

Degree and forms of codeswitching: Academic and social engagement impact among ESL college education students

Cristel Rivas¹, Kyla Miravalles², Nicole Cabarles³, Isabel Bartolay⁴, Sharmelle Garcia⁵

Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology, PHILLIPPINES^{1,2,3,4,5}

¹Email: crystalrivas16@gmail.com

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Abstract - This study investigated language alternation, specifically code-switching and translanguaging, among second-year education students at DEBESMSCAT, analyzing its manifestations and effects on academic and social engagement. Utilizing an Explanatory Sequential mixed-methods design, the research initially quantified code-switching prevalence and forms through a comprehensive survey. Subsequently, in-depth qualitative interviews explored students' subjective experiences, language preferences, and perceived impacts on learning, understanding, and social interaction. Findings indicate that code-switching is a pervasive communicative strategy across all examined majors, functioning as both a cognitive and social resource that enhances participation and collaboration. Science and Filipino students extensively employ it for conceptual clarification in academic settings, while Social Studies students predominantly use it in informal, peer-based, and collaborative interactions. Despite its demonstrable utility in enhancing comprehension, participation, and engagement, students reported challenges in balancing practical communication practices with institutional English-only mandates, expectations, and specific academic requirements. Furthermore, language alternation was found to support confidence-building, collaborative learning, inclusivity, and positive peer relationships in diverse classroom contexts, thereby fostering deeper understanding. The study concludes that language alternation serves as an indispensable, dynamic tool fostering understanding, confidence, and peer solidarity, thereby underscoring the necessity for pedagogies that validate, support, and effectively integrate students' multilingual competencies within higher education environments.

Keywords: code-switching, translanguaging, academic and social engagement, education students, mixed methods

1. Introduction

Language alternation is an important linguistic practice in multilingual higher education because it enables students to draw on more than one linguistic resource to construct meaning, participate in academic activities, and develop social relationships. Among second-year education students, who are simultaneously developing academic competence and professional identities, language alternation may function as a resource for understanding academic content and facilitating interpersonal communication (Wang, 2026). In classroom and social settings,



students may alternate between languages to clarify concepts, express ideas more comfortably, negotiate meaning, and establish social connections with peers (Nweke, 2025; Okoli, 2025; Pfeiffer, 2021; Pfeiffer et al., 2021).

Language alternation broadly refers to the alternating use of two recognizable grammatical systems or linguistic codes (Ali, 2024; Shi & Xu, 2025; Wang, 2026). One of its most extensively investigated forms is code-switching, which involves the selection or alternation of linguistic elements to contextualize interaction (Aubrey, 2025; Pfeiffer, 2021; Steele & Yeatman, 2025). Such alternation can operate at the level of local discourse practices, including turn-taking and conversational framing, while also expressing broader social meanings associated with culture, identity, and group membership. In multilingual educational settings, therefore, language alternation should not necessarily be viewed as a deficiency in language proficiency but as a communicative and sociocultural resource.

The increasing linguistic diversity of higher education makes it necessary to understand how students use their available linguistic resources to support learning and social participation. Research in the Philippines and other Southeast Asian contexts indicates that code-switching and translanguaging can facilitate comprehension of complex academic materials, increase classroom participation, clarify difficult concepts, reduce anxiety, and strengthen peer relationships (Wang & Xu, 2025; Gulle et al., 2024; Mustafayeva et al., 2025). However, the pedagogical use of multiple languages remains controversial because English-only policies and monolingual ideologies continue to influence classroom practices (Bisht & Lam, 2025; Özer, 2024; Shak, 2025).

This tension creates an important need to investigate language alternation not only as a classroom learning strategy but also as a mechanism of social interaction. Students' academic engagement cannot be separated completely from their social relationships, confidence, and sense of belonging. Understanding how language alternation operates across these two dimensions is particularly important for second-year education students, who are developing both academic identities and professional orientations. Evidence concerning this dual function can contribute to more inclusive and language-responsive educational practices.

This study is primarily informed by theories of code-switching, translanguaging, and sociocultural approaches to language use. Code-switching views language alternation as a contextualized communicative practice through which speakers manage interaction, convey meaning, and negotiate social relationships (Aubrey, 2025; Pfeiffer, 2021; Steele & Yeatman, 2025). From this perspective, students may switch languages according to communicative purposes, interlocutors, topics, and social contexts.

The study also draws on the translanguaging perspective, which conceptualizes multilingual speakers as possessing an integrated linguistic repertoire that can be strategically mobilized for meaning-making. Within education, translanguaging provides a language-responsive pedagogical framework in which students can use their linguistic resources to support comprehension, participation, and identity development. This perspective is particularly relevant to the present study because language alternation may simultaneously support academic understanding and social connectedness rather than functioning solely as a linguistic substitution strategy.

