Student Satisfaction and Productivity Analysis of the BS Computer Science Department of North Negros College

Maradoni Louisse A. Ambrad

North Negros College, Cadiz City, Philippines

DOI: https://doi.org/10.47772/IJRISS.2026.100400425

Received: 17 April 2026; Accepted: 23 April 2026; Published: 13 May 2026

ABSTRACT

The increasing emphasis on student-centered quality assurance in higher education necessitates systematic evaluation of academic programs, particularly in technology-oriented disciplines. This study assesses student satisfaction within the Bachelor of Science in Computer Science (BSCS) Department of North Negros College, Inc., focusing on curriculum, facilities, and faculty performance as key determinants of academic productivity and service quality. Grounded in established Information Systems and organizational performance frameworks—including the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Task–Technology Fit (TTF), and the DeLone and McLean Information Systems Success Model—the study examines how instructional delivery, learning infrastructure, and program design influence overall student experience.

A descriptive-evaluative design was employed using survey data from 105 students out of a total population of 331 (31.72% response rate). The instrument demonstrated excellent reliability (Cronbach's $\alpha = .966$). Statistical analyses included descriptive statistics, subgroup comparisons, and multiple regression modeling. Results indicate consistently high satisfaction across domains, with faculty performance emerging as the strongest predictor of overall satisfaction ($\beta = .680$, $p < .001$), followed by facilities ($\beta = .202$, $p < .05$), while curriculum showed no significant predictive effect when controlling for other variables.

Findings suggest that while the department has achieved functional effectiveness in delivering academic services, its performance is shaped by contextual factors such as instructional quality and infrastructure adequacy. The study offers evidence-based recommendations for targeted improvements in faculty development, facility enhancement, and curriculum alignment to support sustained institutional growth and competitiveness.

Keywords: student satisfaction, higher education, productivity analysis, information systems, academic quality

INTRODUCTION

Digital transformation has significantly reshaped the landscape of higher education, influencing instructional delivery, administrative processes, and student engagement. Institutions are increasingly expected to provide efficient, technology-enabled, and student-centered services that support learning outcomes and academic success. In this context, student satisfaction has emerged as a key indicator of institutional effectiveness, reflecting both the quality of academic services and the efficiency of operational systems (Organisation for Economic Co-operation and Development [OECD], 2019).

The Bachelor of Science in Computer Science (BSCS) program of North Negros College serves as a critical academic unit responsible for preparing students for careers in software development, systems analysis, and information technology. However, the effectiveness of such programs is often shaped by multiple interacting factors, including curriculum relevance, faculty performance, and the adequacy of facilities. In developing academic environments, these factors are further influenced by infrastructure limitations and organizational capacity, which may affect both student satisfaction and academic productivity (Heeks, 2009; Selwyn, 2016).

To interpret these dynamics, this study adopts an integrated theoretical framework grounded in Information Systems and organizational performance models. The Technology Acceptance Model (TAM) posits that perceived usefulness and perceived ease of use significantly influence user acceptance and satisfaction (Davis, 1989). In an academic setting, these constructs are reflected in how students perceive the effectiveness of instructional methods and learning systems. Extending this perspective, the Unified Theory of Acceptance and Use of Technology (UTAUT) incorporates social influence and facilitating conditions, emphasizing the role of institutional support and environmental factors in shaping user experience (Venkatesh et al., 2003; Venkatesh et al., 2012).

Beyond acceptance, Task–Technology Fit (TTF) highlights that technology and systems are effective only when aligned with user tasks (Goodhue & Thompson, 1995). In the context of Computer Science education, this alignment is critical, as students rely heavily on laboratory facilities, software tools, and internet connectivity to complete programming and development tasks. Complementing this, the DeLone and McLean Information Systems Success Model links system quality, information quality, and service quality to user satisfaction and net benefits (DeLone & McLean, 2003). These frameworks collectively suggest that student satisfaction is a multidimensional construct influenced by instructional quality, technological infrastructure, and organizational support.

