Students' Academic Performance and Social Life in Flexible and Technology-Enhanced Learning Environments: Basis for Innovative Development Plan for E-Learning and Distance Education

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Abstract: This study examined students' academic performance and social life in flexible and technology-enhanced learning environments as a basis for developing an innovative e-learning and distance education program. The research was conducted among Bachelor of Secondary Education (BSE) English students at Pangasinan State University–Asingan Campus who experienced the transition to flexible and digitally mediated instruction. Using a descriptive–correlational design, data were collected from 95 students during the academic year 2021–2022 through a structured questionnaire and validated using official academic records.
The findings revealed that students maintained a very satisfactory level of academic performance despite challenges such as household distractions, domestic responsibilities, stress, and unstable internet connectivity. Social interaction was largely sustained through digital platforms, including learning management systems and social media applications. However, statistical analysis showed no significant relationship between social media use and academic performance. The results highlighted the need to strengthen institutional capacity through faculty training in digital pedagogy, interactive learning design, and effective technology integration...

Keywords: Academic performance, social life, flexible learning, technology-enhanced learning, e-learning, distance education..

Introduction

In recent years, higher education systems across the world have increasingly encountered disruptions that affect the continuity of teaching and learning. Global crises such as armed conflicts, pandemics, natural disasters, and economic instability have significantly challenged the traditional delivery of face-to-face instruction. Universities have been compelled to adopt alternative modes of instruction to ensure that learning continues despite such interruptions. As emphasized by UNESCO (2021), educational systems must develop resilient strategies that allow institutions to sustain academic activities even during periods of global uncertainty. These developments highlight the growing importance of instructional models that provide flexibility in time, location, and mode of learning.

Moreover, environmental challenges such as extreme weather conditions and rising heat index levels have also affected educational operations in many regions. In several countries, classes are suspended or shifted to remote modalities due to excessive heat, climate-related disasters, or unsafe physical learning environments. The increasing frequency of these disruptions demonstrates the need for educational systems that can quickly adapt without compromising learning outcomes. According to the Organization for Economic Co-operation and Development (OECD, 2021), flexible learning systems supported by digital technologies enable institutions to respond effectively to environmental and societal disruptions while maintaining instructional continuity.,

In response to these global challenges, flexible learning, distance education, and technology-enhanced learning have become essential approaches in contemporary higher education. Flexible learning allows institutions to adjust instructional delivery in terms of pace, time, and location, while technology-enhanced learning integrates digital tools and platforms that facilitate communication, collaboration, and access to educational resources. Studies suggest that these approaches help sustain student engagement and academic participation when traditional classroom interaction is limited (Hodges et al., 2020; Dhawan, 2020). By utilizing learning management systems, video conferencing tools, and digital resources, universities can maintain meaningful educational experiences even in disrupted contexts.

Furthermore, the integration of digital technologies in education has transformed the ways students interact, collaborate, and participate in academic communities. Social media platforms, online discussion forums, and virtual collaboration tools allow students to remain socially connected and academically engaged despite physical distance. These technologies support both academic performance and social interaction, which are essential components of the learning experience. Research indicates that technology-supported learning environments can foster collaboration, peer support, and communication among students when properly integrated into instructional practices (Aristovnik et al., 2020).

Given these realities, there is a growing need to examine how students experience learning in flexible and technology-enhanced environments. Understanding the relationship between students' academic performance and their social life in such learning contexts provides valuable insights for improving instructional strategies and institutional policies. Therefore, this study was conducted to investigate students' academic performance and social life in flexible and technology-enhanced learning environments at Pangasinan State University. The findings aim to provide empirical evidence that will serve as a basis for developing an innovative development plan for e-learning and distance education, thereby strengthening the capacity of higher education institutions to sustain effective teaching and learning amid evolving global challenges.

LITERATURE REVIEW

2.1 Flexible and Technology-Enhanced Learning in Higher Education

The integration of flexible and technology-enhanced learning has significantly transformed higher education systems worldwide. Flexible learning refers to instructional approaches that allow adjustments in time, pace, place, and mode of learning, enabling students to access educational opportunities beyond traditional classroom settings. Technology-enhanced learning, on the other hand, involves the strategic use of digital tools, online platforms, and learning management systems to support teaching and learning processes. Globally, universities have increasingly adopted these approaches to expand access, improve instructional delivery, and sustain learning continuity during disruptions (Hodges et al., 2020; Dhawan, 2020). The rapid shift to digital and hybrid learning environments has demonstrated that institutions equipped with technological infrastructure and digital pedagogical strategies are better prepared to maintain educational operations in times of crisis.

The growing importance of flexible and technology-enhanced learning has been emphasized by international organizations and educational researchers. According to UNESCO (2021), higher education institutions must strengthen digital readiness and develop flexible learning systems to ensure resilience in the face of global disruptions such as pandemics, conflicts, and climate-related emergencies. Similarly, the Organization for Economic Co-operation and Development (OECD, 2021) highlighted that digital transformation in education enables institutions to deliver instruction through multiple modalities, ensuring that students continue learning despite geographical, environmental, or social constraints. These developments demonstrate that preparedness for flexible and technology-supported instruction is now a critical component of sustainable higher education systems worldwide.