A sociocultural perspective further explains language alternation as a socially situated practice through which learners construct meaning through interaction with peers and teachers. From this perspective, language learning and academic engagement are influenced not only by individual linguistic competence but also by interaction, identity, motivation, and the social environment. Consequently, examining language alternation requires attention to both students' academic experiences and their interpersonal relationships.

Previous research demonstrates several academic benefits of language alternation. Studies involving bilingual tertiary students suggest that code-switching can support



vocabulary development and reading comprehension, although its effects on writing performance and grammatical accuracy remain less consistent (Caridad & Chico, 2026; Pfeiffer, 2021). Research in multilingual educational contexts also indicates that strategic language switching can clarify academic concepts, facilitate participation, and reduce communication-related anxiety (Gulle et al., 2024; Wang & Xu, 2025). These findings support the view that language alternation can function as a pedagogical resource when appropriately integrated into multilingual classrooms.

Recent research has also expanded the investigation of multilingual practices beyond traditional code-switching. Studies of multilingual societies identify structural, communicative, pragmatic, and sociolinguistic functions of code-switching, while translanguaging research emphasizes the use of learners' complete linguistic repertoires in educational interaction (Chirsheva & Kozhukhova, 2024; Pilares & Dizon, 2025; Rahayu et al., 2024; Mustafayeva et al., 2025). These studies suggest that language alternation is closely associated with identity, social relationships, and contextual meaning.

Other studies have examined factors that indirectly shape students' engagement and learning experiences. Social media can promote cultural diversity and intercultural understanding, while flipped classroom approaches provide flexible opportunities for English language learning (Mahmood et al., 2024; Maulana et al., 2025). Learners' enjoyment may reduce language anxiety, whereas foreign language anxiety may influence communication competence among students in professional education contexts (Khan et al., 2024; Putri et al., 2025). In addition, social support is associated with online learning experiences and burnout, with self-regulated learning moderating this relationship (Huang et al., 2025). These findings collectively indicate that academic engagement is influenced by linguistic, emotional, social, and pedagogical factors.

Previous studies have highlighted the importance of language-related factors in developing effective communication and learning outcomes across different educational contexts. Foreign language anxiety has been identified as an important factor affecting nursing students' clinical communication competence, particularly when learners are required to communicate in professional healthcare settings. The study indicates that emotional and linguistic challenges may influence students' confidence and ability to communicate effectively, suggesting the need for supportive language instruction that addresses both communicative competence and anxiety in clinical education (Putri et al., 2025).

Problem-based learning has also been examined as an instructional approach for improving English speaking fluency among engineering students. The findings suggest that problem-based learning can encourage active participation, collaborative interaction, and meaningful opportunities for students to use English in contexts related to their academic and professional needs. This approach demonstrates the potential of contextualized and student-centred learning to strengthen oral communication skills in higher education (Sadiyani et al., 2025).

Assessment practices represent another important component of language learning. The use of formative and student-centred assessment can provide learners with continuous feedback and opportunities to monitor their progress, while also encouraging greater involvement in the learning process. Such assessment practices shift the focus from merely measuring achievement toward supporting learners' ongoing development of English language skills and promoting greater learner autonomy (Ghafar et al., 2025).

From a linguistic perspective, the contrastive analysis of reduplication in Madurese and Minangkabau demonstrates how differences in linguistic form and meaning can reveal distinctive characteristics of individual language systems. The comparison contributes to a deeper understanding of reduplication as a morphological process and provides insights into the ways different languages organize and express meaning. Such contrastive studies are



particularly relevant to comparative linguistics and language teaching because they can identify similarities and differences that may influence language learning and interpretation (Santuso & Sukarno, 2025).

Taken together, these studies demonstrate that successful language learning and communication are influenced by psychological, pedagogical, assessment, and structural linguistic factors. However, the existing studies tend to examine these dimensions independently, indicating a need for research that considers their interaction within specific learning and communicative contexts. An integrated perspective may provide a more comprehensive understanding of how learners develop linguistic competence while managing affective factors, engaging in meaningful learning activities, and responding to the structural characteristics of the target language.

Despite these findings, the implementation of multilingual practices remains constrained in many educational settings. English-only policies and monolingual ideologies may restrict students' use of their full linguistic repertoires (Bisht & Lam, 2025; Özer, 2024; Shak, 2025). Research in college composition classrooms also reveals tensions between translingual pedagogical approaches and students' continued adherence to standardized language norms (Cenoz et al., 2024). Furthermore, studies of multilingual university students' academic writing have identified persistent lexical transfer from first languages into second-language production, demonstrating that multilingual practices continue to influence academic discourse beyond spoken classroom interaction (Yafele, 2024a; Yafele, 2024b).