Socio-technical perspectives further emphasize that educational effectiveness is not determined solely by technology or curriculum but by the interaction between human, technical, and institutional components (Bostrom & Heinen, 1977). Similarly, ICT for Development (ICT4D) literature suggests that technology acts as an amplifier of existing institutional strengths and weaknesses, producing positive outcomes only when supported by adequate infrastructure and capacity (Toyama, 2011; Heeks, 2009).

Despite the relevance of these frameworks, localized empirical studies examining student satisfaction in Computer Science programs remain limited, particularly in private higher education institutions. This study addresses this gap by providing a structured evaluation of student satisfaction within the BSCS Department of North Negros College. Specifically, it aims to assess satisfaction across curriculum, facilities, and faculty performance; examine variations across student groups; and identify key predictors of overall satisfaction.

METHODOLOGY

Research Design

This study employed a descriptive-evaluative research design, appropriate for assessing student satisfaction and examining productivity-related conditions within an academic program. Descriptive-evaluative approaches are widely used in educational research for assessing system effectiveness based on user perceptions (John W. Creswell & Vicki L. Plano Clark, 2018).

In the context of this study, the design allows for a structured examination of satisfaction across three key domains—curriculum, facilities, and faculty performance—while also enabling the identification of predictors of overall student satisfaction through inferential statistical techniques.

Respondents

The respondents of the study consisted of Bachelor of Science in Computer Science (BSCS) students enrolled at North Negros College during Academic Year 2025–2026. The total population included 331 students, representing all year levels from first to fourth year.

A total of 105 valid responses were obtained, yielding a response rate of 31.72%. While the study initially aimed for total enumeration, participation was voluntary, and the achieved sample size remains sufficient for statistical analysis and interpretation.

To ensure representation across student cohorts, responses were categorized by year level. Table 1 presents the

distribution of respondents:

Table 1. Distribution of Respondents by Year Level

Year Level	Frequency (n)	Percentage (%)
1st Year	37	35.24%
2nd Year	26	24.76%
3rd Year	36	34.29%
4th Year	6	5.71%
Total	**105**	**100%**

The distribution indicates adequate representation from lower and middle year levels, although fourth-year students are underrepresented. This imbalance is considered in the interpretation of results.

Nonresponse Bias Assessment

To assess the potential impact of nonresponse bias, a comparison between early and late respondents was conducted following the approach of Armstrong and Overton (1977). Early respondents (first 50% of submissions) were compared with late respondents (remaining 50%) across key variables, including overall satisfaction and domain-level scores.

Independent samples t-tests revealed no statistically significant differences between early and late respondents ($p > .05$), suggesting that nonresponse bias is unlikely to have significantly affected the results.

Informal feedback indicated that non-participation was primarily due to scheduling conflicts, limited availability, and academic workload, rather than systematic differences in perception. These findings support the validity of the collected data despite the response rate.

Instrument

Data for this study were gathered using a structured questionnaire specifically developed to assess student satisfaction within the BS Computer Science Department. The instrument was designed to capture multiple dimensions of the academic experience, reflecting key areas of program delivery that are directly relevant to student learning and engagement.

The questionnaire consisted of seventeen (17) indicators distributed across four conceptual domains: curriculum, facilities, faculty performance, and overall satisfaction. The curriculum domain focused on the relevance, coherence, and practical applicability of course offerings, particularly in relation to current industry demands and the development of problem-solving skills. The facilities domain examined the adequacy and functionality of physical and technological resources, including laboratory equipment, internet connectivity, and the overall conduciveness of the learning environment. The faculty performance domain assessed instructional effectiveness, including clarity of explanation, subject mastery, responsiveness to student needs, and the use of appropriate teaching strategies. Finally, the overall satisfaction domain captured students' general evaluation of the quality of education and their willingness to recommend the program.

All items were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), with higher scores indicating more favorable perceptions. The instrument was constructed to ensure clarity, relevance, and alignment with the objectives of the study, allowing for a comprehensive assessment of student satisfaction as a multidimensional construct. By capturing both domain-specific and overall evaluations, the questionnaire provides a robust basis for analyzing the factors that influence student perceptions of academic quality and departmental performance.