2.2 Academic Performance in Flexible Learning Environments

Academic performance remains a primary concern in the implementation of flexible and technology-enhanced learning systems. Research suggests that students can achieve comparable or even improved academic outcomes in online or hybrid learning environments when instruction is supported by effective digital pedagogy, structured learning materials, and active engagement strategies (García-Peñalvo et al., 2020). Flexible learning environments provide opportunities for students to manage their own learning pace and develop independent study skills, which can enhance comprehension and retention of knowledge. However, successful outcomes often depend on students' self-regulation abilities, access to reliable technology, and the quality of instructional design.

Despite these potential benefits, several studies highlight that students may also encounter challenges in flexible learning environments. Factors such as household distractions, limited technological resources, unstable internet connectivity, and increased responsibilities at home may affect students' ability to focus on academic tasks (Aristovnik et al., 2020). Nevertheless, research indicates that students who are provided with structured online learning environments and clear instructional guidance are more likely to maintain satisfactory academic performance. These findings emphasize the need for institutions to invest in instructional support systems and faculty training programs that enhance the effectiveness of flexible and technology-enhanced learning.

2.3 Social Interaction and Student Engagement in Digital Learning

Social interaction is an important element of the learning process, as it supports collaboration, motivation and a sense of belonging among students. In traditional classroom settings, students engage in direct communication with peers and instructors; however, flexible and distance learning environments require alternative methods of maintaining these interactions. Digital platforms, including learning management systems, social media applications, and virtual communication tools, have become important channels for academic collaboration and peer support (Junco, 2012). These technologies allow students to participate in discussions, share learning resources, and maintain social connections despite physical separation.

Research further suggested that meaningful interaction in online learning environments can positively influence students' academic engagement and satisfaction. When instructors incorporated collaborative activities, discussion forums and group projects into digital learning environments, students were more likely to remain motivated and socially connected (Keržič et al., 2021). However, scholars also cautioned that excessive or unstructured social media use may lead to distractions that interfere with academic responsibilities. Therefore, the integration of digital communication tools in education must be guided by well-designed instructional strategies that promote productive interaction while supporting academic goals.

2.4 Global Challenges and the Need for Preparedness in Flexible and Distance Education

The increasing frequency of global disruptions has reinforced the importance of preparedness in flexible and distance education systems. Events such as pandemics, armed conflicts, natural disasters, and extreme environmental conditions have demonstrated that traditional educational structures can be vulnerable to sudden interruptions. As a result, universities worldwide have recognized the need to develop resilient educational systems that can adapt to unpredictable circumstances. Hodges et al. (2020) explained that institutions capable of rapidly transitioning to online and distance learning are better able to sustain academic operations during crises.

Moreover, international studies indicated that preparedness for flexible and technology-enhanced learning requires more than simply adopting digital tools. Effective implementation depends on institutional infrastructure, faculty competence in digital pedagogy, and access to technological resources for students (OECD, 2021). Without these elements, the shift to online learning may lead to inequalities in access and participation. Consequently, higher education institutions are encouraged to invest in faculty training, digital learning platforms, and inclusive instructional design to ensure that flexible learning systems function effectively across diverse learning contexts.

2.5 Implications for Higher Education Institutions

The literature consistently emphasized that flexible and technology-enhanced learning should not be viewed merely as temporary solutions to educational disruptions but as long-term strategies for improving access, resilience, and instructional innovation in higher education. By integrating digital technologies with sound pedagogical practices, institutions can create learning environments that support both academic achievement and meaningful social engagement among students. Research suggests that universities that actively develop flexible learning frameworks are better prepared to respond to global challenges while maintaining educational quality (Dhawan, 2020).

Furthermore, the adoption of distance education and technology-supported learning systems encouraged institutions to rethink traditional teaching practices and develop more inclusive and adaptable learning environments. These systems enable students from diverse geographic and socio-economic backgrounds to participate in higher education while balancing personal, social, and academic responsibilities. As such, strengthening institutional preparedness for flexible and technology-enhanced learning is essential for ensuring the sustainability of higher education in an increasingly dynamic and uncertain world (UNESCO, 2021).

2.6. THEORETICAL FRAMEWORK

The present study is anchored on Constructivist Learning Theory, Self-Determination Theory, and the Technological Pedagogical Content Knowledge (TPACK) framework. These theoretical perspectives collectively explain how students construct knowledge, what motivates them to engage in learning, and how instruction should be designed in flexible and technology-enhanced learning environments. As higher education institutions increasingly adopt distance education and flexible learning modalities, understanding these theoretical foundations becomes essential in ensuring that instructional practices support both students' academic performance and social interaction in digital learning spaces.