Although previous studies have established the academic and communicative functions of code-switching and translanguaging, several gaps remain. First, much of the existing research focuses primarily on classroom interaction, language learning, assessment, or academic writing, with comparatively limited attention to the simultaneous relationship between language alternation, academic engagement, and social connectedness. Second, insufficient attention has been given to second-year education students as a distinct population, despite their important transitional position in higher education and professional identity formation. Third, there is a need for greater understanding of how students perceive and practice language alternation across both academic and social settings. Finally, limited empirical evidence explains whether and how language alternation contributes to academic comprehension, classroom participation, peer relationships, and social integration simultaneously.

Accordingly, the central research problem of this study is how language alternation functions as both an academic and social resource among second-year education students. The study addresses the need to understand not only the linguistic forms of alternation but also its perceived academic and interpersonal consequences.

This study aims to investigate the role of language alternation in supporting academic engagement and social interaction among second-year education students. Specifically, it seeks to: (1) examine how second-year education students practice language alternation in academic and social contexts; (2) identify the factors and communicative purposes that motivate students to alternate languages; (3) examine students' perceptions of the influence of language alternation on academic comprehension and classroom participation; (4) investigate how language alternation contributes to students' social relationships and interaction with peers; and (5) examine the implications of language alternation for inclusive and language-responsive teaching in multilingual higher education.

By addressing these objectives, the study is expected to contribute empirical evidence to research on code-switching, translanguaging, and multilingual education while providing practical implications for educators seeking to develop inclusive, equitable, and language-responsive learning environments.



2. Method

The present exploration leverages mixed-methods research design, specifically an exploratory sequential approach, which was particularly appropriate for thoroughly investigating language alternation (code-switching) among second-year education students (Schoonenboom, 2024). This study involved second-year education students as participants, with a total population of 109 students recruited through a phased approach to align with the Explanatory Sequential Mixed-Methods design. For the quantitative phase, the target population included all second-year education students enrolled across various majors at Dr. Emillio B. Espinosa Sr. Memorial State College of Agriculture and Technology during the 2025-2026 A.Y. A stratified random sampling technique was employed to ensure proportional representation of students from each distinct education major, reflecting their actual distribution within the university's first-year education program (Triveni et al., 2024; Olsen & Vasquez-Ross, 2024). To examine how language alternation related to the academic and social engagement of second-year education students, this study used two primary instruments: a structured survey questionnaire and a semi-structured interview guide. Careful procedures were followed to ensure that both instruments accurately measured the intended constructs and produced consistent results.

The survey questionnaire was developed based on existing literature on language alternation and translanguaging in educational settings (Tai & Li, 2021), as well as established concepts of academic and social engagement. Data was collected using an explanatory sequential method, combining quantitative surveys and qualitative interviews with selected second-year education students (Creswell & Plano Clark, 2018). Survey: Participants completed a survey designed to assess their experiences with language alternation in classroom settings. The researchers prepared a hard copy set of guide questions focused on students', academic participation, lesson comprehension, class confidence, and social interactions in different situations. To ensure data completeness, any missing values were examined and addressed using appropriate imputation methods (Little & Rubin, 2019). The survey items and answers were then analysed appropriately using statistical techniques to allow accurate interpretation of the data in relation to the objectives of the study (Creswell & Creswell, 2018).

This study employed a mixed-method approach, combining survey and interview data to gain a comprehensive understanding of students' language use. Quantitative data from the surveys was organized and analysed using descriptive statistics, such as frequencies and percentages, to identify patterns in code-switching behaviour (Dallaseh et al., 2025; Pilares & Dizon Jr, 2025). For the qualitative data, thematic analysis was conducted on the interview responses. Each response was carefully reviewed and coded, and similar ideas were grouped into themes related to academic engagement, social interaction, and language alternation. Throughout this study, the researchers upheld strict ethical standards to protect the rights and well-being of all participants. Before participating, students were fully informed about the purpose of the research, the procedures involved, and their right to withdraw at any time without any negative consequences. Furthermore, the researchers ensured that all questions were respectful, non-intrusive, and were designed to minimize any potential discomfort, allowing participants to share their experiences openly and honestly.

3. Results and Discussion

3.1 Results

The qualitatively collected data reveals that language alternation, specifically code-switching, is a natural and widespread practice among education students. It serves not merely as a way of speaking, but as a vital tool that helps learners navigate the demands of academic life (Abaño & Estremera, 2026; Asne & Estremera, 2025; Bagasala & Estremera, 2025; Baliwas & Estremera, 2025). The results show that using the first language alongside the target language is highly beneficial, especially when dealing with difficult terms and complex concepts. It helps learners



understand lessons better, express ideas more clearly, and feel more confident during recitations and presentations. However, it is also important to recognize when to use it appropriately. While very effective in oral discussions and casual interactions, it is best to observe discipline and use pure target language in formal writing tasks to maintain academic standards and proficiency.