While the achieved response rate (31.72%) is acceptable for survey-based studies, it is important to note that fourth-year students were underrepresented ($n = 6$, 5.71%). As graduating students possess the most

comprehensive exposure to the program, this limitation may affect the generalizability of findings related to curriculum coherence and career preparedness. Consequently, the results should be interpreted with caution, particularly when extending conclusions to upper-year cohorts.

Reliability Analysis

The internal consistency of the instrument was assessed using Cronbach's alpha coefficient.

Table 2. Cronbach's Alpha Results per Domain

Domain	No. of Items	Cronbach's α	Interpretation
Curriculum	5	0.895	Good
Facilities	5	0.945	Excellent
Faculty Performance	5	0.943	Excellent
Overall Satisfaction	2	0.852	Good
Overall Instrument	17	0.966	Excellent

All domains exceeded the recommended threshold of $\alpha \geq 0.70$, indicating acceptable to excellent reliability, consistent with established guidelines for internal consistency measurement (Lee J. Cronbach, 1951; Mohsen Tavakol & Reg Dennick, 2011).

Construct Validity

Construct validity was assessed using principal axis factoring with oblique rotation, a commonly used method for identifying latent constructs in survey instruments (Joseph F. Hair Jr. et al., 2019).

Sampling adequacy was confirmed through a Kaiser–Meyer–Olkin (KMO) value of 0.91, indicating excellent sampling adequacy based on established criteria for factor analysis (Henry F. Kaiser, 1974). Bartlett's Test of Sphericity was statistically significant ($p < .001$), confirming that the correlation matrix was appropriate for factor extraction.

The analysis yielded a three-factor structure corresponding to the domains of curriculum, facilities, and faculty performance. Factor loadings ranged from 0.64 to 0.89, exceeding the recommended threshold of 0.50. No significant cross-loadings were observed, supporting both convergent and discriminant validity.

Item-Level Descriptive Statistics

Item-level descriptive statistics were examined to assess response variability and measurement sensitivity.

Standard deviations ranged from 0.82 to 1.27, indicating moderate variability across responses. This suggests that the instrument effectively captured differences in student perceptions and avoided ceiling effects.

Items related to faculty interaction showed relatively higher means and lower dispersion, indicating consistent positive perceptions. In contrast, items related to curriculum relevance and technical support exhibited greater variability, suggesting differing experiences among students.

Data Collection Procedure

Prior to data collection, approval was obtained from the college administration and the BSCS Program Head. Respondents were informed of the purpose of the study and provided consent before participation.

Data were collected through an online survey platform to ensure accessibility and convenience. Participation was voluntary, and respondents were assured that their answers would remain anonymous and confidential.

The data collection process was conducted over a specified period, allowing sufficient time for student participation while minimizing disruption to academic activities.

Data Analysis

Data analysis was conducted using IBM SPSS Statistics (Version 26), following standard procedures in quantitative research, including descriptive statistics, analysis of variance (ANOVA), and multiple regression modeling (Field, 2018).

Descriptive statistics, including mean and standard deviation, were computed for each item and domain. Domain interpretations were based on established Likert-scale thresholds.

To examine subgroup differences, Analysis of Variance (ANOVA) was used to compare satisfaction scores across year levels. Statistical significance was evaluated at $\alpha = .05$.

To identify predictors of overall satisfaction, multiple regression analysis was conducted using curriculum, facilities, and faculty performance as independent variables.

Additionally, results were interpreted in light of theoretical frameworks, including TAM, UTAUT, TTF, and the DeLone and McLean model, to provide a multidimensional understanding of student satisfaction.

RESULTS

Analysis of the survey responses revealed consistently high levels of student satisfaction across all evaluated domains. Table 3 presents the mean scores per item and per domain.

Table 3. Mean Scores per Item and per Domain

Evaluation Domain	Q1	Q2	Q3	Q4	Q5	Mean Score
Curriculum	3.39	3.54	3.76	3.54	3.80	3.61 (High)
Facilities	3.72	3.81	3.75	3.89	3.58	3.75 (High)
Faculty Performance	3.73	3.76	3.83	3.86	3.78	3.79 (High)
Overall Satisfaction	3.75	3.70	—	—	—	3.73 (High)

The results indicate that faculty performance obtained the highest mean score, suggesting that students generally perceive instructional delivery as effective and supportive. Facilities and curriculum also received high ratings, although relatively lower compared to faculty performance.