Constructivist Learning Theory, proposed by Jean Piaget (1967), posited that learners actively construct knowledge through interaction with their environment rather than passively receiving information from instructors. According to this perspective, learning occurred when students assimilate new information into existing cognitive structures and accommodate new ideas through reflection and experience. In flexible and technology-enhanced learning environments, students interacted with various digital resources such as learning management systems, multimedia materials, discussion forums, and collaborative platforms. These tools allowed learners to explore concepts, participate in knowledge-sharing activities, and apply understanding through authentic tasks. Such active engagement promotes deeper comprehension and supports sustained academic performance in both online and distance learning contexts.

Complementing the constructivist perspective is Self-Determination Theory, developed by Edward L. Deci and Richard M. Ryan (2000), which emphasized the role of intrinsic motivation in learning. The theory identified three fundamental psychological needs that influence student motivation: autonomy, competence, and relatedness. In flexible learning environments, students often have greater control over their learning pace, schedules, and strategies, which supports the development of autonomy. Structured learning activities and timely feedback from instructors contributed to students' sense of competence, enabling them to feel capable of achieving academic tasks. Meanwhile, digital communication tools such as virtual discussions, collaborative projects, and peer interaction foster a sense of relatedness among learners. When these psychological needs are fulfilled, students are more likely to remain motivated, engaged, and persistent in their academic pursuits despite the challenges associated with distance education.

Another important theoretical foundation of the study is the Technological Pedagogical Content Knowledge (TPACK) framework, introduced by Punya Mishra and Matthew J. Koehler (2006). The TPACK framework explains the complex relationship among technology, pedagogy, and content knowledge in effective teaching practices. According to this framework, successful integration of technology in education requires instructors to understand not only the subject matter but also appropriate pedagogical strategies and digital tools that enhance student learning. In flexible and

technology-enhanced learning environments, instructors must design instructional experiences that effectively combine these three elements. Without proper alignment, the mere use of technology may not lead to improved learning outcomes. Thus, TPACK highlights the importance of faculty competence and professional development in delivering meaningful and interactive online instruction.

Furthermore, these theoretical perspectives collectively highlighted the importance of preparedness for flexible learning and distance education in modern higher education systems. As educational institutions continue to adopt technology-supported learning modalities due to global disruptions, environmental challenges, and evolving educational demands, the integration of sound pedagogical theories becomes essential in maintaining both academic effectiveness and meaningful social interaction among students. Flexible learning environments require not only digital infrastructure but also well-designed instructional strategies that support students' motivation, engagement, and collaborative learning experiences.

Taken together, Constructivist Learning Theory, Self-Determination Theory, and the TPACK framework provide a comprehensive foundation for understanding how flexible and technology-enhanced learning environments influence students' academic performance and social life. Constructivism explains the cognitive processes involved in knowledge construction, Self-Determination Theory explains the motivational factors that sustain student engagement, and the TPACK framework explains how instructors effectively integrate technology into pedagogy and content delivery. The integration of these theories supports the development of an innovative training program for educators, which aims to strengthen digital pedagogy, enhance student engagement, and sustain academic performance in flexible and distance education settings.

