

The Impact of Learning Styles and Teaching Styles on Second Language Learning Success

Lovely Jane L. Balonda¹, Lawrence Anthony U. Dollente²

^{1,2} College of Arts and Social Sciences, University of Southern Mindanao, Kabacan, Cotabato, Philippines

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ABSTRACT

Purpose of the study: Individuals learn in unique ways, influenced by their preferences, ethnic backgrounds, cultures, and personal experiences. Similarly, teaching styles are shaped by educational philosophies and subject matter, leading to potential mismatches in how knowledge is processed in the classroom. This study aimed to identify the learning and teaching styles of students and teachers, explore the alignment between them, and assess the implications for language teaching.

Methodology: This descriptive quantitative study involved 166 students and 23 teachers from the Department of English Language and Literature (DELL) at the University of Southern Mindanao. Data were collected using the Strategies Questionnaires and the VARK Questionnaire for Trainers to assess learning and teaching styles.

Main Findings: The study revealed that AB English Language (ABEL) students predominantly exhibited bimodal learning preferences, particularly in the aural-read/write (AR) and aural-kinesthetic (AK) modalities. DELL teachers, on the other hand, tended to favor single-modal teaching styles, with a slight visual preference. A strong match was observed between single-modal teachers and students with similar learning preferences, although kinesthetic learning was underrepresented. Teachers who were bimodal or trimodal showed a better alignment with a wider range of student learning preferences. Additionally, all-modal teachers demonstrated the most effective alignment across all VARK learning styles.

Novelty/Originality of this study: This study introduces a fresh perspective on language instruction by emphasizing the importance of incorporating multiple teaching styles to match the diverse learning preferences of students. The findings suggest that creating course outlines with a variety of teaching styles is essential for fostering more effective and inclusive language learning environments, ultimately enhancing student engagement and success.

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Corresponding Author: Lawrence Anthony U. Dollente College of Arts and Social Sciences, University of Southern Mindanao, Kabacan, Cotabato, Philippines. Email: <u>laudollente@usm.edu.ph</u>

1. INTRODUCTION

Individuals have varied learning styles influenced by personal preferences, cognitive abilities, cultural backgrounds, and prior experiences [1], [2]. Teachers also have preferences for teaching styles based on their educational philosophies and subject matter [3]. However, differences between students' learning styles and teachers' methods sometimes create conflicts, indicating a need for greater awareness and understanding of diverse

learning preferences [4]. Recognizing these differences can foster better collaboration and equitable access to education, improving teaching and learning experiences.

Research has shown that matching learning styles to instructional methods does not necessarily enhance learning outcomes [5]. The matching hypothesis suggests that students learn best when their style aligns with the teachers', but cognitive psychologists have found little quantitative support for this idea [6]. This lack of empirical evidence raises questions about the effectiveness of learning style-based teaching strategies, particularly in the context of second language acquisition. While the theory of learning styles has been widely adopted in educational settings, studies have revealed inconsistencies in its application and effectiveness, especially in language learning environments [7]. Specifically, language learning often involves complex cognitive processes that may not be adequately addressed through a simple matching of styles. Moreover, the practical challenges of tailoring instruction to each student's learning style, especially in large or diverse classrooms, make this approach unfeasible in many cases.

In addition, evaluations indicate that diverse learning styles do not always align with instructional methods, not reflecting students' capabilities but rather highlighting the variety of learning preferences. For instance, language learners may not benefit from a rigid alignment between teaching and learning styles, but from a more flexible approach that incorporates multiple teaching strategies. Previous studies have also suggested that blending various instructional techniques may be more beneficial than adhering strictly to one style, allowing for greater adaptability in addressing students' varied needs [8]. This study fills a significant gap in the existing literature by exploring the alignment between students' and teachers' learning and teaching styles specifically in the context of second language learning. Unlike prior research that often focuses on the general alignment between styles without considering the specific challenges posed by language acquisition [9], this study delves into how diverse learning styles interact with second language teaching methods. It also addresses the complexities involved in aligning these styles in real-world classroom settings, providing actionable insights for both teachers and students.