3.1.1 Code-switching forms and Impacts

Table 1: English Major

Language Alternative	Transcription	Category	Pattern	Academic Impact
English	When you are an Major in English student, you are encouraged to speak the language when answering the instructor's questions. I personally code switch when i am out of vocabulary or want to elaborate more my answer. Code-switching is not the primary method of communication but rather a backup or coping mechanism.	Intra-sentential code-switching	L2 + L1	This student uses code-switching as a backup strategy when lacking vocabulary or needing to explain ideas further. It serves as an effective coping mechanism to complete thoughts and avoid communication breakdown although it is recognized only as a secondary tool and not the primary way of speaking.
	Code switching positively impact my social interaction during my reporting or presentation. Gagamit ako san code switching para mas lalo ninda maintindihan through giving examples. Negative impact is pag naga report ako is igwa san mga terror na instructor or mga strict na instructor.	Inter-sentential code-switching	L1+L2	For this student using code-switching helps to explain clearly through examples, but strict English requirements hinder clear delivery.
		Inter-sentential code-switching	L2+L1+L2	
		Intra-sentential code-switching	L1+L2	This student stated that code-switching aids understanding of lessons, but avoided in formal papers and professional settings.
	In some settings, code-switching can positively impact. Mas nakaka affect an code-switching positively kay makaka learn or	Inter-sentential code-switching	L2+L1	This participant believes that positive effects outweigh negative; makes communication clearer though too casual for formal events.



mas maintindihan
san estudyante an
gusto ipahiwatig
san instructor or san
teacher. It can also
negatively impact
minsan an sa mga
professional na
kineme kineme pag
formal interaction or
mga formal papers.

It is very rampant to
happen especially in
the classroom where
code-switching is
positively affect in
the learning or
social interactions.
May positive siya na
effect kay mas
naiintindihan san
imo mga co-learners
or kaya even the
teachers kun nano
an ginapaliwanag
mo mas
nahahatagan san
context. Sa negative
naman is pag formal
event or formal
settings na po bagan
dili na po siya
applicable na mag
code-switching.

Yes naga vary
gihapon sa major
san istudyante.
English students
uhh still use code
switching but the
thing is we use
English almost
when we speak kase
that's our major and
we are required to
do that. It vary
significantly based
on students major.
Positive: I'm
learning and uhh
I'm getting used to it
as the years pass by.
Negative: I find it
hard uhh to

Inter-sentential L1+L2
code-scwitching

This second-year student
benefits from improved
language proficiency and
fluency as they practice English
regularly for their major.
However, they also face
difficulty in social interaction
because they sometimes
struggle to express themselves
freely while trying to meet the
high expectations of their
course.

This student feels more
confident and comfortable
expressing ideas in class
because of code-switching.
However, it also creates social
anxiety because they worry
about being judged or labeled.

socialize because
there's some
instances where my
mouth uhh can't
really express uhh
my language
production.

In academic
settings, code-
switching helps me
to express my ideas
clearly as it allows
me to speak more
confidently and
comfortably. In a
social engagement
context, code-
switching affects me
after I do it in a
conversation. It
makes me think that
people might label
me "pilingon" if I try
to code-switch from
Minasbate to
English

Furthermore, the extent and form of code-switching vary depending on the subject area. Students in fields involving technical subjects tend to use it more frequently to grasp difficult concepts, while those in language majors are more conscious of maintaining linguistic purity. This implies that a rigid language policy may not be effective. Instead, recognizing code-switching as a strategic resource can help create a more inclusive and comfortable learning environment. Educators are encouraged to adopt a flexible approach, allowing language alternation to support understanding while still guiding students to develop the necessary skills for formal communication (Dio & Estremera, 2023; Gapayao & Estremera, 2026; Garalde & Estremera, 2026; Guamos & Estremera, 2025; Gersalia & Estremera, 2025). Ultimately, language alternation bridges the gap between what students know and what they need to learn. When used wisely, it becomes a powerful mechanism that enhances both academic achievement and social connection in the classroom. The findings correspondingly indicate that English Major students employ both Intra-sentential and Inter-sentential code-switching following patterns such as L2 + L1 and L1 + L2.

However, unlike other fields, these students are specifically encouraged to speak pure English and treat code-switching not as the primary method of communication, but merely as a backup or coping mechanism used when they run out of vocabulary or need to elaborate their answers further. The practice significantly aids comprehension and makes explanations clearer, especially when giving examples during reporting and presentations (Jalmasco & Estremera, 2025). By alternating languages, students can express ideas more naturally and confidently, effectively removing communication barriers and ensuring that the message is understood by everyone. However, while highly beneficial for understanding and social interaction, code-switching presents limitations in formal contexts. Participants noted that strict requirements from instructors and the need to maintain professionalism hinder its use during formal



presentations and in written outputs. Furthermore, social concerns such as difficulty in expressing oneself freely or the fear of being labeled "pilingon" also affect how students utilize this strategy outside the classroom. In essence, language alternation serves as a vital tool that prioritizes understanding. The students demonstrate a clear awareness of when to apply these patterns to enhance learning while recognizing the necessity of linguistic discipline and standard language use required by their major.