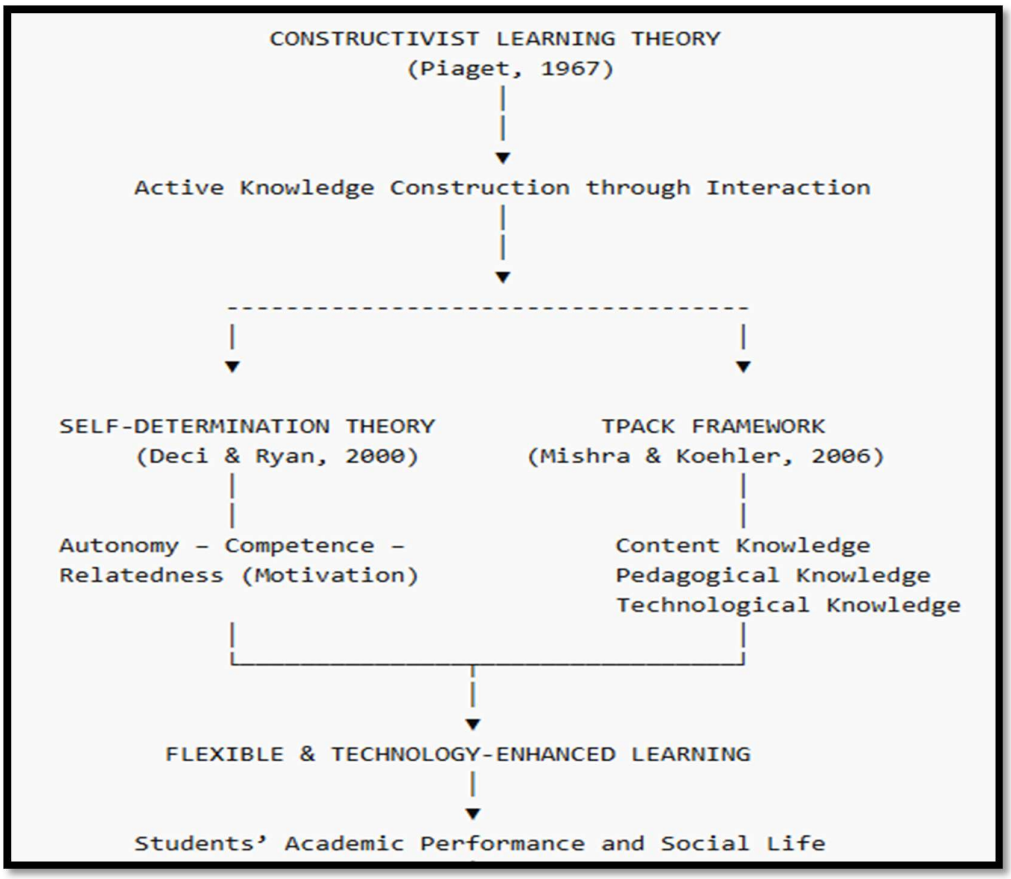

Figure 1. Framework of the Study

2.7. RESEARCH QUESTIONS

Generally, this study aimed to investigate the academic performance and social life of Bachelor of Secondary Education (BSE) English students amid the transition to flexible and technology-enhanced learning. Furthermore, it sought to develop an innovative e-learning and distance education program at Pangasinan State University.

Specifically, the study sought to address the following research questions:

What is the profile of the BSE English students in terms of:

a. year level;

b. gender;

c. social media applications used;

d. number of hours spent on social media; and

e. type of online communities subscribed to?

What is the academic performance of the BSE English students in their English subjects during flexible learning?

What are the social activities commonly practiced by the students during flexible learning?

Is there a significant relationship between the students' profile and their academic performance?

What problems are encountered by the students in flexible and technology-enhanced learning environments?

Based on the findings of the study, what Flexible and Technology-Enhanced Learning strategies can be proposed as an Innovative Development Plan to enhance students' academic performance and social life in e-learning and distance education?

MATERIALS AND METHODS

3.1. RESEARCH DESIGN

This study employed a descriptive–correlational research design to examine the academic performance and social life of students and to determine how selected profile variables relate to their academic outcomes. The descriptive component aimed to identify and present the characteristics of the respondents in terms of their demographic and technological profile, level of academic performance, nature of social activities, and problems encountered in flexible and technology-enhanced learning. The correlational component analyzed the degree of relationship between selected independent variables and the dependent variable, academic performance. The independent variables were examined to determine whether they had a significant association with students' academic performance, which served as the primary dependent variable. Academic performance was measured using the students' official grades in their English subjects during Academic Year 2021–2022. Social activities and problems encountered in the learning environment were treated as descriptive variables to provide a contextual understanding of the students' academic and social experiences.

3.2. RESPONDENTS OF THE STUDY

The respondents of the study were ninety-five (95) Bachelor of Secondary Education (BSE) major in English students from the Asingan Campus of Pangasinan State University, who were officially enrolled during academic year 2021–2022. Total enumeration was utilized because the number of enrolled BSE English students during the specified academic year was manageable and accessible to the researcher, allowing for the inclusion of the entire population in the study.

3.3. INSTRUMENTATION

The data for this study were collected using two primary instruments. The first instrument was a structured researcher-made questionnaire, which was organized into three sections. The first section gathered information on the students' demographic and technological profile variables, including age, gender, type of devices used, and social media engagement. The second section assessed students' social activities and interactions through social media during flexible learning, while the third section identified common problems encountered in flexible and technology-enhanced learning environments. The second instrument consisted of the students' official academic records, specifically their grades in English subjects for Academic Year 2021–2022, which were obtained with proper authorization from the university to ensure accuracy and reliability. To ensure the validity and reliability of the questionnaire, it was subjected to content validation by experts and a pilot test prior to its administration.

3.4. DATA GATHERING PROCEDURE

The researcher conducted data collection in a systematic manner. First, permission was secured from the administration of Pangasinan State University, Asingan Campus, to conduct the study and access the official student records. Following this, the structured questionnaire was distributed to all enrolled BSE English students, with clear instructions provided to ensure understanding and proper completion, while confidentiality of the respondents was strictly maintained.

Official academic records, specifically the students' grades in English subjects, were obtained from the university registrar with proper authorization to ensure accuracy and reliability. After the collection process, all responses were carefully checked for completeness, and academic records were verified for correctness. Finally, the data were organized by coding and tabulating the questionnaire responses and matching the academic grades with the corresponding respondents to facilitate proper analysis.

3.5. STATISTICAL TREATMENT OF DATA

To answer Sub-Problem #1, which focused on describing the profile of the respondents, frequency and percentage were used for categorical variables such as gender, type of devices used, and social media applications engaged in, while the mean was utilized for continuous variables like age. For Sub-Problem # 2, which dealt with describing the respondents' academic performance, social activities, and problems encountered in flexible and technology-enhanced learning, the mean was employed to determine the level or extent of these variables. To analyze the relationships between selected independent variables and the dependent variable of academic performance, Pearson product–moment correlation was applied for continuous variables, Eta coefficient for nominal and interval variable combinations, and point-biserial correlation for dichotomous and continuous variables. All statistical tests were interpreted at a 0.05 level of significance to determine whether the relationships observed were statistically significant.

