



# ACQUIRED 21<sup>ST</sup> CENTURY SKILLS AND LEADERSHIP POTENTIAL AFFECTING THE CIVIC ENGAGEMENT AMONG COLLEGE STUDENTS

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## ABSTRACT

*Civic engagement among students is declining. The general objective of this study was to determine the significance of 21<sup>st</sup> century skills and leadership potential as predictors of civic engagement among college students. Using descriptive-correlational design specifically regression analysis, the data from 125 college students selected through convenient sampling revealed that the 21<sup>st</sup> century skills and leadership potential variables both have a positive significant influence on civic engagement by 64.7%, affirming the Transformative Learning theory. Other variables not covered in the study may be explored to trace the 36.3% variance in the criterion variable. Further, the value of civic engagement may be enhanced by educational institutions to contribute the attainment of SDG 4.*

**KEYWORDS:** 21<sup>st</sup> Century Skills, Leadership Potential, Civic Engagement, College Students

## INTRODUCTION

Civic engagement among college students is a notable decline among youth, raising concerns about the future of democratic participation. This issue is evident to a growing disengagement from broader civic activities (Wike & Castillo, 2018).

Poor civic engagement is evident across various countries. In Indonesia, research reveals that college students exhibit moderate levels and lower levels of civic behavior, indicating a gap between awareness and active participation (Eli et al., 2019). Similarly, a study conducted at a public university in Turkey found that students' overall civic engagement levels were below average, with particularly low participation in activism compared to their interest in politics and exercising rights (Caliskan et al., 2020).

In the Philippines poor engagement is an issue. Research conducted at St. Paul University Surigao found that student's civic engagement such as voting, attending public forums, and political activism was low (Edera et al., 2023).

The consequences of poor civic engagement among college students are profound. A disengaged youth population can lead to a weakened democratic process, as the infusion of fresh perspectives and energies is diminished. Furthermore, low civic engagement may result in policies that do not adequately reflect the interests and needs of the younger demographic, thereby perpetuating a cycle of apathy and underrepresentation (Wike & Castillo, 2018). This urgent issue, along with the scarcity of research on civic engagement among college students prompted the need for this study.

## Statement of the Problem

The general objective of this study was to determine the significance of 21<sup>st</sup> century skills and leadership potential as predictors of civic engagement among college students. Specifically, it aimed to achieve the following objectives:

1. To determine the level of acquired 21<sup>st</sup> century skills, leadership potential and Civic Engagement among the college students
2. To determine the significance of the correlation between 21<sup>st</sup> century skills and leadership potential, and the civic engagement among the college students
3. To determine the significance of the degree of influence of 21<sup>st</sup> century skills and leadership potential on civic engagement

## Hypotheses (Null Hypotheses)

(H<sub>0</sub>) 21<sup>st</sup> century skills and leadership potential are not significantly correlated with Civic Engagement.

(H<sub>1</sub>) 21<sup>st</sup> century skills and leadership potential do not significantly influence Civic Engagement.

