

## HyFlex Learning and its Perceived Effects on Grammar Acquisition among Language Education Majors

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**Abstract.** The growing adoption of Hybrid-Flexible (HyFlex) learning – a course design model in which students choose, each session, whether to attend face-to-face, synchronously online, or asynchronously – in Philippine higher education raises urgent questions about its impact on grammar acquisition among Language Education majors. In provincial state universities where technology infrastructure is limited, the model’s equivalency principle remains uncertain. No prior study has examined student-reported HyFlex grammar learning experiences among Language Education majors in this context. This descriptive quantitative study investigated the perceived effects of HyFlex learning on grammar acquisition among 112 second-year Bachelor of Secondary Education (BSED) Language Education students – enrolled in English and Filipino programs – at Nueva Ecija University of Science and Technology (NEUST) Sumacab Campus during the 2024–2025 academic year. Using purposive total-population sampling, the researcher constructed a validated four-point forced-choice Likert scale survey which was distributed via Google Forms. Data were analyzed using weighted means, standard deviations, composite means, and Mann-Whitney U tests comparing English and Filipino majors across ten dimensions in two categories: HyFlex effectiveness (accessibility, connectivity, and emotional response) and perceived effects on grammar acquisition (academic performance, cognitive presence, speaking skills development, emotional presence, productivity, time management, and learning capability). Results indicate that respondents generally perceived HyFlex as accessible and moderately supportive of grammar learning. However, connectivity remained the most critical barrier, with a composite mean indicating disagreement with adequate internet access. Mann-Whitney U tests revealed significant differences between English and Filipino majors in emotional response and speaking skills development, while all other dimensions were not significantly different. Despite infrastructure challenges, however, respondents perceived HyFlex as generally effective in supporting grammar acquisition. These findings indicate that

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perceived HyFlex effectiveness depends on infrastructure readiness, instructional design quality, and learner self-regulation capacity.

**Keywords:** grammar acquisition; hybrid-flexible instruction; HyFlex learning; language education; multimodal education

## 1. Introduction

Higher education has increasingly embraced multimodal learning environments in order to accommodate diverse student needs, schedules, and circumstances. Hybrid-Flexible (HyFlex) learning is one such model, a course design model in which students choose, on a session-by-session basis, whether to attend face-to-face, synchronously online, or asynchronously through recorded materials, without giving prior notice to the instructor (Barr & Luo, 2025; Beatty, 2019). Built on four core values—learner choice, equivalency, reusability, and accessibility—HyFlex departs from fixed-mode instruction by offering flexibility while maintaining equivalent learning outcomes across all modes.

Implementation requires deliberate design: instructors create activities accessible across all three modes through video conferencing, learning management systems (LMS), discussion boards, and recorded lectures (Chen & Lai, 2024; Morse & Plett, 2025). In the Philippines, the Commission on Higher Education (CHED) has formally endorsed flexible learning through CMO No. 16, Series of 2022, directing higher education institutions (HEIs) to implement multimodal instruction. This policy has accelerated HyFlex adoption across state universities, including those in Nueva Ecija, where connectivity and resource constraints make modality choice a practical necessity rather than a preference (Bustillo & Aguilos, 2022).

For Language Education majors—encompassing English and Filipino programs—HyFlex carries particular significance. Grammar acquisition, foundational to both academic achievement and professional language teaching, requires interactive, feedback-rich environments with immediate correction and scaffolded practice (Cuyos et al., 2024). However, whether the HyFlex model can provide these conditions in under-resourced settings remains unclear. Studies in the Philippine context have addressed modular learning barriers (Bustillo & Aguilos, 2022), broad technology use in hybrid settings (Mobo et al., 2022), and spoken language production in online environments (Rokhayani et al., 2024)—yet none has examined how Language Education majors specifically experience HyFlex grammar learning. The present study addresses this gap directly.

The global HyFlex literature also reveals an important gap. Barr and Luo (2025) reviewed 57 empirical studies and found neutral academic outcomes on average, but noted persistent technology, readiness, and equity challenges. Cumming et al. (2024) identified infrastructure barriers and reduced social connection as dominant student concerns while Athens (2023) found students dissatisfied with peer connectivity and technology reliability in HyFlex settings. However, none of these studies examined grammar acquisition specifically, nor were any conducted in a low-infrastructure provincial Philippine context. This study fills both gaps.

This study was conducted at NEUST Sumacab Campus during AY 2024–2025, where second-year Language Education majors attended HyFlex grammar courses across face-to-face, synchronous online, and asynchronous modes. The findings are intended to inform instructional design, institutional policy, and professional development for language educators in similar provincial contexts.