RESULTS AND DISCUSSION

4.1. PROFILE OF THE RESPONDENTS

This portion presents the profile of the respondents in terms of year level, gender, social media applications used, and the number of hours spent on social media daily. It can be gleaned from table 1 that majority of respondents were third-year students (37.1%), followed by first-year students (30.0%) and fourth-year students (21.4%), while second-year students comprised the smallest group (11.4%). Female students dominated the population at 82.9%, with males at 12.9% and those identifying as bisexual at 4.3%. In terms of social media engagement, most respondents spent 3–4 hours per day (34.8%), followed by 5–6 hours (20.3%), 1–2 hours (13.0%), and 7–8 hours (13.0%). A smaller proportion spent 9–10 hours (10.1%), 11–12 hours (2.9%), and more than 13 hours (5.8%) online. The findings indicate moderate digital engagement, with Facebook and YouTube being the most frequently used platforms, suggesting that respondents are well-acquainted with digital tools necessary for flexible

learning environments.

Table 1. Profile of the Respondents

Variable	Category	Frequency	Percent
Year Level	First Year	29	30.0
	Second Year	11	11.4
	Third Year	35	37.1
	Fourth Year	20	21.4
Gender	Female	79	82.9
	Male	12	12.9
	Bisexual	4	4.3
Social Media Hours	1–2 hrs	12	13.0
	3–4 hrs	33	34.8
	5–6 hrs	19	20.3
	7–8 hrs	12	13.0
	9–10 hrs	10	10.1
	11–12 hrs	3	2.9
	13+ hrs	5	5.8

The findings of the present study regarding the demographic profile and social media engagement of students are consistent with prior research. The predominance of female students aligns with the results of Lenton et al. (2018), who reported that education programs, particularly in language and teaching majors, tend to have higher female enrollment. Similarly, the pattern of social media use, with most students spending 3–4 hours daily and favoring platforms such as Facebook and YouTube, corroborates the findings of Junco (2012), who observed that college students engage regularly with social media for both academic and social purposes, often averaging several hours per day. Moreover, the moderate digital engagement reported in this study is supported by Ellison, Steinfield, and Lampe (2007), who emphasized that social media usage among university students facilitates communication, information sharing, and adaptation to flexible or technology-enhanced learning environments. These studies collectively reinforce that the respondents' familiarity with digital tools is a common characteristic among contemporary higher education students, reflecting the growing integration of technology in learning contexts.

4.2. Academic Performance in English Subjects

This section presents the academic performance of the respondents in selected English subjects, highlighting their minimum, maximum, and mean grades. Table 2 reveals the respondents' overall academic performance in English subjects is Very Satisfactory with an overall mean of 1.8156. Students performed Outstanding in key teaching and assessment subjects such as EL106 Teaching and Assessment of Literature Studies, EL107 Teaching and Assessment of the Macroskills, COG1 Remedial Instruction, and EL108 Teaching and Assessment of Grammar, indicating strong competence in practical and pedagogical skills. Meanwhile, subjects like EL102 Structure of English, EL103 Principles and Theories of Language Acquisition and Learning, EL104 Language Programs and Policies in a Multilingual Society, EL117 Literary Criticism, EL118 Technical Writing, and EL110 Language

Education Research were rated Satisfactory, suggesting areas where students achieved adequate understanding but could improve further. Overall, these results highlight that students excel in applied components while performing steadily in more theoretical or analytical subjects.

Table 2. Academic Performance in English Subjects

Subjects	Minimum	Maximum	Mean	Description
EL100 Intro to Linguistics	1.50	3.00	1.9674	Very Satisfactory
GE4 Purposive Communication	1.00	2.50	1.7283	Very Satisfactory
EL101 Language, Culture and Society	1.00	3.00	1.8877	Very Satisfactory
EL102 Structure of English	1.00	2.75	2.0580	Satisfactory
EL103 Principles and Theories of Language Acquisition and learning	1.25	3.00	2.1686	Satisfactory
EL111 children and Adolescent Literature	1.25	2.25	1.8182	Very Satisfactory
EL112 Mythology and Folklore	1.25	3.00	1.8444	Very Satisfactory
EL114 Survey of Afro Asian Literature	1.00	4.00	1.8125	Very Satisfactory
EL113 Survey of Philippine Literature in English	1.00	2.50	1.6686	Very Satisfactory
EL116 Contemporary, Popular and Emergent Literature	1.50	4.00	1.9286	Very Satisfactory
EL120 Technology in Language education	1.00	2.25	1.6512	Very Satisfactory
EL104 Language Programs and Policies in Multilingual Society	1.25	2.75	2.1419	Satisfactory