By focusing on Bachelor of Arts students in English Language (ABEL), this study not only examines the congruence between students' learning styles and teachers' teaching styles but also identifies the practical challenges that hinder effective alignment in language learning. Furthermore, it provides a nuanced perspective by investigating whether a mismatch or blend of styles can lead to improved language learning outcomes. This is a novel approach that goes beyond the typical focus on matching styles and instead explores the practical application of blended teaching methods tailored to the dynamic needs of language learners.

The urgency of this research stems from the growing need for educational practices that address diverse learning preferences in an increasingly multicultural and multilingual world. With second language acquisition being an essential skill in many academic and professional contexts, improving instructional strategies that account for varied learning preferences could have a lasting impact on educational equity and the effectiveness of language teaching. This study contributes uniquely to the field by offering evidence-based recommendations that help educators better navigate the complexities of learning styles in language education.

2. METHODS

2.1. Research Design

This study utilized a descriptive quantitative research design to determine whether the learning and teaching styles match. A descriptive quantitative research design was employed to investigate learning and teaching styles, utilizing research tools to systematically observe, document, and evaluate the processes by which students acquire knowledge and the methods employed by teachers in delivering instruction. Furthermore, it enabled data-driven insights, which could improve instructional strategies and student learning results. Quantitative research involves the systematic collection and analysis of numerical data to identify patterns, relationships, and trends within a population or sample. Its objective is to quantify variables and extend findings to larger populations, offering objective insights into the phenomena being studied [10].

The researcher primarily utilized data on learning and teaching styles to describe the sample and factors in their approach [11]. The objective of the study was to ascertain the prevalent usage determined that would categorize the ABEL students' VARK styles. Therefore, descriptive design was utilized to understand learning styles and teaching styles in second language learning.

2.2. Research Participants and Materials

The study focused on Bachelor of Arts in English Language (ABEL) students and Department of English Language and Literature (DELL) teachers at the University of Southern Mindanao. It explored ABEL students' learning experiences and DELL teachers' teaching preferences. A sample size of 166 students was determined using the Raosoft [12] sample calculator, while all 23 DELL teachers participated, reflecting a census approach. Two research tools were employed: the Strategies Questionnaires for students and the VARK Questionnaire for

Teachers/Trainers for teachers. Both tools, adapted from the 2019 VARK-Learn, assessed learning and teaching styles.

The Strategies Questionnaires, consisting of 40 items, measured students' use of VARK modalities over the past six months, with respondents marking their frequency of strategy use. The VARK Questionnaire for Teachers/Trainers, with 16 items, identified teaching styles as visual, auditory, read/write, or kinesthetic. Respondents circled their preferred styles, possibly selecting more than one if multiple preferences applied. Respondents were categorized into VARK styles: single modal (preference for one sensory mode), bimodal (two modes), trimodal (three modes), and all-modal (four modes). Each category reflects varying degrees of preference and use across different sensory modalities.

2.3. Data Analysis

The study's primary data sources were the completed questionnaires, which were analyzed quantitatively. Frequency and percentage were used to assess students' learning styles and teachers' teaching styles based on the VARK model (Visual, Auditory, Reading/Writing, Kinesthetic). The Strategies Questionnaire evaluated the prevalence of each learning style among students, with scores recorded and analyzed using the VARK Learn website. Similarly, the VARK For Teachers and Trainers questionnaire assessed the frequency of teaching styles among teachers, with results also analyzed via the VARK Learn website.

This analysis categorized both students and teachers into VARK types: Visual, Aural, Read/Write, or Kinesthetic, and further into Single-Modal or Multi-Modal (Bi-Modal, Tri-Modal, or All-Modal). The study aims to validate VARK as an effective tool for classifying sensory modalities, as proposed by Peyman et al. and Papanagnou et al.