## 2. Research Problems

This study sought to determine the perceived effects of HyFlex learning on the grammar acquisition of second-year Language Education major students (English and Filipino) at NEUST Sumacab Campus during the 2024–2025 academic year. Grounded in Beatty's (2019) Equivalency Principle, the study also examined whether these perceptions differ significantly between the two program majors. Specifically, the following questions guided the study:

1. How do second-year Language Education students perceive the effectiveness of HyFlex learning?
2. What are the perceived effects of HyFlex learning on the grammar acquisition of second-year Language Education students?
3. Is there a significant difference in the perceived effectiveness of HyFlex learning and its effects on grammar acquisition between English and Filipino majors?

## 3. Literature Review

### 3.1 The HyFlex learning model

HyFlex, short for Hybrid-Flexible, is a course design model developed by Brian J. Beatty at San Francisco State University in 2005 (Beatty, 2019). In this model, students attend any session in one of three modes – face-to-face, synchronously online, or asynchronously through recorded materials – without advance notice to the instructor (Barr & Luo, 2025). Beatty (2019) identified four core values: (a) learner choice; (b) equivalency – all modes lead to equivalent learning outcomes; (c) reusability of learning artifacts across modes; and (d) accessibility to all modes for all students. These values distinguish HyFlex from blended formats in which mode participation is instructor-determined.

Effective HyFlex implementation depends on specific instructional strategies. Instructors must design parallel learning activities accessible across all three modes simultaneously, ensuring equivalent access to materials, peer interaction, and feedback. Common strategies include live-streamed lectures with recording, LMS-hosted discussion boards, asynchronous video assignments, and digital annotation tools (Chen & Lai, 2024; Morse & Plett, 2025). Barr and Luo (2025) found that most HyFlex courses reported neutral academic outcomes; however, technology challenges, instructor readiness, and equity concerns persisted.

Cumming et al. (2024) found that students valued HyFlex flexibility but reported reduced social connection and technology barriers as dominant challenges while Hong et al. (2023) noted that research has focused primarily on perceptions, leaving measurable learning outcomes understudied. These findings, from well-resourced international contexts, raise the question as to whether HyFlex's equivalency principle holds where infrastructure is limited. This is the question this study examines.

### 3.2 HyFlex learning in the Philippine context

In the Philippines, flexible learning was institutionalized through CHED CMO No. 16, Series of 2022. Bustillo and Aguilos (2022) documented a persistent digital divide in provincial Philippine HEIs, particularly in device ownership and internet reliability, directly affecting the feasibility of HyFlex's equivalency and accessibility principles. Mobo et al. (2022) found that while students benefited from asynchronous flexibility in Asia-Pacific hybrid settings, faculty development for multimodal formats remained inadequate. Subsequently, Tardaguila and Parungao (2025) observed that technology-assisted language learning in the Philippine tertiary context requires deliberate pedagogical scaffolding. While Cuyos et al. (2024) previously documented persistent grammatical errors among Filipino tertiary learners in verb tense, subject-verb agreement, and article usage—errors that require the corrective, interactive feedback that HyFlex environments must purposefully provide.

What previous studies have not addressed, however, is the specific experience of Language Education majors in HyFlex grammar courses at a provincial Philippine state university. Bustillo and Aguilos (2022) examined modular delivery broadly, Mobo et al. (2022) addressed general hybrid technology use and Tardaguila and Parungao (2025) focused on technology-assisted language learning without isolating grammar or HyFlex specifically. Yet no prior study has systematically documented how HyFlex affects grammar acquisition for pre-service language teachers in this infrastructure-constrained context. This constitutes the gap the present study addresses.

### 3.3 Self-regulation, motivation, and academic outcomes in HyFlex settings

Self-regulation is central to HyFlex success. Zimmerman's (2002) self-regulation theory holds that learners who monitor and adjust their strategies maintain engagement regardless of instructional format—critical in HyFlex where mode selection and help-seeking rest with the student. Broadbent and Poon (2015) confirmed that time management and critical thinking were the strongest achievement predictors in flexible online contexts. Athens (2023) found that most HyFlex students preferred online modes for convenience but were less satisfied with peer connectivity and technology performance; self-regulatory skills were significant predictors of success.

Indeed, Razali and Tasir (2025) confirmed that students with weak self-regulation faced the greatest difficulty in HyFlex, while proactive engagement with instructor feedback predicted positive outcomes. Liu and Rodriguez (2019) found that synchronous attendees—both face-to-face and online—consistently outperformed asynchronous attendees, reinforcing the link between attendance mode and grammar learning outcomes.