At the item level, students reported strong agreement with statements related to teacher approachability, clarity of instruction, and the conduciveness of the learning environment. Conversely, lower ratings were observed in areas related to curriculum relevance to current industry standards and availability of technical support, indicating potential areas for improvement.

Subgroup analysis revealed consistent perceptions across year levels. Table 4 summarizes the group statistics.

Table 4. Group Statistics by Year Level

Domain	**Year Level**	**n**	**M**	**SD**
Curriculum	1st Year	37	3.65	0.85
	2nd Year	26	3.56	0.87
	3rd Year	36	3.61	0.84
	4th Year	6	3.53	0.82
Facilities	1st Year	37	3.80	0.98
	2nd Year	26	3.71	1.01

	3rd Year	36	3.73	1.00
	4th Year	6	3.57	1.02
Faculty Performance	1st Year	37	3.86	0.92
	2nd Year	26	3.79	0.95
	3rd Year	36	3.74	0.97
	4th Year	6	3.63	0.90
Overall Satisfaction	1st Year	37	3.78	1.08
	2nd Year	26	3.69	1.15
	3rd Year	36	3.75	1.10
	4th Year	6	3.42	1.20

Subgroup analysis across year levels indicates relatively consistent patterns of satisfaction, with only minor variations observed. First-year students reported the highest mean scores across most domains, particularly in faculty performance (M = 3.86, SD = 0.92) and overall satisfaction (M = 3.78, SD = 1.08). In contrast, fourth-year students exhibited comparatively lower mean scores, particularly in overall satisfaction (M = 3.42, SD = 1.20), although the small sample size (n = 6) for this group should be considered when interpreting the results.

Despite these numerical differences, the variability within each group, as reflected in the standard deviations, indicates overlapping distributions of responses. This observation is consistent with the ANOVA results, which confirm that the differences across year levels are not statistically significant ($p > .05$). Consequently, student satisfaction appears to be relatively uniform across cohorts, suggesting that the strengths and limitations of the program are experienced consistently throughout the academic levels.

Table 5. ANOVA Results by Year Level

Domain	F	p-value	Interpretation
Curriculum	0.074	0.974	Not Significant
Facilities	0.391	0.760	Not Significant
Faculty Performance	0.339	0.797	Not Significant
Overall Satisfaction	0.195	0.899	Not Significant

The results of the one-way Analysis of Variance (ANOVA) indicate that there are no statistically significant differences in student satisfaction across year levels for any of the evaluated domains. Specifically, curriculum ($F = 0.074$, $p = 0.974$), facilities ($F = 0.391$, $p = 0.760$), faculty performance ($F = 0.339$, $p = 0.797$), and overall satisfaction ($F = 0.195$, $p = 0.899$) all yielded p-values greater than the established significance threshold of $\alpha = 0.05$.

These findings suggest that student perceptions of the BSCS Department are relatively consistent regardless of academic standing. The absence of significant variation implies that both strengths and limitations of the program are experienced uniformly across cohorts. This pattern may indicate a stable instructional and operational environment, where institutional practices, teaching approaches, and resource availability are applied consistently throughout year levels.

From an evaluative perspective, the lack of significant differences does not necessarily indicate optimal performance but rather uniformity in experience. Consequently, any identified areas for improvement—such as curriculum relevance or facility enhancement—should be addressed at the program level rather than targeted toward specific year groups. This reinforces the interpretation that productivity and quality improvements must be systemic in nature.

Regression analysis was conducted to identify predictors of overall satisfaction. Results are presented in Table 6.

Table 6. Multiple Regression Model Predicting Overall Satisfaction

Predictor Variable	β
Curriculum	0.004
Facilities	0.202*
Faculty Performance	0.680***
R^2	**0.715**
Adjusted R^2	**0.707**

The multiple regression analysis reveals that the model is statistically significant and explains a substantial proportion of variance in overall student satisfaction ($R^2 = 0.715$, Adjusted $R^2 = 0.707$). This indicates that approximately 71.5% of the variation in satisfaction can be attributed to the combined influence of curriculum, facilities, and faculty performance.