3. RESULTS AND DISCUSSIONS

3.1. Results

	Table 1. Frequency and percentage of stu	dents' learning styles.	
		Number of Students	Percentage
	VARK Styles	(N=166)	(%=100)
	Single-Modal		
	Mild Visual	1	0.60
	Strong Visual	1	0.60
Single	Mild Aural	11	6.63
Single	Strong Aural	2	1.21
Modal	Mild Read/write	5	3.01
	Mild Kinesthetic	10	6.02
	Strong Kinesthetic	1	0.60
	-	(N=31)	(%=18.67)
	Bi-Modal		
	Visual- Aural (VA)	4	2.41
	Visual-Read/Write (VR)	10	6.02
Multimodal	Aural-Reading/Writing (AR)	22	13.25
	Aural-Kinesthetic (AK)	21	12.65
	Read/Write-Kinesthetic (RK)	11	6.63
	Visual-Kinesthetic (VK)	3	1.81
		(N=71)	(%=42.77)
	Tri-Modal	\$ ²	· · · · ·
	Visual, Aural, and Read/Write (VAR)	5	3.01
	Aural, Read/Write, and Kinesthetic (ARK)	49	29.52
	Visual, Read/Write, and Kinesthetic (VRK)	6	3.61
	Visual, Aural, and Kinesthetic (VAK)	2	1.21
		(N=62)	(%=37.35)
	All-Modal	× /	
		2	1.21
	Visual, Aural, Read/Write, and Kinesthetic (VARK)		
		(N=2)	(%=1.21)
		× /	、 <i>,</i> ,

	Table 2. Frequency and percentage of teacher's teaching styles.			
		Number of		
	VARK Styles	Teachers	Percentage (%=100)	
	-	(N=23)	- · ·	
	Single-Modal			
	Mild Visual	4	17.39	
Single	Very Strong Visual	1	4.34	
Single	Mild Aural	2	8.71	
Modal	Very Strong Aural	2	8.71	
	Mild Read/write	1	4.34	
		(N=10)	(%=43.49)	
	Bi-Modal			
	Visual-Aural (VA)	1	4.34	
	Visual-Read/Write (VR)	1	4.34	
Marldan adal	Aural-Reading/Writing (AR)	1	4.34	
Multimodal	Aural-Kinesthetic (AK)	1	4.34	
	Read/Write-Kinesthetic (RK)	1	4.34	
	Visual-Kinesthetic (VK)	2	8.71	
		(N=7)	(%=30.41)	
	Tri-Modal			
	Aural, Read/Write, and Kinesthetic (ARK)	2	8.71	
		(N=2)	(%=8.71)	
	All-Modal			
	Visual, Aural, Read/Write, and Kinesthetic (VARK)	4	17.39	
	× /	(N=4)	(% = 17.39)	

Table 3	Matching	learning	styles	and	teaching	styles
Table J.	matering	rearning	50 9105	anu	couoning	51 9105

	Students				
-	VARK STYLES	Single Modal (31)	Bi-Modal (71)	Tri-Modal (62)	All-
		VARK	VA VR AR AK RK	VAR ARK VRK VAK	Modal
		(2) (13) (5) (11)	VK	(5) (49) (6) (2)	VARK
			(4) (10) (22) (21) (11)		(2)
			(3)		
	Single Modal				
	(10)				
	V (5)	100% — — —	50% 50% — — 50%	33.3% — 33.3% 33.3%	25%
	A (4)	— 100%— —	50% — 50% 50% — —	33.3% 33.3% - 33.3%	25%
	R (1)	— — 100%—	- 50% 50% $-$ 50% $-$	33.3% 33.3% 33.3% —	25%
	K (0)	— — 0%	<u> </u>	— 0% 0% 0%	0%
\$	Bi-Modal (7)				
her					
acl	VA (1)	100% 100% — —	100% 50% 50% 50% - 50%	66.6% 33.3% 33.3% 66.6%	50%
Te					
	VR (1)	100% - 100% -	50% 100% 50% — 50% 50%	66.6% 33.3% 66.6% 33.3%	50%
		1000/ 1000/			5 00/
	AR (1)	— 100% 100% —	50% 50% 100% 50% 50% —	66.6% 66.6% 33.3% 33.3%	50%
	A TZ (1)	1000/ 1000/	500/ 500/ 1000/ 500/ 500/		500/
	AK (1)	-100% - 100%	50% - 50% 100% 50% 50%	33.3% 66.6% 33.3% 66.6%	50%
	D <i>U</i> (1)	1000/ 1000/	500/ 500/ 500/ 1000/ 500/	22.20/ (((0/ (((0/ 22.20/	500/
	KK (1)	- 100% 100%	- 50% 50% 50% 100% 50%	33.3% 66.6% 66.6% 33.3%	50%
	VVV(2)	1009/ 1009/	500/ 500/ 500/ 1000/	22 20/ 22 20/ 66 60/ 66 60/	500/
	VK (2)	100% = 100%	30% 30% = 30% 30% 100%	33.370 33.370 00.070 00.070	30%
-	Twi Madal (2)				
	$\mathbf{I} \mathbf{f} - \mathbf{M} \mathbf{o} \mathbf{a} \mathbf{I} (2)$				
	$A \mathbf{P} \mathbf{V} (2)$	100% 100% 100%	50% 50% 100 % 100 % 100 % 50%	66 69/ 1009/ 66 69/ 66 69/	750/
	AKK (2)	- 10070 10070 10070	5070 5070 100 70 100 70 100 70 5070	00.070 10070 00.070 00.070	1570
	All Model (4)				
	All-Moual (4)				
	VARK (4)	100%100%100%100%	100%100% 100% 100% 100% 100%	100% 100% 100% 100%	100%
		100/0100/0100/0100/0	100/0100/0100/0100/0100/0100/0	10070 10070 10070 10070	10070