EL109 Speech and Theater Arts	1.25	3.00	1.5897	Very Satisfactory
EL115 Survey of English and American Literature	1.25	4.00	1.9551	Very Satisfactory
EL117 Literary Criticism	1.50	3.00	2.0066	Satisfactory
EL118 Technical Writing	1.25	2.75	2.1513	Satisfactory
EL105 Language Learning Materials Development	1.25	3.00	1.9276	Very Satisfactory
EL106 Teaching and Assessment of Literature Studies	1.00	3.00	1.4038	Outstanding
EL107 Teaching and Assessment of the Macros kills	1.00	2.75	1.4737	Outstanding
COG1 Remedial Instruction	1.00	2.50	1.4359	Outstanding
COG2 Creative Writing	1.25	2.75	1.7500	Very Satisfactory
EL108 Teaching and Assessment of Grammar	1.00	2.25	1.3563	Outstanding
EL110 Language Education Research	1.25	3.00	2.0066	Satisfactory
EL119 Campus Journalism	1.25	2.75	1.8421	Very Satisfactory
Over-all			**1.8156**	**Very Satisfactory**

Legend:
1.0–1.49 Outstanding

1.5–1.99 Very Satisfactory

2.00–2.49 Satisfactory

2.50–3.00 Fair

3.01 and below Poor

The results suggest that students demonstrated academic resilience and competence, particularly in practical and instructional subjects, which may reflect their active engagement and adaptability in flexible learning environments. These findings are consistent with prior studies. For instance, Alkharusi (2010) noted that students in teacher education programs often perform better in applied teaching-

related subjects due to hands-on practice and instructional exposure. Similarly, García-Peñalvo et al. (2020) emphasized that technology-enhanced learning environments can support students in maintaining satisfactory academic performance across theoretical and applied domains. This corroboration indicates that the combination of student engagement, pedagogical training, and digital familiarity contributes to sustained academic achievement, even under flexible learning modalities.

4.3. Social Activities of the Respondents

This area presents the social activities of the respondents, highlighting how students engaged in various online interactions during flexible learning. The data reveal that reading was the most prevalent activity, with 97.1% of respondents participating, followed by responding and downloading music, each at 72.9%, indicating strong engagement in information consumption and interactive activities. Moderate participation was noted in updating and asking (55.7%), and holding conversations (51.4%), while activities involving content creation, such as uploading music, blogging, submitting, and creating polls, were much less frequent, ranging from 42.9% to 1.4%

Table 3. Social Activities of the Respondents

Social Activity	Frequency	Percent	Rank
Reading	92	97.1	1
Responding	69	72.9	2
Downloading Music	69	72.9	2
Updating	53	55.7	4
Asking	53	55.7	4
Holding Conversation	49	51.4	6
Uploading Music	41	42.9	7
Blogging	5	5.7	8
Submitting	5	5.7	8
Creating Polls	1	1.4	10

These findings suggested that students primarily use social media for communication and information sharing rather than for generating content, highlighting an area for potential pedagogical intervention to foster more collaborative and creative learning opportunities. This observation is supported by the study of Junco (2012), which found that students tend to engage more in passive social media activities, such as reading and responding, rather than in content creation, and that integrating interactive online tasks can enhance engagement and learning outcomes

4.4. Relationship Between Profile and Academic Performance

This section presents the relationship between the respondents' profile variables and their academic performance, as shown in Table 4. The analysis reveals that none of the profile factors, including year level, gender, social media applications used, and hours spent on social media—had a significant relationship with academic performance.

Table 4			Decision
Year Level	Pearson Correlation	.106	NS

	Sig. (2-tailed)	.538	NS
Gender	Eta Value	.022	NS
	Sig. (2-tailed)	.691	NS
Youtube	Point Biserial Coefficients	-.254	NS
	Sig. (2-tailed)	.134	NS
Pinterest	Point Biserial Coefficients	.329	NS
	Sig. (2-tailed)	.050	NS
Facebook	Point Biserial Coefficients	-.079	NS
	Sig. (2-tailed)	.648	NS
Tiktok	Point Biserial Coefficients	-.017	NS
	Sig. (2-tailed)	.922	NS
Instagram	Point Biserial Coefficients	-.325	NS
	Sig. (2-tailed)	.053	NS
Whatsapp	Point Biserial Coefficients	-.314	NS
	Sig. (2-tailed)	.062	NS
Linkedin	Point Biserial Coefficients	.[c]	NS
	Sig. (2-tailed)	0.000	S
Messenger	Point Biserial Coefficients	-.072	NS
	Sig. (2-tailed)	.679	NS
Twitter	Point Biserial Coefficients	-.309	NS
	Sig. (2-tailed)	.066	NS
Number Of Hours Used in Social Media	Pearson Correlation	.020	NS
	Sig. (2-tailed)	.908	NS
*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).			
c. Cannot be computed because at least one of the variables is constant.			

Specifically, the Pearson correlation for year level (r = 0.538) and social media hours (r = 0.908), the Eta for gender (0.691), and the Point Biserial for social media apps (p > 0.05) all indicate non-significance. These findings suggest that students' demographic characteristics and social media engagement did not substantially influence their academic outcomes. This result is consistent with prior research indicating that factors such as social media use and demographic variables do not necessarily predict academic performance, emphasizing the role of other influences like learning strategies and motivation (Junco, 2012; Paul et al., 2012).

