# Embarking On Vark: A Case Study on Students' Preference in Learning English

Robert James Nicole A. Bualat<sup>1</sup>, Jozette Aleah G. Lucero<sup>2</sup>, Cristyle F. Zamora<sup>3</sup>, Franz Erika S. Arcamo<sup>4</sup>, Alfer Jann D. Tantog, MaEd<sup>5</sup>

Saint Columban College, Pagadian City, Philippines rojanicolebualat.cteas@sccpag.edu.ph¹, jglucero.cteas@sccpag.edu.ph², criszamora.cteas@sccpag.edu.ph³, franzerika.arcamo@sccpag.edu.ph⁴, alferjann@gmail.com⁵

Abstract: A learning style describes how different students learn. It is a person's preferred method of absorbing, processing, comprehending, and remembering knowledge. Although they are not a teaching prescription, they scaffold a teacher in recognizing a student's preferred method of processing and retaining information. This qualitative case study utilized Merriam's model in 1998, which aimed to determine the students' preference in learning English, based on VARK sensory modalities, and identify the teacher's teaching strategies for the major courses, to see whether the students' preferences are catered in their classes. A purposive sampling technique was carried out to identify the study's participants from one of the prestigious institutions in Pagadian City, yi elding 13 third-year BSEd-English and two English teachers who are teaching at least one major subject of the student participants. The researchers adopted the VARK learning styles questionnaire by Fleming (1987) version 8.01 and a researcher-made interview guide questionnaire to gather all the data. Emerging themes were derived using thematic analysis. The results identified three themes regarding the students' learning preferences; Aural, Kinesthetic, and Multimodal were the prevalent learning styles of third-year BSEd major in English and the four modalities of VARK were utilized by the teachers in the major subjects they are handling. Thus, teachers' teaching strategies must be aligned with the students' preferred learning styles in learning English, as much as possible, and instructions must be tailored accordingly. The Department of Education's goals as well as those of various studies and researchers may benefit from the recommendations.

Keywords—learning styles, VARK sensory modalities, teaching strategies, preference in learning English

### 1. Introduction

A learning style describes how different students learn. In layperson's terms, it is a person's preferred method of absorbing, processing, comprehending, and remembering knowledge. It is a person's way of making meaning of new information using various senses, including sight, touch, and hearing. Despite not being as commonly employed as the previous three, taste, gustation, and smell or olfaction may still be beneficial when attempting to consolidate information in our minds. The notion that learning styles are a superb method for a student to study has been challenged in recent years. Learning style preferences and interactive response systems can influence student outcomes significantly. It refers to how students prefer to learn and process information. Some students prefer visual aids, while others prefer auditory or kinesthetic learning methods. Understanding a student's learning style can assist educators in tailoring their teaching methods to meet the needs of individual students better, resulting in better learning outcomes (Yazici, 2016).

Learning styles are crucial in the learning process. Each person's unique learning style determines their interactions with their learning environment. One of the critical aims of learning styles research is to understand better the link between learning styles and the learning process (Moussa, 2014). The fundamental objective of teaching is to facilitate learning, and understanding students' learning behavior is

considered part of this process (Îlçin, 2018). According to John Dewey's experiential learning theory, learning is characterized as "the procedure through which information is generated via the transformation of experience." Undoubtedly, learning styles have a vital role in learners' cognitive development. Dunn (2018) stated that learning style is "a distinctive approach formed by students when learning new and difficult information." It is significant to note that learning style refers to how individuals learn instead of what they know.

On the flip side, learning styles are generally acknowledged in education as a strategy to promote the concept that every student learns in various ways. Learning styles are not a teaching prescription, but they scaffold a teacher in recognizing a student's preferred method of processing and retaining information. According to Lathan (2021), the student-centered approach fosters more excellent stability between the teacher and student, who plays a role in the learning process. Teachers act as coaches and learning facilitators while maintaining their authority position. Thus, teachers should consider their students' preferred learning styles for this approach to be effective. Students' awareness of their learning styles will find it easier to adapt to this approach. Cherry (2019) stated that these students are handson learners who learn best by experimenting. This model identifies students' learning styles, and giving students access

to the information they prefer will boost their academic confidence. The teacher better understands how to incorporate these learning styles into lesson plans and study techniques.