Moreover, for table 2, the data clearly demonstrates that code-switching occurs frequently in Filipino classes; 4 of the 6 responses demonstrate intra-sentential switching (L2 + L1) while only 2 are examples of purely monolingual usage of L2. These findings suggest that in a primarily Filipino classroom setting, students rely on multiple language varieties as a means of making better sense of content and expressing themselves in ways that are most meaningful to them (Lauta & Estremera, 2025). Transcripts from student interviews indicate that the primary reason for utilizing code-switching was due to a lack of vocabulary related to an English term and/or in order to help explain something by providing additional clarity. A number of participants indicated that they translated English terms into either Filipino or Bisaya because it allowed their classmates to have a better understanding of what they were discussing. Therefore, code-switching provides a functional mechanism for increasing comprehension and facilitating communication among students and assists in creating a positive environment where students feel more inclined to participate in the learning process. At the same time, the data point to some challenges. A number of students noted that relying too much on code-switching may affect their proficiency in Filipino or English. Others shared that using regional languages can sometimes confuse classmates who are not familiar with them. There is also a noticeable tension between actual classroom practices and instructors' expectations to use straight Filipino.

Table 2: Filipino Major



Language Alternation	Transcription	Form\ Category	Pattern	Academic Impact
Filipino	In my own experience, sa positive, may mga times na pag naga discuss ka may malimutan ka na mga words or sa bisaya na di ko ma express sa tagalog or english, mas okay sa akon an naga code switching. Sa negative, gina encourage kami san instructors namon mag straight Filipino kay Filipino majors kami."	Intra-sentential code-switching	L2+L1	This second-year Filipino student views code-switching as both helpful and challenging. It improves student understanding by making lessons clearer and more relatable. However, frequent use of code-switching may weaken their own English proficiency.
	Code switching affect me in a positive way because as I experience in a classroom discussion sometimes, I don't understand some word or how to discuss it in class so I use code switching express the words clear.	Monolingual	L2 only	Even in a Filipino class, this student encounters words or concepts that are difficult to grasp or explain. For them, code-switching is a problem-solving strategy that allows them to bypass language barriers.
	Even in a Filipino class, this student encounters words or concepts that are difficult to grasp or explain. For them, code-switching is a problem-solving strategy that allows them to bypass language barriers	Monolingual	L2 only	This student presents a balanced view. They acknowledge that code-switching is highly effective for making lessons accessible and easy to learn for everyone. However, they also recognize a potential downside: relying on it might prevent students from fully practicing and honing their communication skills purely in the target language (Filipino).
	So sa positive sa pag abot sa learning, gina-translate namon an English into Filipino or Bisaya para mas maintindihan san students. Sa social interaction, ginagamit an code-switching para mag-adjust kag maging clear an communication. Sa negative side, may tendency na masanay an students sa code-switching. Sa school, kinahanglan gihapon sundon an language rules.	Intra-sentential code-switching	L2 + L1 + L2	This student underscores that code-switching can have both positive and negative effects on learning and social interaction. In classroom settings, future educators use code-switching to make lessons clearer. On the negative side, relying too much on code-switching can affect students' ability to develop full proficiency in one language.

So based on my experience uhh... when it comes to presentation sa class or demo teaching nagkakaigwa ako ng code-switching para maintindihan san mga classmates ko. Sa negative naman na impact sa learning is, may mga language na dili ninda nage-gets like Minasbate or Bisaya, so uhh.... nakaka affect ini sa inda learning or social interaction	Intra-sentential code-switching	L2 + L1 + L2	For this Filipino learner, code-switching plays an important role in learning and social interaction. During class presentations or demo teaching, it helps the speaker express their thoughts and opinions more clearly. However, code-switching can also have a negative effect when some students do not understand the language being switched to.
Specific instance siguro po kapag nagkakaroon kami ng discussion or reporting nagkakaroon ng code switching kasi ahmmm... mas naiintindihan po, BSED kami, nasa high school mas madali kasing maintindihan ng mga bata kapag tina-translate namin sa Filipino yung mga ahmm...English discussion. Siguro sa negative, yung English proficiency namin is naaapektuhan din.	Intra-sentential code-switching	L2+ L1	This second-year Filipino major's account reveals that code-switching serves distinct, context-dependent roles in their learning and communication, with both personal benefits and program-specific challenges. However, in their Filipino major, instructors strongly encourage using straight Filipino to build proficiency and maintain linguistic authenticity