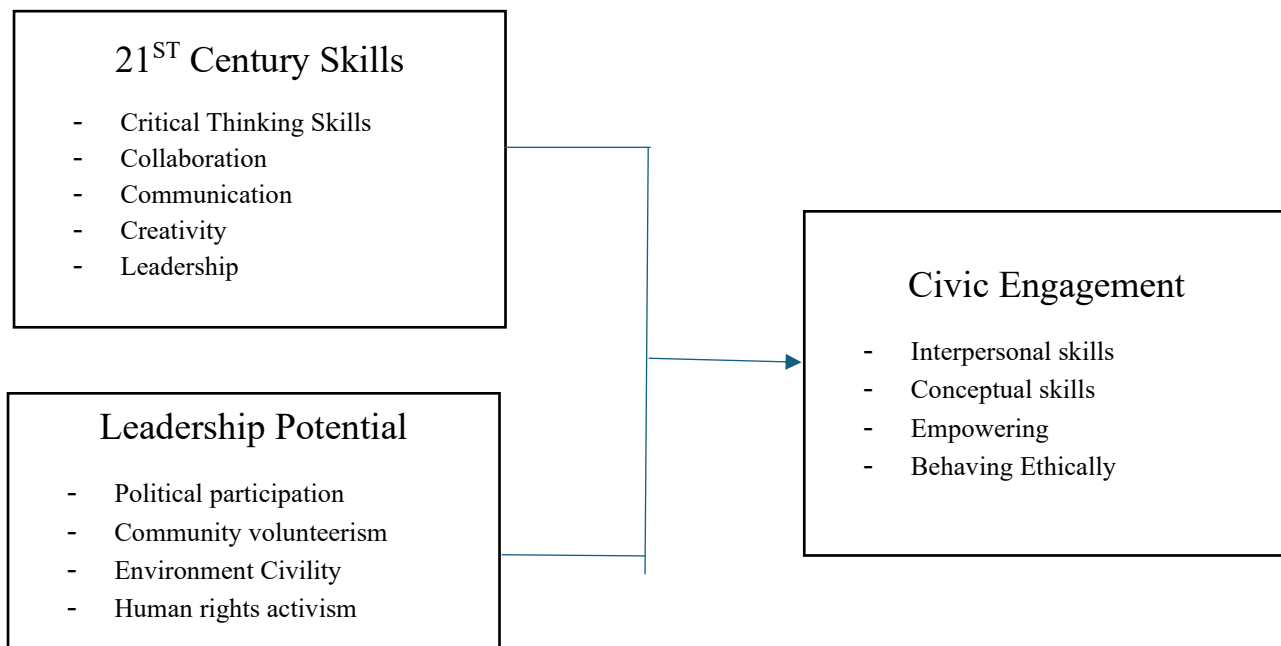
## Theoretical Framework

This study is anchored on Transformative Learning Theory (Mezirow, 2003) which emphasizes the process affecting change in a frame of reference. A frame of reference is composed of two dimensions: habits of mind and a point of view. Adults have acquired a coherent body of experience—associations, concepts, values, feelings, conditioned responses—frames of reference that define their life world.



In this study, the predictive variables used are 21<sup>st</sup> century skills indicated by critical thinking skills, collaboration, communication, creativity and leadership (Buckle, 2020) stands for habits of mind idea in the theory; and leadership potential indicated by political participation, community volunteerism, environmental civility, and human rights activism (Balcazar et al., 2023) stands for point of view; and the criterion variable used is civic engagement indicated by interpersonal skills, conceptual skills, empowering and behaving ethically (Bouland-van Dam et al., 2020) stands for coherent body of experience.

### Conceptual Framework



**Figure 1. The Conceptual Framework of the Study**

### METHODOLOGY

The methods and procedures the researcher employed to carry out the study, such as the research design, research locale, research respondents, research instrument, ethical considerations, data gathering procedure, and data analysis are presented in this chapter.

#### Research Design

The researcher used quantitative approach with descriptive - correlational design. Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, is measured, typically on instruments, so that numbered data can be analyzed using statistical procedures (Creswell J and Creswell D, 2018). Calderon (2006), defined descriptive research as a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships and then making adequate and accurate interpretation about such data with or without or sometimes minimal aid of statistical methods. The researcher used the quantitative descriptive method since the study had to examine three variables. It aimed to determine the relationship between 21st Century Skills, Civic Engagement, and the Leadership Potential of first year college students. The findings of this study were analyzed and interpreted using an appropriate statistical tool. Thus, the results provided a numeric representation of the findings.

#### Research Locale

The study was conducted within Davao City, particularly in two private schools. The researcher's first selected locale was established in Calinan. On the other hand, the second locale was also a private school established in the city. The researcher conducted the study in the said institutions as it was where potential respondents were found. In lieu of this, the researcher aimed to examine the 21st Century Skills, Civic Engagement, and Leadership Potential of first-year college students.