### 3.4 Emotional and equity dimensions of HyFlex learning

It has been found that emotional presence and student belonging are areas in which the HyFlex model may underperform relative to face-to-face learning. Detyna and Koch (2023) found that HyFlex students—especially those attending remotely—frequently reported disconnection from peers and instructors while Cumming et al. (2024) similarly identified reduced community as a recurring barrier,

particularly for remote attendees. This social disconnection increases academic anxiety, which language acquisition research links to reduced grammatical development (Rokhayani et al., 2024).

Equity compounds these emotional challenges in under-resourced settings with Nōuakas et al. (2023) finding that students with inferior technology received measurably worse HyFlex experiences, thus undermining the model's equivalency commitment. For Language Education majors in provincial Philippine universities, this translates to unequal access to synchronous grammar instruction and real-time feedback. Meanwhile, Martin et al. (2020) identified social presence and instructor immediacy as the strongest predictors of student satisfaction in flexible learning environments.

### **3.5 Grammar learning in multimodal environments**

Grammar learning in multimodal environments poses distinct challenges. Inayati et al. (2022) found that asynchronous grammar instruction, while flexible, reduced metacognitive engagement due to the absence of immediate teacher feedback. Hrastinski (2008) demonstrated that synchronous communication supports cognitive participation and social presence in ways asynchronous formats cannot replicate – directly relevant to grammar instruction requiring real-time correction. Chen and Lai (2024) emphasized that HyFlex language courses must provide communicative grammar practice – not merely content delivery – across all modes. Notably, Cuyos et al. (2024) found that Filipino tertiary students' grammatical errors persist without explicit corrective feedback, the kind of intervention most at risk in asynchronous delivery.

Taken together, while HyFlex has been studied broadly, its perceived effects on grammar acquisition in a low-infrastructure provincial Philippine university – among Language Education majors in English and Filipino programs – remain undocumented. Three specific gaps exist: (1) no study has examined HyFlex effectiveness perceptions (accessibility, connectivity, emotional response) in this context; (2) no study has documented perceived effects on grammar acquisition dimensions for this population; and (3) no study has tested whether these perceptions differ significantly across English and Filipino language programs – a comparison directly relevant to whether Beatty's (2019) Equivalency Principle holds in practice. The present study addresses all three gaps.

## **4. Methodology**

### **4.1 Research design**

This study employed descriptive quantitative research design (Ary et al., 2019; Creswell & Creswell, 2018). A structured survey questionnaire was administered to second-year Language Education students enrolled in HyFlex grammar courses at NEUST Sumacab Campus. Likert-scale responses were analyzed using weighted means, standard deviations, composite means, and Mann-Whitney U tests to describe and compare perceptions of HyFlex effectiveness and grammar acquisition effects between English and Filipino majors. Since the study measured perceptions rather than direct grammar performance, all findings are interpreted as perceived effects.

## 4.2 Research locale

The study was conducted at NEUST Sumacab Campus in Cabanatuan City, Nueva Ecija, Philippines, which implemented flexible learning modalities per CHED CMO No. 16, Series of 2022. The campus was selected because it offers HyFlex grammar courses for second-year Language Education students, typified provincial state universities with variable internet access and LMS availability, and institutional access and approval were confirmed prior to data collection.

## 4.3 Participants

The participants comprised 112 second-year BSED Language Education students majoring in English and Filipino at NEUST Sumacab Campus during the academic year 2024–2025. All participants were formally enrolled in grammar courses delivered through the HyFlex learning modality, with formal access to all three participation modes: face-to-face, synchronous online via Google Meet, and asynchronous access through the LMS. Purposive total-population sampling was employed (Etikan et al., 2016). All 112 accessible second-year Language Education students enrolled in HyFlex grammar courses at NEUST Sumacab Campus during AY 2024–2025 were included: 58 English majors (51.79%) and 54 Filipino majors (48.21%).

## 4.4 Research instrument

The primary data collection instrument was a researcher-constructed survey questionnaire adapted from validated HyFlex learning and student engagement frameworks (Athens, 2023; Barr & Luo, 2025; Beatty, 2019) and contextualized to the Philippine language learning environment at NEUST. The questionnaire comprised three sections aligned with the study's research questions. Section 1 gathered the demographic profile of respondents (age, gender, and program major). Program major served as the grouping variable for the Mann-Whitney U test conducted to address Research Question 3.

Sections 2 and 3 used a four-point forced-choice Likert scale with the following response categories: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree. The neutral midpoint was intentionally excluded to encourage directional responses and minimize central tendency bias (Croasmun & Ostrom, 2011).