4.5. Problems Encountered in Flexible Learning

This section presents the problems encountered by respondents during flexible learning, as summarized in Table 5. The data indicate that the most prevalent issue was a noisy home environment, reported by 88.6% of students, followed by household responsibilities (71.4%) and stress (68.6%). Other notable challenges included internet speed and cost, as well as intermittent connectivity (both at 65.7%), and incompatibility of devices (45.7%). Less frequently reported issues were working part-time (40.0%) and loss of interest (32.9%), while several potential challenges—such as insufficient time, lack of availability, and lack of accessible resources—were not reported (0.0%).

	Frequency	Percent	Rank
Doing Household	68	71.4	2
Having noisy	84	88.6	1
Working partv time	38	40.0	7
lost of interest	31	32.9	8
stressed out	65	68.6	3
speed and cost	62	65.7	4.5
experiencing intermittent	62	65.7	4.5
Incompatibility	43	45.7	6
Insufficient	0	0.0	10.5
long time	0	0.0	10.5
Availability	0	0.0	10.5
lack of accessible	0	0.0	10.5

These findings highlight that environmental and psychological factors pose significant barriers to student engagement and learning in flexible settings. The results corroborate previous studies emphasizing that home distractions, technological limitations, and stress can negatively impact students' academic performance and engagement during online or hybrid learning (Adnan & Anwar, 2020; Dhawan, 2020).

Proposed Innovative Development Plan on Flexible and Technology-Enhanced Learning Strategies

I. Introduction and Rationale

The global transformation of higher education has accelerated the adoption of flexible and

technology-enhanced learning (FTEL) models. Institutions are increasingly required to design

instructional systems that are resilient, inclusive, and responsive to diverse learner needs. At Pangasinan State University–Asingan Campus, the transition to flexible and technology-enhanced learning modalities, prompted by climate-related disruptions and operational interruptions, has revealed both strengths and limitations in maintaining academic quality, student engagement, and continuity of operations.

The study, Students' Academic Performance and Social Life in Flexible and Technology-Enhanced Learning Environments, indicates that while students maintained academic performance under flexible arrangements, variations emerged in levels of engagement, interaction, and social connectedness. Academic outcomes in flexible learning environments are closely intertwined with students' social experiences and technological access, emphasizing the need for structured faculty development and strategic program design that extend beyond technical training toward comprehensive pedagogical redesign.

Literature on flexible e-learning highlighted that flexibility must be intentionally structured, encompassing dimensions such as time, pace, content access, instructional methods, and assessment strategies, all aligned with clearly defined learning outcomes. Poorly designed flexibility may weaken academic rigor, while structured flexibility enhances learner autonomy without compromising standards.

Informed by both empirical institutional findings and international research, this plan proposes a comprehensive Innovative Development Plan aimed at institutionalizing research-informed, outcome-based, and globally adaptable practices in flexible and technology-enhanced learning.

II. Goals and Objectives

The primary goal of this development plan is to enhance institutional capacity in designing, implementing, and sustaining structured flexible learning environments that support both academic achievement and student social engagement.

Specifically, it seeks to:

deepen faculty understanding of theoretical and pedagogical foundations of flexible learning.

strengthen instructional design skills aligned with outcomes-based education principles.

build faculty capacity to integrate digital technologies meaningfully and pedagogically.

enhance flexible and valid assessment systems that ensure academic rigor.

promote strategies addressing both academic performance and students' social life in FTEL environments.

III. Theoretical and Research Foundations

The plan is anchored on the principle of structured flexibility, which integrates flexibility within a coherent instructional design framework. Research indicates that effective flexible learning requires:clarity in learning outcomes, alignment of instructional strategies, thoughtful support of learner autonomy, institutional evidence demonstrates that FTEL affects not only academic performance but also students' social interactions. Collaborative learning opportunities, instructional presence, and meaningful technology integration are essential to mitigate isolation and disengagement.

By synthesizing empirical institutional data and international best practices, this development plan ensures that faculty development and program implementation are grounded in both local evidence and globally recognized educational frameworks.

IV. Program Design and Structure

The development plan comprises four key components, delivered through workshops, guided course redesign, and monitored implementation:

Foundations of Flexible and Technology-Enhanced Learning

Explore dimensions of flexibility, instructional alignment, and outcome-based course planning.

Focus on autonomy-supportive learning environments that maintain academic standards.

Digital Pedagogy and Technology Integration

Optimize learning management systems and asynchronous/synchronous modules.

Promote interactive design, collaboration, and higher-order thinking in flexible learning contexts.

Assessment and Academic Integrity

Develop alternative assessments aligned with outcomes, including performance-based tasks, reflective outputs, and portfolios.

Ensure flexible assessment maintains rigor, validity, and reliability.

Student Academic and Social Support Systems

Foster virtual communities of learning and strengthen feedback mechanisms.