#### Sample and Sampling

The researcher used the convenient sampling technique in identifying the respondents of this study. According to Golzar & Noor (2022) convenience sampling is a non-probability sampling technique used to select participants based on their availability and accessibility within the target population. This method is often employed in research due to its cost-effectiveness, simplicity, and efficiency in data collection. This technique was best for my study because it allowed for easy access to respondents who were readily available and willing to participate, ensuring efficient data collection while still aligning with the research objectives. This



was helpful because it ensured the scientific process of selecting my respondents. Using the convenient sampling technique, the researcher identified 125 college students. Prior to participation, the respondents were given informed consent to ensure they fully understood the purpose and nature of the study. The respondents who agreed to participate and provided their consent received the survey questionnaire for data collection. The 125 samples were sufficient to statistically compute the data that were gathered in preparation for answering the questions and problems raised in this study. Additionally, to identify the sample size, the researcher used the Taro Yamane Formula. Moreover, the identified learners should be at least 18 years old to be included in the study. The sample size of the study ( $n=274$ ) will provide sufficient statistical power for modelling analysis (Akpur, 2021).

### **Research Instrument**

This study used survey questionnaires. The first set of the questionnaire deals with the level of the 21st Century Skills, the researcher adapted the survey questionnaire of the 21st Century Skill Acquisition Among the Preservice Teachers of Teacher Education Programs by Diquito et al. (2022). The result of the 21st-century skills of the college students were interpreted under the following Likert-type scale: 5 - Very High, 4 - High, 3 - Neutral, 2 - Low, and 1 - Very Low.

On the other hand, the second set of questionnaires deals with the level of civic engagement. The researcher also adapted the Civic Engagement Scale (CES) for Civic Engagement developed by Obiagu & Ajaps (2021). It was answered by the respondents based on a following Likert-type scale: 5 - Very High, 4 - High, 3 - Neutral, 2 - Low, and 1 - Very Low.

Finally, the third set of questionnaires which was Leadership Potential, the researcher also adapted the Servant Leadership Questionnaire (SLQ) by Liden et al. (2008). This was answered by the college students using a scale of 1-5, with 5: Always, 4: Often, 3: Sometimes, 2: Rarely, and 1: Never.

A comprehensive validation process has been conducted to ensure the credibility and reliability of the research instrument. Following the validation, the instruments had undergone pilot testing to evaluate their effectiveness in capturing accurate data. The results of the pilot testing indicated strong reliability across all variables. This systematic approach ensured the tools' validity and reliability prior to full-scale data collection. Below were the numerical scales of each variable. Additionally, Cronbach's alpha will be utilized to judge the reliability of the research instrument being tested.

### **Data Gathering Procedures**

The researcher underwent the following steps and procedures in gathering the data for this study:

*Asking Permission to Conduct the Study.* The researcher asked for an endorsement letter from the Dean of the Graduate School of Holy Cross of Davao with the consent of the thesis adviser to conduct the study on Acquired 21st Century Skills and Leadership Potential Affecting the Civic Engagement among College Students at the two private schools. Then, the researcher first sought the consent of the school dean in the said school.

*Administration and Retrieval of Questionnaires.* With the approval and full support of the school dean, the manner of answering the given questionnaires was thoroughly explained by the researcher to the students and their teachers. During the actual administration of the survey questionnaires, the researcher translated each question from the indicators into their own dialect to ensure that the respondents understood each question well, making their answers accurate. A total of 125 college students in the two schools were requested to answer the instrument. After the respondents had completely and honestly answered and provided all the necessary data needed in the questionnaire, the researcher retrieved all the answered questionnaires.

*Gathering and Tabulation of Data.* After the successful administration and retrieval of the survey questionnaires, the data was collated and tabulated. Then, appropriate statistical tools were employed to obtain the necessary data for interpretation and further analysis.

### **Data Analysis**

In analyzing the result of the study, the researcher used the following statistical tool:

*Mean.* This was used to answer the first two objectives of the study. More specifically, it was used to determine the level of acquired 21st century skills, leadership potential and Civic Engagement among the college students

*Pearson Product Moment Correlation of Coefficient.* This statistical tool was used to determine the significance of the correlation between 21st century skills and leadership potential, and the civic engagement among the college students

*Regression Analysis.* To determine the significance of the degree of influence of 21st century skills and leadership potential on civic engagement



## RESULTS

This chapter presents the discussions of the results and data analysis. The collected data were analyzed using appropriate statistical methods to explore the issues outlined in Chapter 1 of this study. The discussions are organized categorically following the sequence of the statement of the problem. Hence, this chapter contains the descriptive analysis, correlation analysis, and regression analysis.