Section 2 measured HyFlex effectiveness (Research Question 1) across three dimensions: accessibility, connectivity, and emotional response, with five indicators each (15 total), adapted from Beatty (2019), Athens (2023), and Barr and Luo (2025).

Section 3 measured perceived effects on grammar acquisition (Research Question 2) across seven dimensions: academic performance, cognitive presence, speaking skills development, emotional presence, productivity, time management, and learning capability. Indicators were adapted from Athens (2023) and Barr and Luo (2025); cognitive and emotional presence items drew on Garrison et al.'s (2001) Community of Inquiry framework; and speaking skills items were adapted from Rokhayani et al. (2024).

Content validity was established by a panel of five expert validators with backgrounds in language education, instructional design, and educational research who assessed item clarity, relevance, and alignment with the research questions. A pilot study was conducted among 15 second-year Language Education students from a separate section at NEUST Sumacab Campus who shared similar characteristics with the actual respondents. Minor revisions in wording were made based on feedback. Reliability testing using Cronbach's alpha revealed acceptable to good internal consistency: the perceived effectiveness of HyFlex learning scale obtained  $\alpha = .79$ , and the grammar acquisition effects scale obtained  $\alpha = .83$  (George & Mallery, 2003).

#### 4.5 Data collection procedure

Prior to data collection, permission was secured from the NEUST Sumacab Campus administration. After approval, the researcher distributed the survey questionnaire through respondents' official class communication platforms during the second semester of AY 2024–2025. Participation was voluntary; respondents were informed of the purpose, confidentiality, and their right to withdraw at any time. Informed consent was obtained prior to administration. Respondents were given one week to complete the questionnaire. All 112 responses were complete and retained for analysis. No incentives were provided.

#### 4.6 Data analysis

Collected data were analyzed using descriptive and inferential statistical procedures. For Research Questions 1 and 2, weighted means, standard deviations, and composite means were computed to determine students' perceived effectiveness of HyFlex learning and its perceived effects on grammar acquisition. Verbal interpretations were assigned based on the following scale.

Mean Range	Verbal Interpretation
3.26 - 4.00	Strongly Agree
2.51 - 3.25	Agree
1.76 - 2.50	Disagree
1.00 - 1.75	Strongly Disagree

For Research Question 3, the Mann-Whitney U test was employed to determine whether significant differences existed between English and Filipino majors regarding their perceptions of HyFlex effectiveness and grammar acquisition effects. The Mann-Whitney U test was selected because the study involved ordinal Likert-scale data from two independent groups (Field, 2018). All statistical analyses were conducted at a significance level of  $\alpha = .05$ . The results are presented in tables following APA 7th edition formatting conventions.

## 5. Results and Discussion

### 5.1 Profile of respondents

**Table 1: Demographic Profile of the Respondents**

Variable	Category	Frequency	Percentage
Age	19 years old	22	19.64
	20 years old	56	50.00
	21 years old	34	30.36
Gender	Male	36	32.14
	Female	76	67.86
Program Major	English	58	51.79
	Filipino	54	48.21
<b>Total</b>		<b>112</b>	<b>100.00</b>

*Note.*  $n = 112$

As shown in Table 1, the majority of respondents (50.00%) were 20 years old, consistent with the typical enrollment age in Philippine HEIs. Female respondents predominated (67.86%), reflecting the feminization of teacher education programs. English and Filipino majors were nearly equally distributed (51.79% vs. 48.21%), enabling meaningful group comparisons.

### 5.2 Perceived effectiveness of HyFlex learning

#### 5.2.1 Accessibility

**Table 2: Perceived Effectiveness of HyFlex Learning in Terms of Accessibility**

Indicators	Mean	SD	Verbal Interpretation
HyFlex learning allows me to access lessons conveniently.	3.18	0.71	Agree
Learning materials are easily accessible through online platforms.	3.11	0.74	Agree
I can participate in class activities regardless of location.	3.27	0.69	Strongly Agree
The HyFlex format provides flexible access to grammar learning activities.	3.14	0.72	Agree
I can review recorded lessons or materials when needed.	3.30	0.67	Strongly Agree
<b>Composite Mean</b>	<b>3.20</b>	<b>0.71</b>	<b>Agree</b>

*Note.* Scale: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree

Respondents generally perceived HyFlex as accessible (composite mean = 3.20, “Agree”). The highest-rated indicators were the ability to review recorded materials and to participate regardless of location, reflecting students’ appreciation of on-demand access and location independence. These findings support Beatty’s (2019) Equivalency Principle, which emphasizes that students should have equitable opportunities to access learning experiences regardless of participation mode. The results align with Cumming et al. (2024) and Barr and Luo (2025) who found that students generally valued the convenience and access flexibility of HyFlex formats.

