informal feedback provided by the project participants, it appears that many of them were surprised by the level of underdevelopment and marginalization they witnessed at the sites of their projects. From this perspective, the donated school supplies and funds, which in some cases enabled the construction of a new classroom or toilet facilities, certainly helped alleviate some of the communities’ long-standing problems.



On the other hand, the benefits of this kind of project extend well beyond the donation and charity, which brings us back to the research data. Having recognized both the existence of four emotional capacities as well as the positive impacts made on them, our research paper documents that the project participants were emotionally present during the project implementation and that this emotional presence was still active within forty-eight hours after project completion, when the questionnaires were distributed.

Understandably, a few questions emerge in the process of interpretation of the research data: Would the research data differ significantly had the questionnaire been distributed immediately after the project implementation? How long are emotional competencies retained by project participants? What was the role of social conditioning in project participants, or what Cialdini (2021) once described as *peer-suasion* - a phenomenon of conforming to the beliefs and actions of comparable others? We might not be able to answer these questions at this time, however, we may revisit them in further research.

For now, we wish to state that based on the collected data, project-based learning appears to be an effective instrument in the development of emotional competencies in Gen Z students. The research data underpin such a notion. Our research findings presented in Figures 1-4 indicate no significant differences in the respondents' responses across four emotional competencies evaluated by the survey. To reiterate, the respondents evaluated the project's ability to develop their emotional competencies positively.

Both self-regulation as well as motivation recorded nearly an identical level in 'Strongly Agree' responses: 49% and 48 % respectively. This was closely followed by the two remaining emotional competencies - leadership skills, which recorded 38% of such responses, while conflict management skills scored 32% in the same category.

In addition, 'Agree' responses appear to be even more evenly distributed compared to the 'Strongly Agree' responses. While leadership recorded the highest number of responses (50 %), it was closely followed by the three remaining emotional competencies: self-regulation (48%), conflict management (47%), and motivation (45 %).

The number of respondents in 'Neutral' responses was the lowest at 3 % for self-regulation. This number increased to 7 % where motivation was concerned. A further 12 % of the respondents felt neutral when it comes to leadership. Finally, conflict management received the highest number of neutral responses among the respondents - 20 %.

The number of respondents who 'Disagree' remains at 0 % for the first three emotional competencies that were put forth by the survey. The only exception was conflict management, where the number of those respondents who disagreed was 1%. Finally, the number

of those who ‘Strongly Disagree’ with survey statements was 0 %.

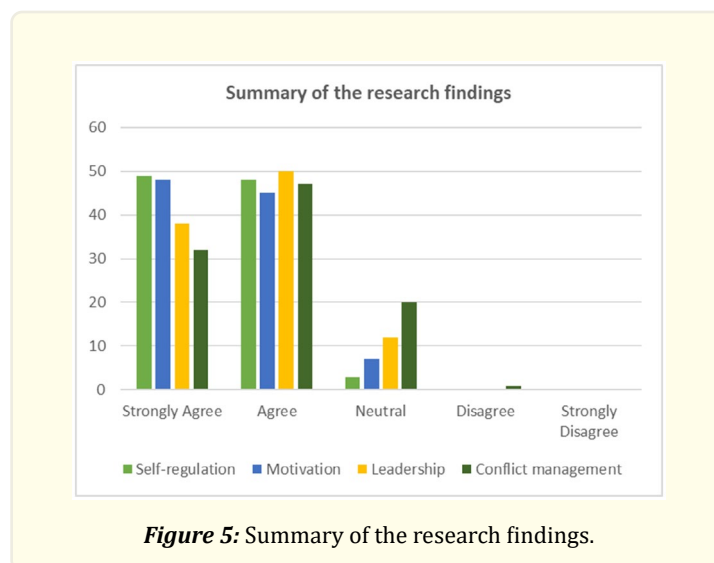
Thus, if we combine ‘Strongly Agree’ with ‘Agree’ responses, and further consider the fact that ‘Strongly Disagree’ is at 0%, while ‘Disagree’ responses are near 0 % across all the evaluated emotional competencies - as displayed in Figure 5 - then research findings document an overall highly positive effect of the community service project on the development of emotional competencies in project participants which include: self-regulation, motivation, leadership, and conflict resolution.

Furthermore, the findings of this research are consistent with those of another research carried out in August 2023, when the community service project was analyzed from a slightly different standpoint.

As mentioned earlier in a section dedicated to the paper’s literature review, our preceding research aimed to analyze how project-based learning fostered the development of those emotional competencies, which included self-awareness, empathy, and social skills in communication and teamwork. The results of the preceding research, whose questionnaire was completed by 240 students - all of them also falling into the Gen Z category - were strikingly similar to the current one, as the respondents reported an overall highly positive impact of community service projects on the development of emotional competencies (Sviatko, 2023).