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3.2. Discussions

3.2.1. Learning Styles of Students

Table 1 outlines the learning styles of 166 ABEL students using the VARK model, which includes Visual, Aural, Read/Write, and Kinesthetic modalities. Visual learners prefer diagrams and charts; Aural learners excel with auditory inputs like lectures; Read/Write learners benefit from textual materials; and Kinesthetic learners thrive on hands-on activities.

Single-modal learners are categorized based on their preference strength: "mild" indicates a slight preference, "strong" denotes a significant preference, and "very strong" reflects a dominant reliance on one modality. In contrast, multimodal learners use multiple modalities. Bimodal learners equally prefer two modalities, trimodal learners utilize three, and all-modal learners are proficient in all four. The data reveals that the majority of ABEL students are bimodal (42.77%, 71 students), followed by trimodal (37.35%, 62 students). Single-modal learners make up 18.67% (31 students), and all-modal learners are the least common, at 1.21% (2 students). This distribution highlights the predominance of multimodal learning preferences and suggests the need for varied instructional methods to cater to diverse learning styles.

Bimodal Learning Preferences

The study reveals that 42.77% of ABEL students are bimodal learners, with the most common combinations being aural-read/write (AR) at 13.25% and aural-kinesthetic (AK) at 12.65%. Read/write-kinesthetic (RK) learners makeup 6.63%, visual-read/write (VR) learners are 6.02%, and visual-aural (VA) and visual-kinesthetic (VK) learners are less common, at 2.41% and 1.81%, respectively.

This trend towards bimodal learning highlights students' preference for combining two sensory modalities for a more effective learning experience. Research supports this, showing that bimodal approaches, such as AR, enhance focus and comprehension by integrating auditory and written materials [13]-[16]. Samarakoon et al. [17] also note the commonality of bimodal preferences, suggesting that a uniform teaching approach may not address diverse learning needs effectively.

Additionally, trimodal preferences, such as aural-read/write-kinesthetic (ARK), indicate a broader integration of sensory modalities. This underscores the need for flexible teaching strategies to accommodate both general bimodal trends and individual preferences [18]. As Isozaki [19] suggests, tailoring instructional approaches is crucial to meet the varied learning needs of students.

Tri-Modal Learning Preferences

The study finds that 37.35% of ABEL students exhibit a tri-modal learning style, making it the second most common preference. Among these, aural-read/write-kinesthetic (ARK) is the most prevalent, chosen by 29.52% of students. In contrast, visual-read/write-kinesthetic (VRK) is preferred by 3.61%, visual-aural-read/write (VAR) by 3.01%, and visual-aural-kinesthetic (VAK) by just 1.21%.