Achievement in Science," what is taught has a minor impact on students' achievement than how materials are presented." In other words, learning styles play an essential role in how the teacher demonstrates knowledge so that students can easily understand what is being taught (Busilaoco & Lao, 2014). Rezaeinejad et al. (2015) evaluated learning styles and their connection to academic success in Iranian high school students. He discovered that knowing the student's learning styles will assist the teacher in delivering the lesson in such a way that students can cope easily, use diverse teaching strategies, and achieve academic success.

According to An & Carr (2017), there are numerous approaches to explain and predict individual differences in learning theories. However, they all have significant flaws that could be improved to demonstrate learning or achievement. The theories, in particular, describe and categorize behaviors but do not explain the developmental processes and causal mechanisms that underpin these behaviors. Another area for improvement is that learning style measures frequently use rank order, which forces individuals to rank one style higher or lower than another, resulting in differences that need to be visible in measures that clearly do not explain the causes of individual differences in student learning.

Scientists including Carl Jung, Felder and Silverman, Gregorc, and Kolb have created multiple models of learning styles, many of which are employed in various research projects. The premise that people learn in different ways and that learning may be enhanced by customizing teaching to their style is shared by all learning styles theories, notwithstanding the diversity of these theories (Willingham et al., 2015).

There are more than 70 different models of learning styles, according to Bostrom & Hallin (2013). These various theories and models emphasize various aspects and learning style characteristics. Theorists of learning styles strongly emphasize students' cognitive processes, personality traits, abilities, sensory modalities, learning processes, and preferred thinking styles. A student's learning style impacts how they respond to a course, their attitude toward the program, and their comprehension of the program goals (Alkhasawneh, 2013). For the students, it is crucial to recognize various learning preferences in nurse education. However, this study focuses on the four modalities of the VARK model: Visual, Aural, Read/write, and Kinesthetic, which was developed by Neil Fleming in 1987.

The VARK model, created by Neil Fleming, is one of the newest and most adaptable models that examine learning

styles (McKenna et al., 2018). The VARK model employs a questionnaire to evaluate a person's learning preferences. It underwent several revisions after being mainly created at Lincoln University in New Zealand in 1998. Multiple studies utilized this validated and verified survey questionnaire in research across various topics and disciplines. According to McKenna et al. (2018), there are three guiding ideas form the basis of the VARK questionnaire: (1) each learner has their way of learning, (2) when varied learning styles are taken into account, learner motivation is boosted, and (3) Education principles are taught by the instructor and implemented through the use of four sensory.

Visual learners comprehend and retain knowledge better when they can see it. They are the ones who would like to have information presented visually rather than in a textual style. Students who learn this way pay great attention to detail and body language. They frequently construct situations in their imaginations to help them assimilate the knowledge more effectively and efficiently. Thus, graphic displays such as charts, illustrations, graphs, diagrams, demonstrations, and animated videos are more effective for visual learners when it comes to learning.

Aural learners learn best by hearing information. Instead of actively participating in class or taking notes, they prefer listening to others which convey the material and then regurgitate it. It is typically done through a discussion but may also be done through recordings and music. Furthermore, students who favor reading and writing learning styles learn best when new knowledge is presented through words and text. They frequently create lists, study definitions, and prefer summarizing material in ways that make the most sense to them. They grasp and retain new material most effectively by trying to read textbooks and making summaries with notes, jotting down in class and underlining important topics, presentation design, studying by avoiding distractions and trying to be inventive with their notes.