Table 3: Mathematics Major

Language Alternation	Transcription	Form\ Category	Pattern	Academic Impact
Mathematics	Code switching helps me understand difficult Math lessons since the language used is English. However, frequent use makes me uncomfortable speaking pure English. Overall, it is very necessary to engage with numbers and peers.	Monolingual	L2 only	For this student, Code-switching is essential in Math to understand complex concepts and engage with peers effectively. However, it affects communication confidence, causing self-disappointment when speaking pure English is required.
		Monolingual	L2 only	
	Code switching positively affect my learning or social interaction because it causes an impact to my fellow students/			For this student, code-switching serves two main purposes: it acts as a communication tool that ensures their peers understand their explanations, and it



classmate to easily understand my discussion and gives me comfortable to use my native language or the Filipino language.	Intra-sentential code-switching	L2+L1+L2	provides emotional comfort.
Yes it's positively affected during discussion para maging comfortable tayo sa pag discuss at para ma boost ang confidence.	Intra-sentential code-switching	L2+L1	This student emphasizes the psychological benefit of code-switching. They believe that mixing languages during discussions makes the speaking environment less intimidating.
During discussion specially sa prof ed mas naintindihan ko ang lesson then during oral participation mas comfortable akong sumagot kapag natatatalog. For me code switching help me to understand better the lesson.	Intra-sentential code-switching	L2+L1	This student finds that code-switching enhances their own comprehension of the subject matter. It also makes them feel more secure and comfortable when answering questions orally.
Code-switching does not affect engagement, instead it makes lessons easier to understand. We only use Filipino and English anyway. It is important especially during reporting and demo-teaching, especially for terms na mahirap i-translate.	Intra-sentential code-switching	L2+L1+L2	For this student, Code-switching does not negatively affect engagement; instead, it enhances classroom comprehension. It is essential especially for reports and demo-teaching, especially for terms na mahirap i-translate.
"For instance, during our class oral participation, our instructor encourages us to speak in English or Filipino. Because this haga nagtutulak ako na participate during class and wag mag hesitate ako if mali or li matalino an mga ideas sa isip ko. And that's how it positively affect my learning because kapag code switching			For this student, Code-switching reduces anxiety and encourages participation by allowing freedom to use either language

ko ito ha what if mali
ah marami ko ha
wrong ideas sa isip ako
na what to generate
English.

The findings suggest that code-switching plays a significant role in Mathematics learning, particularly in classrooms where English (L2) is the primary medium of instruction (. While some students use monolingual English, most responses reflect intra-sentential code-switching (L2+L1). This indicates that students often choose to combine two languages in order to convey math ideas they have learned better. Academically, code-switching enhances comprehension by making complex and technical concepts more accessible and easier to understand. Additionally, code switching gives students an opportunity to clearly define what they mean, especially if they are trying to find ways to describe something that does not directly translate into English. It also improves communication during discussions, reporting, and collaborative tasks, as students can explain ideas more effectively and ensure peer understanding (Lopez & Estremera, 2025; Mingoy & Estremera, 2025). Finally, code switching has an affective benefit by giving students less anxiety and therefore more confidence in participating in class orally. Since students feel more comfortable expressing their views, we see increased levels of student participation and enthusiasm. However, while many students who frequently switch languages may lose confidence in speaking purely in English; the net gain from using code-switching is positive in regard to the cognitive aspects of learning mathematics and being actively involved in the classroom.

As for the Science majors, they employ Inter-sentential and Intra-sentential switching following complex patterns such as L1 + L2 + L1 and L2 + L1 + L2. These strategies are necessary to address the technical nature of the field which involves specialized terminologies and complex concepts. The practice significantly enhances learning and social interaction by allowing students to explain difficult ideas clearly during recitations and reports (Obispo & Estremera 2025; Sayo & Estremera, 2026; Sevilla & Estremera, 2026; Sevilla & Estremera, 2025; Valladolid & Estremera, 2026). It serves as an effective tool to express thoughts that are hard to articulate using only one language. Nevertheless, participants recognized potential risks. Translating scientific terms with no direct equivalents may alter meanings while over-reliance could hinder English proficiencies. Therefore, language alternation is strategically used to bridge comprehension gaps but must be applied carefully to preserve the accuracy and integrity of scientific knowledge.

Table 4: Science Major

Language Alternation	Transcription	Form\ Category	Pattern	Academic Impact
Science	SCIENCE Depende kung nano an nasa curriculum base ito education tayo or ano. Parehas man san ginsabi ni Renz na paiba-iba parang ipa-narrow down muna an specific subject then ipa follow up mo ina sa maayo na direction para hindi ma mismatch an skill kag development. Well for me, neutral lang ako so parang I don't know kung ma negative ina or positive nandyan lang ako sa neutral zone lang.	Intra-sentential code-switching	L1+L2+L1	The data suggests that the impact of code-switching in science education depends on the curriculum and the specific subject being taught. For this participant, the experience is neutral.
		Intra-sentential code-switching	L2+L1+L2+L1	This student emphasized that code-switching can play an important role in learning and social interaction, especially in science classes.
		Intra-sentential code-switching	L2+L1+L2	
	So ano, there's like igwa san instance na pag mag report ka sa tunga meron san mga jargon na mga salita na kailangan talaga ipaliwanag into native language or other language para maintindihan san mga students mo or mga kaklase mo.	Inter-sentential code-switching	L2+L1+L2	This student views code-switching as an essential teaching aid. Since Science involves specialized English terminology that may be unfamiliar or difficult to grasp, translating or explaining these terms in the local language is necessary to ensure understanding.
	For an instance, when we explain a certain word na hindi alam san students, like science terms in English such as enzymes, protein, lipids and others, kailangan iexplain mo in tagalog or in your native language. By this makakasabi ako na positive ang effect san code switching sa social interaction ko especially sa students.	Intra-sentential code-switching	L2+L1+L2	This student's account highlights code-switching's value depends on a student's major especially in science, where translating technical terms into Filipino or native languages risks altering meanings. However, it positively enhances learning and communication by making complex topic clearer.
		Intra-sentential code-switching	L2+L1+L2+L1	The student shares that code-switching has both positive and negative effects. Positively, it allows them to express ideas they