The prominence of the ARK style indicates a strong preference for combining auditory, reading/writing, and kinesthetic modalities, suggesting the need for multimodal instructional strategies. Research supports that ARK learners benefit from integrated approaches involving lectures, texts, and hands-on activities [12], [21]. However, ARK learners might struggle with visual information, as noted by Imran et al. [20], Chang-Tik [22], and Noben et al. [23]. Therefore, educators should adopt flexible teaching methods that incorporate various modalities to address these needs effectively, enhancing the learning experience for ARK students.

Single-Modal Learning Preferences

The single-modal learning style, observed in 31 students, constitutes approximately 18.67% of the overall student population. Among these, mild aural learners were the most prevalent, accounting for 6.63% (11 students), followed by mild kinesthetic at 32.25% (10 students). Mild read/write and strong aural each represented 16.13% (5 students) and 6.45% (2 students), respectively. The least common preferences were mild visual, strong visual, and strong kinesthetic, each with only 0.60% (1 student).

The implications for students with a mild aural learning preference are notable, positioning this as the third most dominant VARK category. For these learners, integrating auditory elements into their study routines while remaining open to other modalities is crucial. Effective strategies for mild aural learners include listening to recorded lectures, engaging in discussions, and using audiobooks to reinforce material [23]. Active participation in study groups, explaining concepts to peers, and verbal repetition can further enhance learning and retention [24].

In the classroom, fostering active listening and participation in discussions is essential. Recording lectures for later review and combining auditory learning with visual aids, reading/writing, and kinesthetic activities can create a more comprehensive learning experience. This multi-faceted approach leverages their primary learning modality while also enriching their overall educational experience. Despite the tendency towards mild aural preferences, individual differences may influence how students engage with various learning styles, highlighting the need for personalized and adaptable teaching methods to maximize understanding and academic success.

3.2.2. Teaching Styles of Teachers

Table 2 details the teaching styles of 23 teachers according to the VARK model, which categorizes educators into Visual, Aural, Read/Write, and Kinesthetic modalities. This classification reflects how teachers deliver knowledge rather than their own learning preferences. The data reveals that 43.49% (10 teachers) use a single-modal teaching style, while 30.41% (7 teachers) employ bimodal strategies. All-modal teachers, who integrate all four modalities, make up 17.39% (4 teachers), and trimodal teachers, who use three modalities, are the least common at 8.71% (2 teachers).

Single-modal teaching focuses on one primary method, which may streamline lesson planning but could limit engagement with diverse learning needs. Conversely, bimodal and all-modal approaches incorporate multiple strategies, potentially enhancing student engagement and comprehension [25]. The presence of trimodal teachers suggests a more nuanced approach, blending three modalities to cater to varied learning styles. These insights from Table 2 offer a preliminary understanding of instructional methods and their alignment with students' learning preferences.

Single-Modal Teaching Styles

Finding reveals that 43.49% (10) of teachers primarily use a single-modal teaching style, focusing on one of the VARK modalities: Visual (V), Aural (A), Read/Write (R), or Kinesthetic (K). Among these, the most common was mild visual, with 17.39% (4) of teachers favoring this style. Mild aural and very strong aural each constituted 8.71% (2) of the teachers. The least common single-modal styles were mild read/write and very strong visual, each representing 4.34% (1) of the teachers.

Teachers often choose instructional methods that reflect their educational backgrounds and personal preferences, which can lead to a predominance of single-modal approaches. For example, teachers with mild visual preference use visual aids like diagrams and graphs to enhance instruction, a method supported by Dos Santos [26] and Fisher et al. [27]. These visual aids can facilitate learning by making abstract concepts more tangible [28]. However, an over-reliance on a single modality may not meet the diverse needs of students who benefit from multimodal approaches [25].

Fleming and Mills [29], as referenced by Widharyanto and Binawan [25], argue that no single teaching style is universally effective [30]. Students who have learning preferences that do not align with the predominant teaching method may struggle to fully engage with or understand the material. To address this, teachers might need to incorporate supplementary resources that cater to various learning styles, such as auditory podcasts, written texts, or hands-on activities for kinesthetic learners [31]. Adapting to multiple teaching strategies can help teachers better meet the needs of all students, ultimately enhancing the learning experience and effectiveness of instruction.