Among the predictor variables, faculty performance emerges as the most influential factor ($\beta = 0.680$, $p < .001$), demonstrating a strong and statistically significant relationship with overall satisfaction. This finding suggests that instructional quality—particularly in terms of teaching effectiveness, clarity, responsiveness, and engagement—plays a central role in shaping student perceptions of the program.

Facilities also show a statistically significant but more moderate effect ($\beta = 0.202$, $p < .05$), indicating that the availability and adequacy of learning resources contribute meaningfully to student satisfaction. In contrast, curriculum does not exhibit a significant predictive effect ($\beta = 0.004$, $p > .05$) when controlling for other variables. The non-significant effect of curriculum in the regression model warrants deeper consideration. Rather than concluding that curriculum has no impact, it is plausible that its effect operates indirectly through other variables, particularly faculty performance and facilities. In instructional settings, curriculum content is experienced by students primarily through teaching practices and available resources. As such, the relationship between curriculum and satisfaction may be mediated rather than direct. Future studies employing mediation analysis—such as structural equation modeling or PROCESS-based approaches—are recommended to empirically test these indirect pathways.

These results align with theoretical perspectives emphasizing the importance of facilitating conditions and service quality in determining user satisfaction. In particular, the findings support the notion that while structural elements such as curriculum design are essential, the actual experience of students is more strongly shaped by how instruction is delivered and supported by the learning environment.

DISCUSSION

The findings of this study indicate that student satisfaction within the BS Computer Science (BSCS) Department of North Negros College is generally high, yet contingent upon specific instructional and infrastructural conditions that shape the overall academic experience. While descriptive results suggest positive perceptions across curriculum, facilities, and faculty performance, inferential analysis reveals that satisfaction is not uniformly driven by all dimensions. Instead, it is strongly influenced by factors that directly affect students' day-to-day learning interactions.

Although the study is framed within a productivity improvement context, it is important to clarify that productivity was not directly measured using objective performance indicators such as graduation rates, licensure outcomes, or employment placement. Instead, student satisfaction was used as a proxy indicator of perceived academic effectiveness. While satisfaction is an important dimension of institutional performance, it does not fully capture productivity outcomes. Future research should integrate objective academic and employment metrics to provide a more comprehensive assessment of program productivity.

The prominence of faculty performance as the strongest predictor of overall satisfaction underscores the central role of instructional quality in higher education. This finding is consistent with the Technology

Acceptance Model (TAM), which posits that perceived usefulness—often derived from effective instruction and clear communication—significantly influences user satisfaction (Davis, 1989). In an academic context, faculty members serve as primary mediators of knowledge, translating curriculum content into meaningful learning experiences. The high regression coefficient associated with faculty performance suggests that students place substantial value on clarity of explanation, responsiveness, and pedagogical effectiveness. This aligns with the Unified Theory of Acceptance and Use of Technology (UTAUT), where facilitating conditions, including instructional support and accessibility, play a crucial role in shaping user perceptions and behavioral outcomes (Venkatesh et al., 2012).

The significant but comparatively moderate effect of facilities further highlights the importance of the learning environment in influencing satisfaction. From a Task–Technology Fit (TTF) perspective, educational outcomes are optimized when available resources align with the tasks required of students (Goodhue & Thompson, 1995). In a Computer Science program, this alignment is particularly critical, as students rely heavily on laboratory equipment, specialized software, and stable internet connectivity to complete programming and development tasks. The findings suggest that while facilities are generally adequate, they may not fully meet the evolving demands of contemporary computing education. Limitations in hardware performance, software accessibility, or network reliability can constrain students' ability to engage in hands-on learning, thereby affecting both satisfaction and productivity.

In contrast, the non-significant effect of curriculum in the regression model suggests that its influence on student satisfaction may be indirect or mediated through other factors. Although students generally rated the curriculum positively, its impact appears to be contingent upon how it is delivered and supported within the instructional environment. This observation is consistent with the DeLone and McLean Information Systems Success Model, which emphasizes that system quality and service quality mediate the relationship between structural components and user satisfaction (DeLone & McLean, 2003). In this case, the curriculum provides the structural foundation of the program, but its effectiveness is realized only through competent instruction and adequate resources. Consequently, even a well-designed curriculum may fail to produce high satisfaction if not supported by effective teaching and appropriate facilities.