### Descriptive Analysis

Table 1 is the descriptive table. It contains the variables involved in the study namely, 21<sup>st</sup> Century Skills, Leadership Potential and Civic Engagement among college students. Specifically, the corresponding indicators of these variables are also shown. Table 1 further contains the number of the respondents, the mean and corresponding descriptive level.

**Table 1. Descriptive Table**

Variables	N	SD	Mean	Descriptive Level
<b>21st century skills</b>	<b>125</b>	<b>0.57</b>	<b>4.07</b>	<b>High</b>
Critical Thinking		0.67	3.99	High
Collaboration		0.61	4.16	High
Communication		0.71	4.03	High
Creativity		0.65	4.14	High
Leadership		0.71	4.02	High
<b>Civic Engagement</b>	<b>125</b>	<b>0.71</b>	<b>3.90</b>	<b>High</b>
Political Participation		0.89	3.73	High
Community Volunteerism		0.94	3.78	High
Environmental Civility		0.74	4.05	High
Human Rights Activism		0.81	4.03	High
<b>Leadership Potential</b>	<b>125</b>	<b>0.62</b>	<b>4.04</b>	<b>High</b>
Interpersonal Skills		0.81	3.87	High
Conceptual Skills		0.77	4.00	High
Empowering		0.69	4.08	High
Behaving Ethically		0.65	4.21	Very High

4.20-5.00 Very High, 3.49-4.19 High, 2.60-3.39 Moderate, 1.80-2.59 Low, 1.00-1.79 Very Low

Table 1 shows that 21<sup>st</sup> century skills obtained a standard deviation of 0.57 with a mean of 4.07 described as high. This indicates that 21<sup>st</sup> century skills is observed. All its indicators corresponding means that are described as high. On the other hand, the civic engagement obtained a standard deviation of 0.71 with a mean of 3.90 described as high. This indicates that civic engagement is manifested. Furthermore, the leadership potential obtained a standard deviation of 0.62 with a mean of 4.04 described as high. This indicates that leadership potential is observed. Among its indicators, only the behaving ethically obtained a mean that is described as very high.

### Correlation Table

Table 2 is the table of correlation. It contains the 21<sup>st</sup> century skills and leadership potential as predictive variables, and civic engagement as criterion variable. Furthermore, it contains the r-value, p-value, the decision on hypothesis and corresponding interpretation.

**Table 2. Correlation Table**

Variables	Civic Engagement			Interpretation
	r-value	p-value	Decision on H <sub>01</sub>	
21st century skills	0.716	0.000	Reject	Significant
Leadership Potential	0.787	0.000	Reject	Significant



The correlation between 21<sup>st</sup> century skills and civic engagement obtained a p-value of 0.000 which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that correlation between 21<sup>st</sup> century skills and civic engagement is significant. Furthermore, the correlation between the 21st century skills and civic engagement obtain r-value of 0.716 which indicates moderately high positive correlation.

The correlation between leadership potential and civic engagement obtained a p-value of 0.000 which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that correlation between leadership potential and civic engagement is significant. Furthermore, the correlation between the leadership potential and civic engagement obtain r-value of 0.787 which indicates moderately high positive correlation.

### Regression of Analysis

Table 3 is the regression analysis. It contains the variables both the predictive and the criterion variables, namely the 21<sup>st</sup> century skills, leadership potential and civic engagement. In addition, table 3 contains the unstandardized coefficient, standardized coefficient, the decision on the null hypothesis, and the interpretation.

**Table 3. Regression Table**

Predictor	Estimate	Stand. Estimate	SE	t	p	Decision on H <sub>0</sub>
Intercept	-0.164		0.287	-0.571	0.569	
21 <sup>st</sup> Century Skills	0.331	0.266	0.108	3.074	0.003	Reject
Leadership Potential	0.672	0.581	0.100	6.720	0.000	Reject

R= 0.804, R<sup>2</sup>= 0.647, Adjusted R<sup>2</sup>=0.641, F=108.0, Sig.=0.000

The 21<sup>st</sup> century skills obtained a beta coefficient of .331. It indicates that 21st century skills competence has 33.1 % influence on civic engagement. Furthermore, the influence of said variable obtained a p-value of 0.003 which is less than 0.05 degree of confidence; thus, the null hypothesis was rejected. It further indicates that the 33.1% influence 21<sup>st</sup> century skills on civic engagement is significant.

