

# 21st Century Skills and Academic Performance of Grade 7 Students in Public Secondary Schools

Joy P. Egino

Tanay-Sampaloc Integrated National High School, Tanay, Rizal

[joy.perezr@deped.gov.ph](mailto:joy.perezr@deped.gov.ph)

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## Abstract

This study investigated the level of 21st-century skills among Grade 7 students in selected public secondary schools and examined how these skills relate to their academic performance. Recognizing the increasing importance of competencies such as innovative thinking, digital literacy, and life and career skills in modern education, the research aimed to determine students' self-perceived abilities and whether demographic factors influence these skills. The study also sought to identify whether mastery of 21st-century skills contributes to improved scholastic achievement.

A descriptive research design, specifically a survey method, was utilized involving 272 Grade 7 students selected through stratified sampling based on Slovin's formula. Data were gathered using a validated questionnaire-checklist, supplemented by documentary analysis of students' general averages to determine their academic performance. The instrument underwent expert validation to ensure content accuracy and reliability. Descriptive statistics, mean scores, and inferential tests were used to determine levels of skills and identify significant differences and relationships.

Results revealed that students rated themselves as "Much Skillful" across all domains of 21st-century skills, with composite means of 3.86 for learning innovative skills, 4.12 for digital literacy skills, and 3.93 for life and career skills, yielding an overall mean of 3.97. Digital literacy emerged as the strongest skill area. Demographic variables—including age, sex, sibling position, family size, income, and parents' occupation—showed no significant influence, although father's educational attainment demonstrated a significant effect on life and career skills. Academic performance was generally high, with a mean of 89.44, categorized as Very Satisfactory. The study concludes that students' 21st-century skills are strongly associated with their academic performance, indicating that greater confidence in creativity, critical thinking, digital proficiency, and life skills enhances scholastic outcomes. These findings support the integration of 21st-century competencies into instructional practices and highlight the need for continuous training, skill-based learning activities, and supportive school environments.

**Keywords:** *21st-Century Skills , Academic Performance , Grade 7 Students , Digital Literacy , Learning Innovative Skills*

## 1. Introduction

The rapid evolution of global education and employment highlights the increasing need for students to acquire 21st-century skills, including learning innovative skills, digital literacy skills, and life and career skills. These competencies are essential for enabling learners to adapt to technological advancements, navigate complex environments, and succeed in diverse social and professional contexts. Review of existing literature, such as Aspiras (2024), Vismonte (2023), and Gomez (2023), consistently emphasizes the role of creativity, critical thinking, digital proficiency, and adaptability in ensuring learners' readiness for modern demands. Despite this, factors influencing students' acquisition of these skills and their relationship to academic performance remain subjects of inquiry in Philippine public schools. Thus, this study addressed the extent to which Grade 7 students perceive themselves as capable in these skill areas and examined whether demographic characteristics affect their perceived competencies. Specifically, the study sought to determine the level of students' 21st-century skills, identify significant differences across student profiles, and test whether these competencies are correlated with academic performance. The research hypothesized that demographic factors do not significantly influence perceived skill levels, while 21st-century skills are positively associated with academic achievement.

## 2. Materials and Methods

This study employed a **descriptive survey research design** to assess the level of 21st-century skills among Grade 7 students in public secondary schools. The participants consisted of **272 Grade 7 students** selected through stratified sampling from a population of 844 learners within the Tanay Sub-Office. Data were gathered using a **validated questionnaire-checklist** measuring learning innovative skills, digital literacy skills, and life and career skills, supplemented by documentary analysis of students' general averages. The procedure involved securing permissions from the Schools Division Office, administering the instrument through Google Forms in compliance with the Data Privacy Act of 2012, and encoding responses for analysis. Collected data were processed using **SPSS**, employing descriptive statistics such as means and standard deviations, and inferential tests such as p-values to determine significant differences and correlations among variables.

## 3. Results

Findings showed that students rated themselves as **Much Skillful**, with composite means of **3.86** for learning innovative skills, **4.12** for digital literacy skills, and **3.93** for life and career skills, resulting in an **overall mean of 3.97**. Digital literacy emerged as the strongest domain, while reasoning-related innovative skills ranked lowest. Inferential analysis revealed **no significant differences** in perceived skill levels across age, sex, sibling position, family size, income, and parents' occupation, although father's educational attainment showed a significant effect on life and career skills. Students demonstrated high academic achievement, with a mean general average of **89.44 (SD = 3.92)**, categorized as Very Satisfactory. Correlational analysis confirmed a

significant positive relationship ( $p < 0.01$ ) between students' perceived 21st-century skills and academic performance.

#### 4. Discussion

The findings indicate that Grade 7 students view themselves as highly capable across essential 21st-century skill domains, consistent with prior studies emphasizing the importance of technology-driven and innovation-oriented competencies. Similar to Vismonte (2023) and Gomez (2023), students demonstrated strong confidence in digital literacy and adaptability, highlighting exposure to technology-rich environments. The lack of significant differences across most demographic variables suggests equal learning opportunities within the school system, although the effect of father's educational attainment implies that parental support may shape students' life skills and career readiness. The positive correlation between skill perception and academic performance reinforces existing literature asserting that students who possess—or believe they possess—critical thinking, digital proficiency, and adaptive behaviors tend to perform better academically. However, the study is limited by its reliance on self-reported data, which may not fully represent students' actual skill levels. Future research may integrate performance-based assessments and qualitative methods to capture deeper dimensions of 21st-century competencies.

#### 5. Conclusion

The study concludes that students' demographic factors—including age, sex, sibling position, family size, income, and parents' education and occupation—do not significantly influence their perceived 21st-century skills. However, students' academic performance is positively correlated with their 21st-century competencies, indicating that these skills contribute meaningfully to improving their overall academic achievement and readiness for modern learning demands.

In light of these findings, it is recommended that school administrators continue offering seminars, trainings, and workshops focused on strengthening 21st-century skills among teachers and students. Schools should cultivate learning environments that enhance students' confidence in critical thinking, digital literacy, collaboration, and adaptability, while integrating these competencies as essential elements of basic education. Teachers are likewise encouraged to design learning activities that develop these skills, ensuring improved academic outcomes and better preparation for future educational and career challenges.



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