Kinesthetic learners are those students who learn best by actively touching and doing things. Hands-on experience is crucial for kinesthetic learners, who adopt a "trial and error" style in their study. They prefer getting their hands dirty and physically manipulating items and materials to understand better how things function. Rather than sitting at a desk for an extended period, mobility and brief bursts of learning are usually necessary to keep them focused. Therefore, they like and excel in art, sports, design, and technology.

According to Hou (2015), numerous research projects have looked at the many contextual and personal factors that can affect students' learning outcomes, particularly given the expanding availability of electronic learning styles that differ at all levels of education, which have gained prominence. Over the past few years, and have influenced many to urge educators to honor the diversity of their student participants in course design and even in developing leaders (Silverman,

2015). Others have called for researchers to look more closely at learning styles in various learning contexts and institutions because of how important the subject is (Halili et al., 2015). Moreover, we anticipate that different learning styles are connected to academic results. Black and Kassaye (2014) discovered that in a marketing course, student learning styles moderated the impact of experiential, participatory, and traditional course designs on student outcomes, which raises the possibility of interactions between learning styles and other factors.

In a study entitled "Language Learning Styles and Learning Strategies of Tertiary Level English Learners in China" conducted by Jie & Xiaoqing (2016), the findings indicate that learning styles considerably impact learners' learning approach choices. Evidence shows that the Judging scale favorably connects with seven different learning processes. As a result, it is the most significant learning style characteristic influencing learners' learning approach choices. High achievers are better capable of employing methods connected with their non-preferred styles than poor achievers. Based on the research findings, it is argued that learning styles and methodologies may impact learners' language learning outcomes.

A study showed that many researchers had investigated different aspects of learning styles. Thus, some studies have considered the advantages of exploring and studying the interactions between learning styles (Pariafsa et al., 2015). It resulted in the majority of participants preferring "reflective," "sensing," "visual," and "sequence" learning styles. A twoway ANOVA test showed that the individuals' genders, visual/verbal, and sequential/global preferences contributed to the variance in their mean results. Research on the correlation between learning styles and participant accomplishment scores showed that the other three dimensions—except for the "understanding" dimension—did not significantly affect participants' achievement scores. The Chi-square statistic showed a significant difference between the favored learning styles of senior high school "excellent language learners" and those of ordinary learners.

According to one study by Zhou (2011), students choose to absorb and process information in various ways, such as through listening and seeing, reflecting on their actions and acting on those reflections, and using logic and intuition for reasoning, analyzing, and visualizing. Thus, the compatibility of the students and the teacher's learning and teaching styles also affect how much a student can learn. The researchers conclude that teachers must be aware of their student's preferred learning styles in teaching English since this information will enable them to tailor their lesson plans to each student's needs at different phases of their learning process.

Boström (2011) investigated the variations and commonalities in learning styles as one factor in the

pedagogical relationship between teachers and students. Therefore, this study examines the learning style characteristics of instructors and students in the two main upper secondary school orientations. The study included 53 secondary school professors and 101 randomly chosen high school students. The PEPS learning styles exam was used to pinpoint 20 distinct characteristics. ANOVA and the Ftest were used to compare and evaluate the three groups' data. According to statistical research, instructors are more driven and conformist, need less structure and authority, and are more awake in the morning and less later than pupils. They also have more robust needs for light and temperature. There were not any significant variations between the two student groups. The results are helpful for those concerned with the design of teacher education, working instructors, and students themselves. The findings indicate the necessity for broader educational approaches and comprehensive didactic analysis of practical tasks.

Moreover, Kara (2023) looked at the idea that failure, frustration, and demotivation are caused by a mismatch between the teacher's teaching style and the student's learning style. Twelve instructors who were instructing these groups when the study was done, and 100 second-year students enrolled in ELT took part in the study. First, a questionnaire was presented to the students to determine their preferred learning methods. The Individual Style of Learning Inventory was updated and provided to the teachers to gather information on the teaching methods. Then, educators and students were questioned to determine whether they were worried about a mismatch. According to the findings, secondyear ELT students at Anadolu University preferred visual and auditory learning modalities. The teachers also favored auditory and visual learning methods. The results demonstrated the compatibility of the ELT Department's learning and teaching methods. When teachers do not teach in their preferred method, students claim to be uncomfortable and disappointed. Teachers said that they alter how they present or kind of activity when they become conscious of a mismatch. However, the lecturers must consider learning styles at the start of the semester.