On the other hand, the leadership potential obtained a beta coefficient of 0.672. It indicates that leadership potential has 67.2% influence on civic engagement. Furthermore, the said variable obtained a p-value of 0.000 which is less than 0.05 degree of confidence; thus, the null hypothesis was rejected. It further indicates that 67.2% influence leadership potential on civic engagement is significant.

The predictive variables obtained a combined degree of influence of 64.7%. With the obtained p-value of 0.000 which is less than 0.05 degree of confidence, it indicates that their combined degree of influence is significant.

### Summary of Findings

1. The 21<sup>st</sup> century skills, leadership potential and civic engage are good.
2. The 21st century skills, and leadership potential are significantly correlated with civic engagement.
3. The 21st century skills and leadership potential significantly influenced civic engagement by 64.7%.

### DISCUSSIONS

This chapter provides the meaning of the findings obtained from Chapter 3. This implications for each of the essential results are expounded on by citing some studies supported by the outcomes of this investigation compared to the points underscored in other studies already published.

#### Table 1. Descriptive Table

##### *Summary on the levels of 21<sup>st</sup> Century Skills*

The results indicate that students' 21<sup>st</sup> century skills are at a high level. These results suggest that integrating 21st-century skill development into educational programs can enhance students' social responsibility, ethical decision-making, and ability to lead effectively in various settings.

Based on the result of this study, the overall mean for the level of 21st-century skills among first-year college students is 0.57, categorized as High, indicating that these skills are highly observed. This finding aligns with a study conducted by Varghese & Alias, (2021) in Kerala, India, which found that 16.3% of students demonstrated a high level of 21st-century skills, while 68.1% had an average level. These results reinforce the idea that students generally possess a strong foundation in 21st-century skills,



which are essential for academic success, workforce readiness, and active civic participation. Moreover, a study conducted by Ghanney (2024) examined the integration of 21st Century Skills into the teaching of Social Studies in Effutu Municipality, Ghana. It adopted Shulman's Pedagogical Content Knowledge theory and followed a positivist research approach. The findings revealed strong integration of communication, collaboration, and digital literacy skills, while creativity, cultural identity, global citizenship, personal development, leadership, critical thinking, and problem-solving skills had good integration. These 21st Century Skills accounted for 63.8% of the variance in students' academic performance. Moreover, the study conducted by Oluwagbohunmi & Alonge (2023) highlights the importance of 21st Century skills, which include Knowledge (applicability of what is taught), Skills (the 4Cs—creativity, critical thinking, communication, collaboration).

### ***Summary on the Levels of Civic Engagement***

The findings show that college first-year students' civic engagement is *High* which indicates that the perceived civic engagement is often observed. This finding is supported by the study of Ballard et al., (2021) the study assessed the improvement in civic engagement skills among 320 youth who participated in five youth leadership programs nationwide, all of which included a community advocacy component. The results showed that youth in positive development programs experienced a significant increase in civic engagement skills. Additionally, skill-building opportunities and an equitable climate were strongly associated with higher civic engagement scores.

Building on this perspective, the impact of political participation on civic engagement in local communities using a desk study methodology, analyzing existing research from online journals and libraries is assessed. Findings revealed that active political participation—such as voting, attending town meetings, and community organizing—enhances awareness of local issues, increases volunteerism, strengthens community networks, and improves local advocacy. Communities with high political participation experience better governance, as officials are held accountable, and policies better reflect residents' needs (Owusu Enchoka, 2024).

### ***Summary on the Levels of Leadership Potential***

The leadership potential is interpreted as *High*, which indicates that students generally exhibit strong leadership qualities, such as decision-making, initiative, and the ability to guide others. The finding is supported by the study of Kim & Wargo (2022) which highlights the importance of extracurricular activities in fostering community leadership development among students. The results indicate that students with high involvement in extracurricular activities demonstrate stronger leadership citizenship outcomes. Additionally, self-perception of leadership skills emerged as the most significant predictor of students' commitment to community leadership values.