Bimodal Teaching Styles

Table 2 indicates that 30.41% (7) of teachers used bimodal teaching styles, making this approach the second most common. Among these, the most frequent style was visual-kinesthetic (VK), with 8.71% (2) of teachers employing this method. Other bimodal styles, including visual-aural (VA), visual-read/write (VR), aural-read/write (AR), aural-kinesthetic (AK), and read/write-kinesthetic (RK), each had one teacher, representing 4.34%.

The prominence of the VK teaching style highlights the growing recognition of the benefits of combining different modalities. Teachers using the VK approach blend visual aids—such as diagrams and videos—with hands-on activities and practical demonstrations. This integration creates a dynamic and engaging learning environment [32], [33]. By incorporating both visual and kinesthetic elements, these teachers address diverse learning preferences and enhance student engagement and comprehension, especially in subjects like literature and language studies.

Incorporating visual and kinesthetic methods not only makes lessons more interactive but also supports students' creativity and critical thinking. Activities such as language games, drama, and creative writing workshops are examples of how the VK approach fosters a richer learning experience [20]. This multimodal approach equips students with valuable skills for academic and professional success in our multimedia-driven world. By utilizing combined teaching styles, educators can better accommodate varying student needs and improve overall educational outcomes.

All-Modal Teaching Styles

The all-modal teaching approach, adopted by 17.39% of teachers, incorporates the full range of modalities defined by the VARK model: visual, auditory, reading/writing, and kinesthetic. This approach, combined with a mild visual preference, emerged as a prominent teaching style in AB English studies, reflecting a significant shift toward more comprehensive, inclusive instructional strategies. By utilizing all four learning modes, the all-modal method demonstrates a nuanced understanding of students' varied learning preferences and employs a range of instructional techniques to address these needs [34]. This trend highlights the importance of inclusive pedagogy, which accommodates diverse learning styles and fosters a more engaging educational environment.

Furthermore, Loh and Ang [35] emphasize the importance of flexibility in teaching methods, aligning with the all-modal approach. Their research supports the notion that effective teaching requires adapting strategies to meet the diverse needs of students, reinforcing the value of a multifaceted instructional approach. Overall, the prevalence of the all-modal teaching style underscores a broader educational shift towards methods that recognize and address the complexity of student learning preferences.

The tri-modal teaching approach, utilized by only 8.71% of teachers, integrates aural, reading/writing, and kinesthetic modalities (ARK) while excluding the visual component. This limited approach may hinder students who benefit from visual aids, affecting their engagement and understanding of the material. The lower prevalence of tri-modal teachers suggests a potential gap in addressing diverse learning needs compared to the all-modal method, which includes all four VARK modalities [36].

Tri-Modal Teaching Styles

Tri-modal teachers typically use methods like group discussions and role-playing but might underutilize visual tools [19]. This could result in a less balanced educational experience. In contrast, while the all-modal approach shows a commitment to inclusive teaching, the reliance on single-modal methods in group settings—especially visual ones—might not fully meet the diverse needs of students, potentially impacting their learning outcomes.

At the individual level, the all-modal method reflects an understanding of the importance of diverse instructional strategies. Research supports that varied teaching approaches enhance learning outcomes and self-reflection [37], [38]. Yale University's Learning Styles as a Myth webpage also suggests that diverse instructional methods cater to different student needs, reinforcing the value of personalized education. Thus, recognizing and addressing individual learning differences can create a more effective and inclusive learning environment.

3.2.3. Matching Learning and Teaching Styles

The findings in Table 3 provide an intricate overview of how the learning styles of ABEL students align with the teaching styles of DELL teachers, categorized according to the VARK model—Visual, Aural, Read/Write, and Kinesthetic. This model serves as a framework to understand both student and teacher preferences, which are pivotal for optimizing educational outcomes. The table elucidates the degree to which different teaching and learning styles match, ranging from single-modal to all-modal configurations. Understanding these matches and mismatches is essential as it can significantly impact the effectiveness of teaching strategies and student learning experiences.