Implement monitoring systems for at-risk students to support academic and social outcomes

V. Implementation Framework

Phase	Program component	Description of activities		Responsible office/unit	Time frame	Expected output
Phase 1	Needs assessment and planning	Conduct institutional assessment of faculty readiness, technological capacity, and instructional needs. Consolidate findings to inform design.		Office of academic affairs & department chairs	Month 1	Needs assessment report & development plan
Phase 2	Module development	Design structured training materials grounded in research and institutional findings.		Instructional development team & qa office	Month 2	Completed modules & guides

Phase 3	Faculty workshops	Conduct workshops on structured flexibility, digital pedagogy, assessment, and student support.		Campus administration & resource speakers	Month 3	Trained faculty & workshop documentation
Phase 4	Guided course redesign &validation	Faculty redesign course syllabi aligned with ftel principles. Peer review and validation.		Department chairs & qa panel	Month 4	Revised & approved course syllabi
Phase 5	Implementation & monitoring	Pilot redesigned courses, monitor engagement, academic performance, and instructional practices.		Faculty & qa office	Following semester	Monitoring reports & performance data
Phase 6	Evaluation & continuous improvement	Conduct post-implementation evaluation using faculty self-assessment, student feedback, and academic data.		Office of academic affairs & qa office	End of pilot semester	Recommendations for scaling and refinement

VI. Expected Institutional Impact

The implementation of this development plan is expected to significantly enhance the competence of faculty in instructional design and digital pedagogy, equipping them with the skills needed to create flexible, engaging, and pedagogically sound learning experiences. Courses across programs will be more effectively aligned with learning outcomes, instructional activities, and flexible assessment strategies, ensuring that academic rigor is maintained while supporting diverse student learning needs. As a result, students are anticipated to demonstrate higher levels of engagement,

motivation, and social interaction, fostering a balanced development of both academic performance and social well-being within flexible and technology-enhanced learning environments.

In addition, this plan will strengthen the university's institutional capacity to participate in international collaborations, benchmarking initiatives, and global knowledge exchange, creating opportunities for cross-border partnerships and alignment with global best practices in e-learning. By integrating research-informed strategies with practical implementation frameworks, the plan provides a scalable and sustainable approach to embedding FTEL strategies across courses and programs. Ultimately, this framework positions Pangasinan State University–Asingan Campus to maintain high-quality instruction, enhance student outcomes, and lead in innovative, technology-supported education both locally and internationally.

VII. Key Takeaways of the Plan

Flexible and technology-enhanced learning represents not just a response to educational disruption but a strategic approach to sustainable, inclusive, and globally relevant higher education.

By implementing this Innovative Development Plan, Pangasinan State University–Asingan Campus affirms its commitment to academic excellence, student well-being, and pedagogical innovation, ensuring that structured flexibility, technological integration, and social engagement are embedded in all learning environments.

CONCLUSIONS

The findings of this study reveal that Bachelor of Secondary Education (BSE) English students at Pangasinan State University spent a moderate amount of time, averaging three to four hours daily, on social media platforms, primarily Facebook and YouTube. Despite this, the respondents demonstrated overall Very Satisfactory academic performance in their English subjects, particularly excelling in applied and pedagogical courses such as Teaching and Assessment of Literature Studies, Teaching and Assessment of the Macroskills, Remedial Instruction, and Teaching and Assessment of Grammar.

In terms of social activities, students were highly engaged in information consumption and interactive activities on social media, such as reading posts (97.1%), responding to content, and downloading music (72.9%), whereas content creation was minimal. The study further showed that profile variables, including year level, gender, types of social media applications used, and hours spent on social media, did not have a significant relationship with academic performance. Students, however, faced notable challenges in flexible and technology-enhanced learning, including environmental and psychological barriers such as noisy home environments (88.6%), household responsibilities (71.4%), and stress (68.6%), as well as technological difficulties like slow internet connections and device incompatibility.

Thus, these findings highlighted the resilience and adaptability of students in balancing social media engagement with academic responsibilities while highlighting the need for structured support. Consequently, this study provides a solid empirical basis for proposing a comprehensive Training Program on Flexible and Technology-Enhanced Learning (FTEL) designed to enhance both students' academic performance and their social engagement in online learning environments.

RECOMMENDATIONS

Based on the findings of this study, several recommendations are proposed to enhance the academic performance and overall learning experience of BSE English students in flexible and technology-enhanced learning environments. First, teachers are encouraged to integrate innovative and interactive pedagogical strategies, such as gamification, online collaborative tasks, and simulation exercises, to strengthen both theoretical understanding and applied competencies. Second, educators may design activities that encourage students to actively create content on social media and digital platforms, complementing their high engagement in passive online activities and promoting deeper participation and collaborative learning. To address the environmental and technological challenges

identified, institutions should provide practical support, including workshops on effective study habits at home, access to reliable internet, and compatible devices, to ensure equitable learning opportunities for all students. Additionally, continuous feedback mechanisms and periodic assessments should be implemented to monitor student progress, enabling educators to adjust instructional strategies in real time and address emerging learning needs. Finally, future research is encouraged to investigate interventions that integrate students' digital literacy, social media engagement, and pedagogical techniques to optimize academic outcomes and enhance learning experiences in flexible and technology-enhanced education contexts.

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