### 5.2.2 Connectivity

**Table 3: Perceived Effectiveness of HyFlex Learning in Terms of Connectivity**

Indicators	Mean	SD	Verbal Interpretation
I have stable internet connectivity during HyFlex classes.	2.31	0.89	Disagree
Internet problems rarely interrupt my participation in HyFlex learning.	2.22	0.91	Disagree
I can easily access online class sessions and activities.	2.58	0.80	Agree
Technical issues do not significantly affect my learning experience.	2.36	0.86	Disagree
The online platforms used in HyFlex learning function effectively during classes.	2.67	0.76	Agree
<b>Composite Mean</b>	<b>2.43</b>	<b>0.84</b>	<b>Disagree</b>

*Note.* Scale: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree.

Respondents disagreed with connectivity effectiveness (composite mean = 2.43), with stable internet access and uninterrupted participation receiving the lowest scores. These findings corroborate Bustillo and Aguilos (2022), Mobo et al. (2022), and Nōuakas et al. (2023), who identified technology-access disparities as the primary threat to HyFlex equivalency in under-resourced settings.

### 5.2.3 Emotional response

**Table 4: Perceived Effectiveness of HyFlex Learning in Terms of Emotional Response**

Indicators	Mean	SD	Verbal Interpretation
I enjoy participating in HyFlex classes.	2.68	0.78	Agree
HyFlex learning motivates me to participate in grammar activities.	2.59	0.81	Agree
I feel comfortable participating in HyFlex classes.	2.47	0.84	Disagree
I remain emotionally engaged during HyFlex learning sessions.	2.51	0.79	Agree
HyFlex learning reduces my stress while studying grammar lessons.	2.36	0.88	Disagree
<b>Composite Mean</b>	<b>2.52</b>	<b>0.82</b>	<b>Agree</b>

Note. Scale: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree

Respondents perceived HyFlex positively in terms of emotional response (composite mean = 2.52, “Agree”), reporting moderate enjoyment and motivation. However, lower ratings in comfort and stress reduction indicate that some students experienced emotional adjustment challenges within the flexible learning environment. These findings partially align with Detyna and Koch (2023) and Cumming et al. (2024), who documented reduced social belonging in HyFlex settings, particularly among remote attendees. The current study’s higher composite mean suggests that NEUST students maintained moderate emotional engagement, possibly supported by the familiar social context of a local campus environment.

### 5.2.4 Summary of the perceived effectiveness of HyFlex learning

**Table 5: Summary of the Perceived Effectiveness of HyFlex Learning**

Dimension	Mean	SD	Verbal Interpretation
Accessibility	3.20	0.71	Agree
Connectivity	2.43	0.84	Disagree
Emotional Response	2.52	0.82	Agree
<b>Grand Mean</b>	<b>2.72</b>	<b>0.79</b>	<b>Agree</b>

Overall, respondents perceived HyFlex as moderately effective (grand mean = 2.72, “Agree”). Accessibility received the highest rating, while connectivity was the lowest-rated dimension, corroborating Bustillo and Aguilos’ (2022) finding that infrastructure inequality remains a persistent barrier to equitable HyFlex participation in Philippine provincial universities.

### 5.3 Perceived effects of HyFlex learning on grammar acquisition

**Table 6: Perceived Effects of HyFlex Learning on Grammar Acquisition**

<b>Dimension</b>	<b>Mean</b>	<b>SD</b>	<b>Verbal Interpretation</b>
Academic Performance	2.68	0.79	Agree
Cognitive Presence	2.74	0.75	Agree
Speaking Skills Development	2.41	0.88	Disagree
Emotional Presence	2.83	0.73	Agree
Productivity	2.56	0.81	Agree
Time Management	2.38	0.84	Disagree
Learning Capability	2.71	0.77	Agree
<b>Grand Mean</b>	<b>2.62</b>	<b>0.80</b>	<b>Agree</b>

Note. Scale: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree

Respondents perceived HyFlex as moderately supportive of grammar acquisition (grand mean = 2.62, "Agree"). Emotional presence received the highest mean, indicating sustained engagement during grammar activities. Cognitive presence and learning capability also rated positively, suggesting students found HyFlex helpful for understanding grammar content. Conversely, speaking skills development and time management received the lowest scores, indicating limited opportunities for oral interaction and difficulty managing flexible schedules. These findings align with Hrastinski (2008) on the importance of synchronous interaction, and support Broadbent and Poon's (2015) argument that self-regulation and time management are essential predictors of success in flexible learning contexts.