Single-Modal Teaching and Learning Styles

In the single-modal category, the data shows that 10 teachers and 31 students were identified. Among these, five visual (V) teachers achieved a perfect 100% match with two visual (V) students, indicating strong alignment with visual learners. However, these teachers had only a 50% match with bimodal students combining visual with other modalities, suggesting that while they excel with visual learners, they may not fully address the needs of those who require multiple modalities [39].

Similarly, four aural (A) teachers matched perfectly with 13 aural (A) students, reflecting a strong alignment within this modality. Yet, they had only a 50% match with bimodal students who combined aural with other styles, such as visual or kinesthetic. This limitation highlights a gap in addressing the diverse needs of bimodal learners, especially those who benefit from kinesthetic engagement [40]. Single-read/write (R) teachers matched 100% with five read/write (R) students but only achieved a 50% match with bimodal students, revealing that while they effectively support read/write learners, they fall short for those integrating other modalities. The absence of kinesthetic teaching further exacerbates this issue, underscoring the need for a more integrated approach [41]. Additionally, the absence of kinesthetic (K) teachers indicates a significant gap in catering to kinesthetic learners, who require physical engagement for effective learning [42].

Bi-Modal Teaching and Learning Styles

The bi-modal category comprised 7 teachers and 71 students, featuring combinations such as visual-aural (VA) and visual-read/write (VR). Two VA teachers achieved a perfect 100% match with visual and aural learners, showing strong alignment with these modalities. However, their 50% match with bimodal students who combine visual with other styles, such as read/write or kinesthetic, indicates that while they excel with VA learners, they may not fully address the needs of students with different bimodal preferences [43].

Similarly, VR teachers matched 100% with visual and read/write students but only 50% with other bimodal combinations, highlighting the challenge of meeting the needs of students with multiple modality preferences [29]. The aural-read/write (AR) and aural-kinesthetic (AK) teachers also demonstrated high alignment with their respective single-modal learners but only partial alignment with bimodal and tri-modal students. This underscores the necessity for teachers to adopt versatile approaches to accommodate a broader range of learning styles [44].

Tri-Modal and All-Modal Teaching and Learning Styles

Tri-modal teaching, used by two teachers with 62 students, focused on the aural, read/write, and kinesthetic (ARK) combination. These teachers achieved a 100% match with single-modal ARK students and bimodal students combining these styles, but had lower alignment with visual modalities. This indicates a need to include visual elements in tri-modal teaching for a more comprehensive approach [45].

All-modal teaching, involving four teachers and two students, effectively addressed all learning styles visual, aural, read/write, and kinesthetic. This approach provides a dynamic learning environment that meets diverse needs [46], [47]. The findings suggest a need for more versatile teaching strategies. While single-modal and bi-modal approaches are common, integrating multiple modalities can enhance learning [17], [48]. The limited use of tri-modal teaching highlights the importance of professional development to adapt teaching methods and improve educational outcomes [38], [37].

4. CONCLUSION

The study finds that AB English Language (ABEL) students at the University of Southern Mindanao primarily exhibit bimodal learning preferences, with aural-read/write (AR) and aural-kinesthetic (AK) being the most common. This suggests that integrating these two modalities is an effective teaching strategy. In contrast, the Department of English Language and Literature (DELL) teachers generally use single-modal teaching styles, often with a mild visual preference, focusing on one instructional style at a time.

Single-modal teaching aligns well with students who share the same modality, though kinesthetic learning is underrepresented. Teachers using bimodal or trimodal approaches better match a wider range of student preferences, while all-modal teachers, who incorporate all VARK styles, offer the most comprehensive alignment. This highlights the need for diverse teaching strategies to address various learning preferences.

Most students in the study are multimodal, with a significant number being bimodal and a notable group of ARK learners. However, no single-modal approach specifically caters to kinesthetic learners was found. Teachers should thus use a broad teaching strategy that includes visual, auditory, reading/writing, and kinesthetic methods. This is particularly relevant in the Philippine context, where cooperative learning and social interaction are emphasized.

Promoting peer collaboration and group work aligns with traditional values like "bayanihan and pakikipagkapwa," fostering a sense of community and engagement. To enhance their learning experiences, students should assess their preferred learning modalities. Flexibility in teaching and learning styles is essential, ensuring that categorizing individuals does not limit their ability to adapt and succeed.

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