For me nakadepende
ito sa major. Intra-
Halimbawa sa science, sentential
hindi ka naman code-
pwedeng mag code switching
lalo na sa switching
scientific
terminologies. Sa
positive affect kapag
nagre-report ako
maganda sya kase
nahihirapan ako
magbigay ng
information in English
language, so maganda
mag code switching
para mas maintindihan
ng mga kaklase mo.

So there's example of,
specific instance when
I go code switching
and affects me.
Positively during
ahm...class discussion,
may mga terms or
words na di ko ma
express using English
language so I shift into
Tagalog or other native
language to explain it
better. Then,
negatively I get used to
shift in native language
rather than speaking in
English frequently.

'For instance, if English
major ka, mas required
mag English. Tapos,
since we are science
majors mahirap sya
gamiton kase may mga
scientific terminologies
na wara sin Tagalog
translations. It
positively affected my
learning and social
interaction sa mga
recitation, I do code
switch para mas na
express ko. Negatively
affect naman kapag
naga code switch,
nagiiba an answer.

cannot articulate in English
ensures classmates
understand explanations
clearly.

The student emphasizes
that code-switching's
impact depends heavily on
a student's major.
Positively, code-switching
enhances learning and
social interaction—during
recitations, it allows them
to express ideas clearly.

As for table 5, the data reveals that Social Studies students predominantly employ Inter-sentential and Intra-sentential code-switching following patterns of L1 + L2 and L2 + L1. These strategies are utilized strategically to address the nature of the major which involves complex terminologies and deep concepts. Practice significantly aids comprehension particularly in History where technical terms are difficult to grasp in a single language. By alternating languages students can explain ideas more naturally and ensure that lessons are accessible to everyone.

Table 5: Social Studies Major

Language Alternation	Transcription	Form\ Category	Pattern	Academic Impact
Social Studies	"So, an na experience ko sani is positive is naka affect sya saamon positively in terms sa history. Sa major namon, may terms sa world history na mahirap sya intindihon in tagalog that's why need sya icode switch sa English. Sa negative igwa man, an iba na instructor naga code switch tapos an inagamit na word is mga mahidarom na hindi namon naiintindihan."	Inter-sentential code-switching	L2+L1+L2+L1	This student's response highlights that code-switching in Social Studies is both beneficial and non-beneficial. Positively, it aids comprehension of complex world history concepts. However, using unfamiliar words can create barriers to learning.
	Code-switching practices like for example when reporting may mga time or words na kahit alam natin but the students is hindi nila alam kaya mas nakakatulong when we are using code-switching."	Intra-sentential code-switching	L2 + L1 + L2	This student presents a balanced view. They acknowledge that code-switching is highly effective for making lessons accessible and easy to learn for everyone. However, they also recognize a potential downside: relying on it might prevent students from fully honing their communication skills purely in the target language (Filipino).
	"For me it does, as a Social Studies student we tend to speak English when needed and on a formal setting. Code-switching helps me explain things more in front, it makes my fellow classmates understand the lesson even more but in negative instances, it affects how you speak accurately in a formal	Monolingual	L2 only	
		Intra-sentential code-switching	L2 + L1 + L2 + L1	This student affirms that code-switching has positive and negative impacts on learning and communication. It allows better explanation of ideas and improves classmates'

setting.”			understanding of lessons.
Let’s put an instances, code switching positively affected in learning in reporting where in may mga terminologies na hindi alam so that i used code switching however i think hindi sya magiging professional in terms sa paggawa ng lesson plans.”	Monolingual	L2 + L1 + L2 + L1	This student distinguishes between spoken and written contexts. They find code-switching very useful for explaining deep or unfamiliar terms during oral reports and learning sessions. However, they feel that it is not appropriate or professional when it comes to formal written outputs.
“Sometimes I find it easier to speak with different language because some words are easier to explain with different language rather than one like for example teaching a concept then explaining in other language.”	Intra-sentential code-switching		This student believes that different languages have unique strengths. They find that certain concepts or words are more natural and easily explained in one or more languages.
” The specific example na naexperience ko positively sa pag gamit ng code switching is sa oras ng discussion as a social studies student there are some instances na gumagamit ng terminologies na malalim na mas kailangan ipaliwanag sa tagalog at mas makapagshare ng sariling explanation ang mga students.”			Based on their personal experience, this student highlights that Social Studies often involves deep or technical terms. Explaining these in Tagalog makes the concepts accessible, which has the added benefit of encouraging other students to participate more actively as it removes barriers.