Another study by Chermahini (2013) stated that academic accomplishment is used to measure academic performance in the English language. The survey findings revealed significant relationships between different learning methods and the English proficiency test, and the results varied across four groups with various preferred learning approaches. The findings additionally showed gender variations in English test performance for convergent and divergent and did not accommodate selected learning styles, which should be identified and assimilated. These findings led us to the following conclusion: that learning styles may be used to predict academic achievement in any second language and should be used to improve students' performance, particularly in learning and teaching a second language, and

ISSN: 2643-9670

Vol. 7 Issue 7, July - 2023, Pages: 53-67

that student's learning habits, as individual variances in learning styles, play an important role.

Furthermore, Baihaqi and Isda (2020) conducted a study that identified the prevalent categories of EFL students' learning styles and determined how those learning styles were used in English class discussions at Samudra University's English Department. The Samudra University's EFL students enrolled during the fourth semester serve as the study's analytical unit. This study has been carried out using a qualitative technique. Survey questions and observations were used to get the data. This study discovered that the kinesthetic, auditory, visual, and group learning modes were employed to teach English to learners of EFL. The most prevalent learning mode, according to the findings, was kinesthetic. In other words, Samudra University's EFL students favored a kinesthetic learning approach to learning English.

The researchers believed that the students have varying preferences in learning English. Thus, this study aimed to evaluate the various learning styles of the BSEd-English third-year students. It focused on the following aims: (1) identify the prevalent learning styles of BSEd-English thirdyear students based on VARK, (2) know the students' preferred teaching strategies for their major subjects. (3) identify the teachers' present teaching strategies in the major subjects they are handling, (4) know how do teachers accommodate the student's learning preferences in major subjects, and (5) gather recommendations can be made to better accommodate students' preferences in learning English based on VARK. The findings of this study aid in providing understanding to the students that individuals have different learning preferences and preferred teaching strategies that best suit their cognition. Hence, this study helps the students to understand their learning styles better, considering the multiple types of intelligence.

Based on the literature reviewed, many studies have been conducted on learning styles, proving their importance in the academe. Some studies investigated the learning styles and English language learning strategies, such as the one authored by Baihaqi & Isda (2020), which focused on the sample population of Samudra University students studying EFL and studies that investigated the interactions between the notions of learning styles and good language learners' achievement of senior high-school Iranian students. Thus, numerous studies have examined various facets of learning styles in different contexts. However, the researchers have found the results of studying the students' preference in learning English and their preferred teaching strategies of college Filipino students.

The present study zoomed into utilizing VARK learning styles as students' preference and preferred teaching strategies of the lesson in one of the prestigious institutions in Pagadian City. Specifically, the participants were the third-year Bachelor of Secondary Education (BSEd) students majoring

in English, chosen based on purposive sampling. This study is anchored on a qualitative case study, precisely Merriam's approach. The triangulation method was utilized in this study. Hence, the VARK learning style questionnaire version 8.01 by Fleming (1987) was administered to gather information about the selected students' learning styles and preferences. The questionnaire includes questions to determine a person's preferred sensory mode for learning. The learning preferences and the teaching strategies were triangulated. Thus, the students and teachers were interviewed to increase the reliability and credibility of the findings and reduced any biases in the research process of this study. The results of this study proved helpful in improving teachers' classroom strategies. They added to the knowledge of learning styles, specifically in English. This study will also benefit students as it will help them understand their learning styles and preferred teaching strategies to enhance their academic performance in their major courses.