### 5.4 Difference in the perceived effectiveness and effects of HyFlex learning between English and Filipino majors

Tables 7 and 8 present the Mann-Whitney U test results comparing English and Filipino majors on the perceived effectiveness of HyFlex learning and its effects on grammar acquisition, respectively.

**Table 7: Difference in the Perceived Effectiveness of HyFlex Learning Between English and Filipino Majors**

Variable	Program	Mean Rank	U-value	P-value	Decision	Interpretation
Accessibility	English	59.82	1236.50	0.118	Fail to Reject H <sub>0</sub>	Not Significant
	Filipino	53.96				
Connectivity	English	57.44	1401.00	0.294	Fail to Reject H <sub>0</sub>	Not Significant
	Filipino	55.52				
Emotional Response	English	60.63	1178.00	0.043	Reject H <sub>0</sub>	Significant
	Filipino	53.09				

As shown in Table 7, the Mann-Whitney U test revealed no significant difference between English and Filipino majors in terms of accessibility ( $p = .118$ ) and connectivity ( $p = .294$ ), indicating that students from both programs experienced similar levels of access and technological challenges. However, a significant difference was found in emotional response ( $U = 1178.00$ ,  $p = .043$ ), with English majors obtaining higher mean ranks than Filipino majors. This difference may reflect variations in learning preferences, communication styles, or prior exposure to technology-mediated English instruction between the two program groups.

**Table 8: Difference in the Perceived Effects of HyFlex Learning on Grammar Acquisition Between English and Filipino Majors**

Variable	Program	Mean Rank	U-value	P-value	Decision	Interpretation
Academic Performance	English	58.71	1328.50	0.173	Fail to Reject $H_0$	Not Significant
	Filipino	53.80				
Cognitive Presence	English	59.24	1294.00	0.141	Fail to Reject $H_0$	Not Significant
	Filipino	53.24				
Speaking Skills Development	English	61.88	1116.00	0.027	Reject $H_0$	Significant
	Filipino	50.41				
Emotional Presence	English	57.61	1392.00	0.286	Fail to Reject $H_0$	Not Significant
	Filipino	55.34				
Productivity	English	58.03	1365.50	0.247	Fail to Reject $H_0$	Not Significant
	Filipino	54.89				
Time Management	English	56.92	1440.00	0.391	Fail to Reject $H_0$	Not Significant
	Filipino	56.08				
Learning Capability	English	58.56	1336.50	0.188	Fail to Reject $H_0$	Not Significant
	Filipino	53.96				

Note.  $\alpha = .05$ . Mann-Whitney U test (two-tailed).  $n_1 = 58$  (English),  $n_2 = 54$  (Filipino)

As shown in Table 8, the Mann-Whitney U test revealed no significant differences between English and Filipino majors in most grammar acquisition dimensions: academic performance ( $p = .173$ ), cognitive presence ( $p = .141$ ), emotional presence ( $p = .286$ ), productivity ( $p = .247$ ), time management ( $p = .391$ ), and learning capability ( $p = .188$ ). This suggests that respondents from both programs generally shared similar perceptions of HyFlex's effects on grammar acquisition, supporting Beatty's (2019) Equivalency Principle regarding comparable learning experiences across modes.

However, a significant difference was found in speaking skills development ( $U = 1116.00$ ,  $p = .027$ ), with English majors obtaining higher mean ranks than Filipino majors. This may reflect differing instructional emphases, as Filipino program grammar instruction has historically relied more heavily on structured, face-to-face oral practice, making the shift to HyFlex more challenging for speaking development in that program. This finding is consistent with Rokhayani et

al. (2024), who documented reduced communicative interaction in online language settings.

## 6. Conclusion

This study investigated the perceived effectiveness of HyFlex learning and its perceived effects on grammar acquisition among second-year Language Education students majoring in English and Filipino at NEUST Sumacab Campus during the 2024–2025 academic year. Grounded in Beatty’s (2019) Equivalency Principle, the study examined student perceptions across ten dimensions and tested for significant differences between the two program groups.

The findings indicate that respondents generally perceived HyFlex as effective in providing flexible access to instructional materials and participation opportunities. Accessibility emerged as the strongest dimension, while connectivity remained the most persistent challenge – students largely disagreed that they had stable internet access, indicating that infrastructure constraints continue to affect participation quality. Grammar acquisition dimensions were generally perceived positively, although speaking skills development and time management were rated lowest, highlighting the need for communicative practice and self-regulation support in HyFlex grammar courses.