This approach effectively removes communication barriers and fosters active participation during discussions and reports. However, while code-switching is highly beneficial for oral instruction and clarification it presents limitations in formal contexts. Participants noted that excessive reliance may affect language accuracy and proficiency. Consequently, it is deemed inappropriate for written outputs such as lesson plans where professionalism and adherence to standard language are required. In essence language alteration serves as a necessary pedagogical tool that prioritizes understanding. The students demonstrate a clear awareness of when to apply these patterns to enhance learning while recognizing the need for linguistic discipline in formal academic requirements.

3.1.2 Degree of Code-switching

This study investigated students' use of code switching across academic and social contexts, with weighted mean scores capturing the extent to which each major group engages with or values this language practice. Overall, code-switching is a common communicative strategy among respondents, though patterns of use vary notably by field of study. When considering code-switching as a tool for clarifying technical terms, students from Filipino and Science majors express the strongest agreement, with a weighted mean of 4.5. This suggests that these groups find language alternation particularly valuable for making complex technical concepts more understandable. English and Mathematics majors also recognize this benefit with a mean score of 3.8 each. While Social Studies students report the lowest mean in this area at 3.6, their response still reflects clear agreement that code-switching aids in explaining technical content. In terms of inserting native language words into English sentences, Science majors demonstrate the highest level of engagement, scoring 4.6. Filipino majors follow closely at 4.3, with English majors at 4.0 and Mathematics majors at 3.8. Social Studies, however, show less frequent use of this practice, with a mean score of 2.6. For language switches occurring at the end of sentences, Science majors again report the highest agreement at 4.1. English, Filipino, and Mathematics majors show comparable levels of agreement, all scoring 3.8.

Table 2. Forms of code-switching used by various majors

Statement	English (WM)	Filipino (WM)	Science (WM)	Mathematics (WM)	Social Studies (WM)	Verbal Interpretation
Code-switching for clarifying Technical Terms	3.8	4.5	4.5	3.8	3.6	Filipino and Science strongly agree more
Native Language Word insertion in English sentences	4	4.3	4.6	3.8	2.6	Science strongly agrees more
Sentence-Final language switching	3.8	3.8	4.1	3.8	3.5	Science agrees more
Language mixing in online discussions	3	3.8	4.1	4	4.3	Social Studies agrees more
Switching to Native Language for examples	3.6	4.3	4.5	4.3	4	Science strongly agrees more
Overall Mean	3.6	4.1	4.3	3.9	3.6	Science strongly agrees more

Social Studies students indicate moderate agreement with a mean of 3.5, suggesting they use this form of code-switching less regularly than their peers in other majors. When it comes to language mixing in casual settings, Social Studies majors stand out with a mean score of 4.1, matching the score reported by science majors. Mathematics students also engage actively in casual code-switching, scoring 4.0, while English and Filipino majors report slightly lower but still substantial agreement at 3.8 each. Regarding the practice of switching to English to express complex ideas, Science and Mathematics majors show the strongest agreement, both scoring 4.3. Filipino and Social Studies students follow at 4.0, while English majors report a mean of 3.6 – a score that still reflects general agreement with the practice. In summary, code-switching is widely integrated into both academic and social communication among students across all majors. Science and Filipino majors tend to rely on it more heavily for academic purposes, such as clarifying concepts and conveying complex ideas. In contrast, Social Studies students

demonstrate a stronger preference for code-switching in casual contexts, underscoring how the nature of the interaction shapes language use patterns across different student groups.

4. Conclusion

This study demonstrates the importance of language alternation, particularly code-switching and translanguaging, as a feature that greatly influences academic success and social engagement among second-year education students at DEBESMSCAT. It primarily contributed to the field of codeswitching theory and ESL context. In effect, by illuminating the advantages of codeswitching in ESL classrooms, teachers will be able to offer appropriate activities, leading to L2 proficiency by degrees. Not only does it operate as a means of communication, but it also serves as a cognitive and social resource that allows understanding, participation, and cooperation among diverse academic fields. Despite increased use of this interactive tool to enhance learning, the persistence of official English-only policies makes studying difficult because it puts students in a position where they feel forced to choose between institutional guidelines encouraging use of English only, and their lived experiences attempting pragmatic communication in each other's languages. Despite these constraints, language alternation contributes to increased confidence, inclusivity, and peer connection within the classroom.

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