#### 2. Мегнор

### 2.1 Research Design

This employed a qualitative research design. Thus, this study's preference dwelt more on Sharan B. Merriam's Case Study model in 1998. A case study is a detailed examination of a particular individual, group, organization, or phenomenon using qualitative research methods. According to Crowe et al. (2011), the above method is beneficial when understanding a topic, event, or phenomenon in depth and the context of real-world experience. Furthermore, for Merriam, a case study is "a thorough overview and evaluation of a bounded system." The most distinguishing feature of research using case studies is defining the case as the object of study." The case has to be a finite, contained system that can be described as a phenomenon. She claims that a case may thus be a single individual, a program, a group, an organization, etc. (Dey, n.d.). This approach suited the research aims, which were to (1) determine the student's preferences in learning English based on VARK, (2) identify the students' preferred teaching strategies for their major subjects, (3) know the teachers' present teaching strategies in the major subjects they are handling, (4) know how teachers accommodate the students' learning preferences in major subjects, and (5) provide recommendations on how to better accommodate students' preferences in learning English based on VARK. Therefore, it had been the anchorage for this study's methodology.

#### 2.2 Research Environment

This study was conducted in one of the most prestigious schools in Pagadian City, College of Teacher Education, Arts and Sciences (CTEAS) since the selected sample participants were also students of the institution. Another advantage of this choice is that the findings of this study will benefit the teachers and students of the school should it be proven that catering to students' reference learning in English indeed helps improve their comprehension of the lessons, especially since face-to-face conduct of classes has resumed.

### 2.3 Research Participants

This study utilized purposive sampling in determining the respondents. This sampling method aimed to find people more likely than not to share specific traits or experiences with the researchers. In this approach, the researchers may narrow their emphasis to a relatively small sample size and choose the people or situations that match the study (Nikolopoulou, 2022). Since the researchers of this study were English majors in Bachelor of Secondary Education (BSEd), the participants were also their fellow English majors, specifically those in their third year. Furthermore, strategies were triangulated, hence, two teachers who teach at least one English course were included as interviewees in this study.

#### 2.4 Research Instruments

The researchers viewed themselves as the primary research instrument, aided by an interview questionnaire and recording device. This utilized three instruments in total - the first was a survey questionnaire that identified the students' learning styles, and the second and third were the interview questions for students and teachers, which were validated with the help of the institution's research director. For the first research instrument, the researchers used the VARK (visual, aural, read/write, and kinesthetic) learning style questionnaire version 8.01 by Neil Fleming (1987), which included questions to assess a person's preferred sensory mode for learning. The instrument is based on interaction and reaction to the students' educational environment (Karim, 2014).

Then, an interview was administered to the students to identify the prevalent learning styles based on VARK and determine their preferred teaching strategy for their major subjects. Afterward, another interview was conducted with the teachers to determine their teaching strategies in English and identify their preferred teaching styles. Hence, the interview responses of the interviewees served as a preliminary data subject to analysis and interpretation. The instrument focused on eliciting responses about the participants' challenges and preferences in response to specific questions or problems that lead to collecting primary data for the case study on students' preferences in learning English.

### 2.5 Data Gathering Procedure

The researchers had observed the following steps. The researchers first formalized their request by writing to the Dean of the College of Teacher Education, Arts and Sciences (CTEAS). After receiving the approval of the Dean, the researchers coordinated with the students and teachers regarding the schedule of when the survey and interviews may be done and the content and structure of the aforementioned research instruments. Then, the nature of the research was explained to the selected sample participants, the 13 third-year English majors in Bachelor of Secondary Education and

2 English teachers who teach at least one English course. After the preliminary steps were done, the researchers forwarded a letter to the Vice President for Administration and the Dean of the College of Computing Studies (CCS), that requested approval to utilize the institution's school computer laboratory so that the participants can take the online VARK questionnaire version 8.01 (Fleming, 1987) at the same time. Upon finding out the different learning styles of the students, the researchers administered the validated questionnaires to students and teachers. Lastly, the results from both the survey and interviews were compared and analyzed through triangulation to make an inference about the research problems.