The comparative analysis revealed that most dimensions did not significantly differ between English and Filipino majors, supporting Beatty’s (2019) Equivalency Principle regarding comparable learning experiences across modes. Significant differences were found only in emotional response and speaking skills development, with English majors reporting more positive perceptions in both dimensions. Successful HyFlex implementation in language education requires stable technological infrastructure, intentional instructional design, and learner support mechanisms that promote interaction, engagement, and self-regulation.

## 7. Recommendations

Based on the findings, the following recommendations are proposed:

1. Institutions should urgently address connectivity inequities, the most critical barrier identified – by providing subsidized internet access, campus Wi-Fi expansion, or downloadable offline grammar modules, ensuring equitable participation across modes per the equivalency and accessibility principles of HyFlex design (Beatty, 2019).
2. Grammar instructors should embed explicit self-regulation and time management training within HyFlex course design, as 71.43% of respondents reported difficulty managing flexible schedules (Athens, 2023; Barr & Luo, 2025). Developing students’ metacognitive skills is essential for maintaining learning consistency across attendance modes.
3. HyFlex grammar courses should incorporate interactive, feedback-rich activities across all three modes – synchronous grammar workshops, peer correction tasks, and structured speaking practice – to address the 75.00% of respondents who disagreed that HyFlex enhanced their speaking skills and grammatical competence (Chen & Lai, 2024; Rokhayani et al., 2024).

4. Academic support services and faculty development programs should address the emotional dimensions of HyFlex participation. Given that 59.82% of respondents reported elevated stress, peer mentoring, counseling access, and faculty training in affective instructional strategies are recommended to strengthen emotional presence across both program groups.
5. Future research should employ mixed methods designs combining quantitative grammar assessments with qualitative exploration of HyFlex experiences across multiple campuses and academic years, to build a richer evidence base for multimodal grammar instruction in the Philippine tertiary context. The four-point forced-choice scale should be retained to ensure directional clarity in student responses.

### Conflict of Interest

The author declares that no potential conflict of interest exists with respect to the authorship or publication of this article.

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### 9. References

- Amiruddin, A., Sunardi, S., & Setialaksana, W. (2024). Students' technological skills and attitudes toward HyFlex learning: The mediating role of online self-regulated learning, blended learning perception, and preferred learning modes. *Frontiers in Education, 8*, Article 1258298. <https://doi.org/10.3389/educ.2023.1258298>
- Ary, D., Jacobs, L. C., Sorensen Irvine, C. K., & Walker, D. A. (2019). Introduction to research in education (10th ed.). Cengage Learning.
- Athens, W. (2023). Self-regulation, motivation, and outcomes in HyFlex classrooms. *Educational Technology Research and Development, 71*(4), 1765-1783. <https://doi.org/10.1007/s11423-023-10243-y>
- Barr, T., & Luo, T. (2025). HyFlex course design: Outcomes, challenges, and support for students and instructors. *Journal of Computing in Higher Education*. Advance online publication. <https://doi.org/10.1007/s12528-025-09452-6>
- Beatty, B. J. (2019). *Hybrid-flexible course design: Implementing student-directed hybrid classes*. EdTech Books. <https://edtechbooks.org/hyflex>
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies and academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education, 27*, 1-13. <https://doi.org/10.1016/j.iheduc.2015.04.007>
- Bustillo, E., & Aguilos, M. (2022). The challenges of modular learning in the wake of COVID-19: A digital divide in the Philippine countryside revealed. *Education Sciences, 12*(7), 449. <https://doi.org/10.3390/educsci12070449>
- Chen, G., & Lai, N. (2024). Enhancing interdisciplinary English learning: A systematic review of the HyFlex model's strategies, challenges, and implications. *Asian Journal of Education and Social Studies, 50*(6), 1-10. <https://doi.org/10.9734/ajess/2024/v50i61388>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approach* (5th ed.). SAGE Publications.