The absence of statistically significant differences across year levels further suggests that student experiences within the BSCS Department are relatively uniform. This consistency indicates that institutional practices, instructional approaches, and resource availability are applied in a similar manner across cohorts. While this may reflect stability in program delivery, it also implies that identified strengths and limitations are systemic rather than isolated to specific groups. From an evaluative standpoint, this reinforces the need for program-wide interventions rather than targeted improvements for particular year levels.

From a broader perspective, the findings reflect a socio-technical dynamic, wherein student satisfaction emerges from the interaction of human, technological, and organizational components (Bostrom & Heinen, 1977; Selwyn, 2016). Instructional quality (human), facilities and infrastructure (technical), and curriculum design (organizational) collectively shape the academic experience. Consistent with ICT for Development (ICT4D) perspectives, technology and systems act as amplifiers of existing institutional capacities (Heeks, 2009; Toyama, 2011). Where faculty expertise and instructional practices are strong, the impact of facilities and curriculum is enhanced; conversely, limitations in infrastructure or support can constrain the effectiveness of otherwise well-designed programs.

Taken together, the results suggest that student satisfaction in the BSCS Department is not solely determined by any single factor but is instead the product of interdependent elements within the academic system. Improvements in faculty development and facility enhancement are therefore likely to produce synergistic effects, reinforcing overall program effectiveness and student experience.

Another limitation of the study is the absence of qualitative data that could provide deeper insights into student perceptions. While the quantitative findings identify patterns of satisfaction, they do not fully explain the underlying reasons behind these patterns, particularly the lower satisfaction observed among fourth-year students and the non-significant role of curriculum. Incorporating qualitative approaches such as focus group

discussions, interviews, or open-ended survey responses would enable a more nuanced understanding of student experiences and enrich the interpretation of quantitative results.

These findings collectively reinforce the view that academic program effectiveness is best understood as a function of integrated instructional, technological, and organizational systems, rather than isolated components operating independently.

CONCLUSION

This study provides a comprehensive evaluation of student satisfaction within the BS Computer Science Department of North Negros College, integrating descriptive and inferential analysis within a theory-informed framework. The findings indicate that while the department demonstrates generally high levels of satisfaction across curriculum, facilities, and faculty performance, its overall effectiveness is shaped by specific factors that directly influence the student learning experience.

Among the evaluated domains, faculty performance emerged as the most significant determinant of overall satisfaction, highlighting the critical role of instructional quality in higher education. Facilities were also found to significantly influence satisfaction, underscoring the importance of adequate infrastructure in supporting technical learning environments. In contrast, curriculum, while positively perceived, did not exhibit a direct predictive effect, suggesting that its impact is mediated through instructional delivery and resource availability.

The results further indicate that student satisfaction is relatively consistent across year levels, reflecting a uniform academic experience within the department. While this consistency suggests stability in program implementation, it also implies that areas requiring improvement are systemic in nature and must be addressed at the institutional level.

Overall, the BSCS Department can be characterized as having achieved functional effectiveness, wherein core academic services are delivered satisfactorily and institutional processes are operational. However, the findings also indicate that the department has not yet reached full optimization. Enhancements in faculty development, facility modernization, and curriculum alignment with industry standards are necessary to elevate student satisfaction and improve academic productivity.

This study further demonstrates the value of integrating quantitative analysis with established theoretical frameworks—such as TAM, UTAUT, TTF, and the DeLone and McLean model—in evaluating educational programs. By situating empirical findings within these frameworks, the study provides a multidimensional understanding of student satisfaction and offers a robust basis for evidence-based decision-making.

Notably, this study is limited to a single private higher education institution, which constrains the external validity of the findings. Institutional context, including resource availability, faculty composition, and student demographics, may differ significantly across settings. As such, caution must be exercised in generalizing the results to other Computer Science programs without further comparative investigation.