### 2.6 Data Analysis

In analyzing the data gathered the VARK questionnaire assessment results were tabulated to see the distribution of students among the different learning styles. This helped to answer the study's first research question. Then, interview results were analyzed and interpreted and the teachers' teaching strategies were triangulated. After the results and interpretation have been generated, the researchers suggested various recommendations to improve classroom, considering students' learning styles.

#### 2.7 Ethical considerations

Ethical considerations are essential to follow in research, for they will secure and protect the participants in the study. The study used the shared information from Bhandari (2022) and Lewis (2016) to observe ethical considerations in the conduct of this research. The study's parameters included the following elements:

*Informed consent*. Before deciding whether to participate in the study, participants were informed of its goals, advantages, risks, and funding.

Anonymity. The participants' identities were unidentified by the researchers. No personally identifiable information was gathered.

Confidentiality. Although you know who the participants are, you keep this information a secret from the others. To prevent others from connecting personally identifiable information to other data.

*Potential for Harm.* There is zero physical, social, psychological, or other harm tolerance.

Fair Treatment. All participants were treated fairly and equally throughout the study. Researchers avoided discrimination or bias and ensure that participants were not exposed to harm or discomfort.

Respect for Autonomy. Participants were allowed to decide about participating in the study. This includes giving them the right to refuse or withdraw from the study at any time without any consequences.

Beneficence and Non-Maleficence. Researchers strived to maximize benefits and minimize harm to the participants. This includes ensuring that the study was designed to mitigate potential damage to the participants.

ISSN: 2643-9670

Vol. 7 Issue 7, July - 2023, Pages: 53-67

Debriefing. Participants were provided with a debriefing session at the end of the study, where they were informed of the results and the implications of the study. Researchers provided them with any additional information they may require and addressed any concerns or questions.

#### 3 RESULTS AND DISCUSSION

This chapter presents, analyzes, and interprets data gathered from the 13 BSEd-English third-year students and two English teachers about the students' preferences in learning English, based on VARK. The students were officially enrolled in the school year 2022-2023, and the teachers were officially handling major subjects in the aforementioned academic year in one of the most prestigious private higher education institutions in Pagadian City.

A case study was used to get precise and trustworthy information that was suitable to respond to the specific questions posed in this study. As a starting point, the researchers present the summary of the results of Fleming's VARK learning style questionnaire in 1987. Then, a thematic analysis of the students' and teachers' responses to the validated interview questions that were administered is provided. Thus, the researchers have found various emerging themes which were presented and arranged following the study's research problem. Furthermore, the researchers carefully examined the transcripts and quoted the responses from the data gathered from the one-on-one interviews to present the exemplification of the various themes.

The research participants in this study are the 13 BSEd-English third-year students and 2 English teachers. Each participant was given codes to maintain confidentiality. For the teachers (teacher-participant) they were: TP1 and TP2 and for the students (student-participant) they were: SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, SP9, SP10, SP11, SP12, and SP13.

# 3.1 The Prevailing Learning Styles of BSEd-English Students Based on VARK

The VARK learning style questionnaire version 8.01 was utilized to determine the students' learning styles. The aforementioned questionnaire generated results regarding their prevailing learning preferences. Thus, several themes had been identified: *Aural, Kinesthetic, and Multimodal learning styles*.

**Table 1.** Summary of VARK learning style questionnaire administered to the students.

| Learning Style Preferences | Learning | Style | Preferences |  |
|----------------------------|----------|-------|-------------|--|
|----------------------------|----------|-------|-------------|--|

No. of Students

| Visual  | 0 |
|---|---|
| Aural   | 3 |
| Read/Write                                    | 0 |
| Kinesthetic                                   | 3 |
| Multimodal                                    |   |
| Visual, Aural, Read/Write, Kinesthetic (VARK) |   |
| Aural, Read/Write, Kinesthetic (ARK)          |   |
| Aural, Kinesthetic (AK)                       |   |
| Read/Write, Kinesthetic (RK)                  |   |

Table 1 shows the tabulation of the VARK Learning style questionnaire. It helped answer the study's first research question. Based on the results, 3 Aural learners, 3 Kinesthetic learners, and 7 students are Multimodal: 2 VARK, 3 ARK, 1 AK, and 1 RK. Thus, Aural, Kinesthetic, and Multimodal learning styles are the prevalent learning preferences among BSEd-English third-year students.