Furthermore, the study developed and validated the Youth Leadership Potential Scale (YLPS) based on the development theory of leadership, using data from 696 students in China. Findings revealed a five-factor structure—leadership information, leadership attitude, communication skills, decision-making skills, and stress management skills—identified through exploratory structural equation modeling (ESEM), with confirmatory factor analysis confirming a good model fit. Additionally, criterion-related validity was supported by the positive relationship between YLPS scores and students' leadership experience. The study concludes that YLPS is a valid and practical tool for assessing youth leadership potential, marking the first development of such a scale based on leadership development theory (Yuan et al., 2019).

### **Table 2. Correlation Table**

The findings of this study indicate a positive correlation between civic engagement and 21st-century skills among college students. In the study by Borhan (2025), Singapore's 21st-Century Competencies Framework emphasizes values such as respect, responsibility, resilience, integrity, care, and harmony to underpin essential social and emotional skills and 21st-century competencies—including civic literacy, global awareness, cross-cultural skills, and critical, inventive thinking—preparing individuals to tackle challenges from globalization; similarly, a study by Winthrop (2020) emphasized that civic learning must extend beyond academic competencies by explicitly incorporating social values and fostering civic engagement, ensuring that education not only develops individual skills but also nurtures shared civic norms.

Meanwhile, leadership potential had a significant relationship on students' civic engagement. Civic leadership and democratic engagement praxis—describes how students connected leadership theory to their practice of civic engagement (Kniffin & Sapa, 2021). A study of Mgbonyebi & Ezenwani (2024) on Nigerian civic humanism reveals a strong correlation between leadership potential and civic engagement, indicating that transformational, autocratic, and democratic leadership styles positively influence organizational performance, while transactional styles have a negative impact. These findings underscore the critical role of effective leadership in driving civic engagement and highlight the need for further research in this area.



### Table 3. Regression Table

The strong influence of 21st-century skills on civic engagement among college students is evident in research showing that abilities such as critical thinking, problem-solving, communication, and collaboration enhance students' involvement in social and civic matters (Saleh et al., 2022; Chang et al., 2023). According to Chang et al. (2023), civic engagement encompasses embracing diversity, fostering empathy, and upholding social responsibility, all of which are reinforced by 21st-century skills. Their study also highlights that self-efficacy significantly impacts civic participation, indicating that students with greater confidence in their abilities are more likely to take active roles in public life. Likewise, Saleh et al. (2022) emphasize that service learning and problem-based learning are effective in cultivating these essential skills, further promoting civic involvement. These findings suggest that enhancing 21st-century skills leads to stronger civic engagement, equipping students to become proactive and responsible members of society.

The findings explain the significant influence of leadership potential on civic engagement among college students, highlighting the role of leadership education in fostering social responsibility and active participation. According to Hurtado (2019), democracy-building skills are best developed when curricular and co-curricular civic engagement interventions incorporate leadership education, allowing students to engage in meaningful, community-based problem-solving. Similarly, Kniffin (2021) emphasizes that students involved in civic projects develop leadership skills by practicing shared responsibility, teamwork, and collaboration, which strengthens their civic engagement. Ahmad et al. (2022) further explain that while students in higher education naturally engage in civic activities, sustained participation requires a deeper internalization of civic values and leadership responsibilities. Collectively, these studies suggest that integrating leadership development into civic engagement initiatives not only enhances students' social involvement but also equips them with the necessary skills to become proactive and responsible citizens.

### Conclusion

Based on the findings of the study it is concluded that that 21<sup>st</sup> century skills and leadership potential significantly influence civic engagement. Such Conclusion affirms the Transformative Learning Theory which emphasizes the process affecting change in a frame of reference. A frame of reference is composed of two dimensions: habits of mind and a point of view. Adults have acquired a coherent body of experience—associations, concepts, values, feelings, conditioned responses—frames of reference that define their life world.

### Recommendations

Based on the conclusion of the study, it is mainly recommended that further studies may be undertaken using other potential variables not covered in this study in order to trace the 36.3% variance in civic engagement among first year college students. Additionally, the findings support UN Sustainable Development Goal 4: Quality Education by emphasizing inclusive and transformative learning approaches—such as mentorship, leadership training, and policy-making participation—that empower college students as transformational leaders.

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