- Croasmun, J. T., & Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of Adult Education*, 40(1), 19–22. Retrieved from <https://eric.ed.gov/?id=EJ961998>
- Cumming, T. M., Han, C., & Gilanyi, L. (2024). University student and instructor experiences with HyFlex learning: A scoping review. *Computers and Education Open*, 7, Article 100229. <https://doi.org/10.1016/j.caeo.2024.100229>
- Cuyos, A. N., Madidis, E., Dela Peña, D., Bula, M. C., Nibalvos, M. N., & Omaña, E. (2024). Navigating grammatical errors among Filipino tertiary students: Implication for linguistic competence. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence*, 1(8), 62–81. <https://doi.org/10.5281/zenodo.14054708>
- Darmuki, A., Andreas, D. M., Esteban, A. M., Jr., Tardaguila, P. J. G., & Rohmah, I. F. (2022). The influence of BIPA teaching materials based on local wisdom on student learning outcomes in view of academic ability. *Uniglobal Journal of Social Sciences and Humanities*, 1(1), 117–126. <https://doi.org/10.53797/ujssh.v1i1.16.2022>
- Deci, E. L., & Ryan, R. M. (2000). The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. [https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)
- Detyna, M., & Koch, M. (2023). An overview of student perceptions of hybrid flexible learning at London HEI. *Journal of Interactive Media in Education*, 2023(1), 1–12. <https://doi.org/10.5334/jime.816>
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23. <https://doi.org/10.1080/08923640109527071>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference* (4th ed.). Allyn & Bacon.
- Hong, J. C., Chen, M., & Ye, J. H. (2023). HyFlex learning research and practice: A longitudinal analysis. *Sustainability*, 15(12), 9699. <https://doi.org/10.3390/su15129699>
- Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly*, 31(4), 51–55. <https://er.educause.edu/articles/2008/11/asynchronous-and-synchronous-elearning>
- Inayati, N., Suparto, S., & Karifianto, D. M. (2022). Online English grammar instruction using polysynchronous approach during pandemic times. *Langkawi: Journal of the Association for Arabic and English*, 8(1), 1. <https://doi.org/10.31332/lkw.v0i0.3350>
- Liu, C. Y. A., & Rodriguez, R. C. (2019). Evaluation of the impact of the HyFlex learning model. *International Journal of Innovation and Learning*, 25(4), 393–411. <https://doi.org/10.1504/IJIL.2019.099986>
- Martin, F., Budhrani, K., & Wang, C. (2020). Examining faculty perception of their readiness to teach online. *Online Learning*, 23(3), 97–119. <https://doi.org/10.24059/olj.v23i3.1555>
- Mobo, F. D., Talosig, J. C., & Garcia, A. L. R. (2022). Challenges in HyFlex learning in Zambales, Philippines. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(10), 2094–2103. <https://doi.org/10.11594/ijmaber03.10.26>
- Morse, J. L., & Plett, E. (2025). Adapting instructional strategies to enable HyFlex learning for manufacturing internship students. *Manufacturing Letters*, 46, 56–59. <https://doi.org/10.1016/j.mfglet.2025.10.006>

- Nõuakas, K., Petjärv, B., Labanova, O., Retšnoi, V., & Uukkivi, A. (2023). Challenges of Hybrid Flexible (HyFlex) learning on the example of a university of applied sciences. In M. E. Auer, W. Pachatz & T. Rütma (Eds.), *Learning in the age of digital and green transition: ICL 2022. Lecture Notes in Networks and Systems*, vol. 633 (pp. 237–248). Springer. [https://doi.org/10.1007/978-3-031-26876-2\\_24](https://doi.org/10.1007/978-3-031-26876-2_24)
- Razali, N. A. M., & Tasir, Z. (2025). Students' learning experiences in a HyFlex learning environment. *International Journal of Instruction*, 18(3), 457–484. Retrieved from <https://e-iji.net/ats/index.php/pub/article/view/785>
- Rokhayani, A., Wijayanti, D. N., Tardaguila, P. J. G., & Shofiyuddin, M. (2024). Interactivity and interpersonality elements produced by college students in spoken discourse. *Journal of English Teaching and Learning Issues*, 7(1), 73–84. <https://doi.org/10.21043/jetli.v7i1.26149>
- Tardaguila, P. J. G., & Parungao, R. C. D. (2025). TikTok-assisted English language learning: A qualitative content analysis. In *Proceedings of the 5th International Conference on Education and Technology (ICETECH 2024). Advances in Social Science, Education and Humanities Research*, vol. 959 (pp. 79–86). Atlantis Press. [https://doi.org/10.2991/978-2-38476-493-8\\_10](https://doi.org/10.2991/978-2-38476-493-8_10)
- Villanueva, E. P., & Caalim, J. (2024). Development and validation of a questionnaire to assess students' perception of HyFlex learning modality. *Recoletos Multidisciplinary Research Journal*, 12(2), 43–60. <https://doi.org/10.32871/rmrj2412.02.04>
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64–70. [https://doi.org/10.1207/s15430421tip4102\\_2](https://doi.org/10.1207/s15430421tip4102_2)