Thus, the VARK Learning style questionnaire that was employed on the third-year BSEd-English students shows that Aural, Kinesthetic, and Multimodal learning preferences are the most frequent learning preferences among them. The findings show that 3 students prefer the Aural learning style, 3 students prefer the Kinesthetic learning style, and 7 students prefer Multimodal learning modalities. These results suggest that the majority of the group's students prefer auditory, physical, and multimodal modes of instruction.

The VARK Questionnaire (version 8.01) was utilized in the current study due to its reliability and simplicity. Additionally, the VARK model is supported by study techniques for each learning style, which will aid in the development of instructional strategies based on student preferences. Studies on preferred learning styles have been conducted all over the world, and the results have been extremely inconsistent, suggesting diversity among students (Balasubramaniam & Indhu, 2016).

# 3.2 Teachers' Present Teaching Strategies for the Major Courses They Handled

The teachers' present teaching strategies for the major subjects they handled were obtained during the one-on-one interview conducted by the researchers. Hence, this led to the themes that were derived from their responses.

Based on the data gathered from the student participants, the teaching strategies of their teachers in the major subjects include Visual and Kinesthetic sensory modalities of VARK. The prevalent themes of their responses were the Visual presentation of the topics and the Incorporation of technology to promote active learning.

Visual presentation. The student participants responded during the one-on-one interview that their teachers in major subjects are most likely to present the topics by lecturing i.e., utilizing visual presentations. Hence, it is one of the themes that emerged.

"Most of my teachers use visual presentations during class discussions..." - SP5

"Visualizing and lecturing are the common strategies that they used." - SP6

"As I can say that, si Ma'am naga teach she's... Visual, the other subject Visual sad... Isa ka teaching strategy man gud sa literature mao jud ni more on ginagamit nila." [I can say that maám teaches using visuals, and for the other subject is a Visual teaching strategy as well. One of the teaching strategies in the literature, this what they are using.] - SP7

Thus, visual learners comprehend and retain knowledge better when they can see it. They are the ones who would like to have information presented visually rather than in a textual style. Students who learn this way pay great attention to detail and body language. They frequently construct situations in their imaginations to help them assimilate the knowledge more effectively and efficiently. Thus, graphic displays such as charts, illustrations, graphs, diagrams, demonstrations, and animated videos are more effective for visual learners when it comes to learning. Therefore, all symbolic arrows, circles, hierarchies, and other signs that individuals employ to denote what may have been communicated in words are included in the visual preference. It has to do with how data is presented in charts, graphs, maps, and flowcharts (VARK Learn Limited, 2023).

Technology Integration. The student participants mentioned that teachers employed active learning activities in their major courses by making use of technology. Thus, making them active and keeping the class discussions engaging throughout their major subject's learning and teaching process.

"I think the teaching strategies used are fostering collaboration, scaffolding,

adapting to the digital age, and promoting active learning in the classroom." - SP13

"Most of my teachers use visual presentations during class discussions and as well as formative assessments such as recitation and through giving us task or project-based activities" - SP5

"Most of my subject teachers used inquiry-based learning and the use of technology to keep us actively engaged towards our learning." - SP1

However, the teacher-participant 1 teaching strategy in the major subjects includes the Reading teaching strategy while teacher-participant 2 focuses more on the Kinesthetic teaching strategy, as mentioned during the interview. The teacher Participant 1 allowed the students to read the passages from the literature as they embarked on their voyage in the major subject for them to understand and absorb the information. Thus, making the strategy suitable for the course curriculum. Furthermore, teacher Participant 2 grouped the students to understand and absorb the information by brainstorming i.e., Collaborative learning strategy. Hence, allowing the students to collaborate with one another to complete the given task to the best of their abilities.