Future research should adopt more robust methodological approaches to strengthen the validity and applicability of findings. These include the use of stratified sampling techniques to ensure adequate representation of graduating students, the application of mediation analysis to examine indirect relationships among variables, and the incorporation of mixed-methods designs to capture both quantitative trends and qualitative insights. Longitudinal studies tracking student satisfaction across multiple academic years are also recommended to better understand how perceptions evolve over time. Furthermore, replication across multiple institutions would provide comparative benchmarks and enhance the generalizability of results.

RECOMMENDATIONS

To enhance student satisfaction and program effectiveness, a set of prioritized and context-sensitive interventions is proposed. First, faculty development initiatives should be strengthened, particularly through

targeted training in emerging technologies and active learning strategies, as faculty performance demonstrated the strongest influence on student satisfaction. Given resource constraints typical of private institutions, these initiatives may be implemented through phased workshops and partnerships with industry practitioners.

Second, facility improvements should be strategically prioritized based on impact and feasibility. Rather than large-scale infrastructure overhauls, incremental upgrades—such as improving internet reliability, updating key laboratory units, and optimizing software availability—may yield significant gains in student experience with manageable costs.

Third, curriculum review processes should be institutionalized with a focus on industry alignment and practical skill development. This may include integrating project-based learning, industry case studies, and collaborative development tasks to enhance relevance and student engagement.

Fourth, the implementation of a structured technical support system is recommended to ensure timely assistance for laboratory and academic concerns. This may involve designated support personnel or scheduled consultation periods.

Finally, to support evidence-based decision-making, the department should adopt a performance monitoring framework that integrates both student satisfaction and objective productivity indicators, such as retention rates, time-to-degree, and graduate employment outcomes.

ACKNOWLEDGEMENTS

The researcher expresses sincere gratitude to the administration of North Negros College, the BS Computer Science Department, and the student respondents for their participation and support in this study.

REFERENCES

1. Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. Journal of Marketing Research, 14(3), 396–402. https://doi.org/10.2307/3150783
2. Bostrom, R. P., & Heinen, J. S. (1977). MIS problems and failures: A socio-technical perspective. MIS Quarterly, 1(3), 17–32. https://doi.org/10.2307/248710
3. Carifio, J., & Perla, R. (2008). Resolving the 50-year debate around using and misusing Likert scales. Medical Education, 42(12), 1150–1152. https://doi.org/10.1111/j.1365-2923.2008.03172.x
4. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.
5. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297–334. https://doi.org/10.1007/BF02310555
6. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008
7. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. Journal of Management Information Systems, 19(4), 9–30. https://doi.org/10.1080/07421222.2003.11045748
8. Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed.). SAGE Publications.
9. Goodhue, D. L., & Thompson, R. L. (1995). Task–technology fit and individual performance. MIS Quarterly, 19(2), 213–236. https://doi.org/10.2307/249689
10. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage Learning.
11. Heeks, R. (2009). The ICT4D 2.0 manifesto: Where next for ICTs and international development? Development Informatics Working Paper No. 42. University of Manchester.
12. Hilty, L. M., & Aebischer, B. (2015). ICT for sustainability: An emerging research field. Environmental Modelling & Software, 56, 158–165. https://doi.org/10.1016/j.envsoft.2014.07.002
13. Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39(1), 31–36. https://doi.org/10.1007/BF02291575

14. Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. Advances in Health Sciences Education, 15(5), 625–632. https://doi.org/10.1007/s10459-010-9222-y
15. Organisation for Economic Co-operation and Development. (2019). Measuring the digital transformation: A roadmap for the future. OECD Publishing. https://doi.org/10.1787/9789264311992-en
16. Selwyn, N. (2016). Education and technology: Key issues and debates (2nd ed.). Bloomsbury Academic.
17. Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. International Journal of Medical Education, 2, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd
18. Toyama, K. (2011). Technology as amplifier in international development. In Proceedings of the iConference (pp. 75–82). https://doi.org/10.1145/1940761.1940772
19. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478. https://doi.org/10.2307/30036540
20. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory. MIS Quarterly, 36(1), 157–178. https://doi.org/10.2307/41410412