As a result, the findings of the two consecutive research papers validate project-based learning as an effective teaching method that still retains its relevance despite the vast changes occurring in academia globally. The paper also provides an affirmative answer to the important question of whether it is still meaningful to include a project-based learning method in the academic portfolio of active engagement instruments for Gen Z students, particularly where the curriculum of tertiary institutions is concerned.

Thus, at a bare minimum, project-based learning not only provides Gen Z students with ample opportunities for introspection and social and emotional learning - but more crucially, the project implementation has positive effects on a wide range of emotional competencies. Project-based learning proves to be an effective teaching method that allows project participants to acknowledge and cultivate feelings about themselves, their peers, or the communities they serve. When considering its maximum potential, project-based learning can also be viewed as a vital tool in combating those social and emotional deficiencies that may prevent members of this recently emerged demographic cohort from realizing their full potential.



Limitations

The main limitation of the research is associated with the survey's sample size, which includes only 221 respondents. In addition, the survey data originate from the respondents' responses, and because of their subjective nature, self-report tools are subject to bias. Also, the survey only involves Year 1 students. Because the study was conducted in Cambodia, considering wider socio-cultural, religious, and economic factors, similar research conducted elsewhere may produce a different set of results.

Conclusion

Despite being an ancient educational instrument, the benefits of project-based learning are evident in our modern-day era as well. The practicality of this medium allows various academic subjects to employ project-based learning inside or outside of classrooms, much to the benefit of learners. Particularly due to its ability to bring learners face to face with real-life situations, project-based learning can instill and develop a wide range of competencies in project participants.

As our research focused primarily on project-based learning occurring outside classroom settings, namely the one taking the form of a community service project, students are not only provided with ample opportunities for introspection and learning, but the emotional presence of project participants is elicited, too. The successful implementation of a community service project results in the development of a variety of emotional competencies in project participants who represent a unique demographic cohort - Gen Z. Thus, project-based learning, as an academic tool, is capable of not only alleviating a country's socio-economic problems but also developing much needed emotional competencies in Gen Z students, which are considered critical for their success in our modern times.

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Appendix

Leadership Community Service Project Survey

ការស្ទង់មតិលើគម្រោងសហគមន៍សម្រាប់មុខវិជ្ជា ទស្សនៈវិស័យ ភាពជាអ្នកដឹកនាំ

Age/អាយុ:

Gender/ភេទ:

Instructions: Please indicate (√) whether you agree or disagree with each statement listed below. Choose only one option per each statement.

សចេកុក៏ណែនាំ៖ សូមបង្ហាញសញ្ញា (√) ថា តើអ្នកយល់ព្រមឬមិនយល់ស្របទៅនឹងសចេកុក៏ចូលដៃការណ៍នីមួយៗដដែលមាននៅខាងក្រោម។ ផ្លូវសរសេរជម្រើសតម្លៃយកកុំនុងសចេកុក៏ចូលដៃការណ៍នីមួយៗ។

	Strongly Agree/យល់ស្របទាំងស្រុង	Agree/យល់ស្រប	Neutral/អព្យាករណ៍	Disagree/មិនយល់ស្រប	Strongly Disagree/មិនយល់ស្របទាំងស្រុង
1. In general, the community service project helped me to assume responsibility for my own performance. (ជាទូទៅគម្រោងសហគមន៍បានជួយឱ្យខ្ញុំទទួលខុសត្រូវចំពោះការអនុវត្តផ្ទាល់ខ្លួនរបស់ខ្ញុំ។)					
2. On the whole, the community service project helped me to become more motivated when it comes to pursuing my goals and aspirations. (សរុបមកគម្រោងសហគមន៍បានជួយឱ្យខ្ញុំមានកម្រិតចិត្តបន្តបន្ទាប់ក្នុងការបន្តគំណើនដើម្បីសម្រេចបាននូវគោលដៅនិងសចេកុក៏បុរាណរបស់ខ្ញុំ។)					

<p>3. For the most part, the community service project helped me to inspire, guide, and influence others. (សម្រាប់ផ្នែកភាគច្រើនគម្រោងសេវាសហគមន៍នេះបានជួយឱ្យក្នុងការបំផុសគំនិតអ្នកដទៃណាៗនាំ និងមានឥទ្ធិពលលើអ្នកដទៃ។)</p>					
<p>4. To a large extent, the community service project helped me to negotiate and resolve disagreements with others more effectively. (មួយភាគធំនោះគឺគម្រោងសេវាសហគមន៍នេះបានជួយឱ្យក្នុងការចរចានិងដោះស្រាយភាពខុសគ្នាជាមួយអ្នកដទៃដោយកាន់តែមានប្រសិទ្ធភាព។)</p>					