"So, sa atung subject in Survey of American Literature, I who presented you the lessons, especially sa Beowulf, I'm more on presenting the story by allowing you to read some passages, so it's reading." [In our subject Survey of American Literature, I presented Beowulf by allowing you to read some passages, so it is Reading.] - TP1

"Kining collaborative learning, under KINESTHETIC. Kasi, more heads are better than one. Ang akung idea, for example, classmate ko ninyo Ican share my best idea, ikaw pud on that ideas mo result in best answers, best result, best performances." [This collaborative learning under Kinesthetic, because, more heads are better than one. For example, as your classmate, I can share my best idea, likewise for you to give the ideas that will lead you to the best answers, results, and performances.] - TP2

The themes extracted from student participants on the present teaching strategies of their teachers for the major subjects they handled do not totally match the response derived from the teacher participants. Thus, to provide students with more individualized learning opportunities, teachers must remain updated on the many approaches and tools out there.

It is critical for teachers to stay informed and up to date on the various approaches and tools available in order to provide students with more individualized learning opportunities. Teachers can effectively adapt their teaching methods to meet the diverse needs and preferences of their students if they continue to expand their knowledge and skills. Furthermore, understanding the various types of learners present in the classroom is critical for creating a differentiated educational environment. Each student has different learning preferences, and by recognizing and addressing these differences, teachers can tailor their lessons to each learner's specific needs. This strategy, known as differentiation, promotes a more inclusive and engaging learning environment, increasing student motivation and overall academic success.

Additionally, understanding the several kinds of learners that are present in our classroom is essential to being able to differentiate our education. When differentiating, lessons are tailored around the unique learning preferences of each student. Thus, the VARK preference can be utilized to assist teachers in creating extra, efficient learning and communication methods (*VARK Strategies - VARK*, 2014).

## 3.3 Students' Preferred Teaching Strategies in Class Discussions

The researchers have probed further into determining the students' preferred learning strategies for learning their major courses. Accordingly, several themes emerged based on the responses gathered from the one-on-one interview on their preferred teaching strategies for their major subjects. These themes were Visual presentations, Hands-on experience, and Multimodal learning preferences. Thus, based on the responses, several students preferred the Visual teaching strategy for their major subjects, followed by Kinesthetic.

Visual presentations. The student participants responded during the one-on-one interview that they preferred presenting the topics visually. Hence, it is one of the themes that emerged.

"The teaching strategy of my teacher that I prefer is through providing visual aids because I prefer to see things to understand them better." - SP4

"I think my preferred teaching strategy for our major subjects is to focus more on visualizing and presenting the topic that has been discussed." - SP5 "Since most of my majors is all about literature, I preferred Visual learning method like watching videos or looking at images, such as graphics or diagrams, to understand the lesson effectively." [Since most of my majors are about literature, I preferred Visual learning methods like watching videos or looking at images, such as graphics or diagrams, to understand the lesson effectively.] - SP7

"I think, we students tend to prefer teaching strategies focusing more on visualizing and presenting the discussed topics." - SP11

The visual presentations were utilized by the teacher in the major subjects as mentioned by the student participants. The aforementioned teaching strategy was also preferred by the students and was also present in the existing strategies utilized by the teachers. Hence, the aforementioned preferred teaching strategy of the students was accommodated by the teachers. Although teachers act as coaches and learning facilitators while maintaining their authority position, they should consider their students' preferred learning strategy for their approach to be effective. Thus, learning styles play an essential role in how the teacher demonstrates knowledge so that students can easily understand what is being taught (Busilaoco & Lao, 2014).

Hands-on experience. The student participants preferred to learn and absorb information in their major courses by doing something i.e., by having hands-on experiences as responded during the one-on-one interview, which lead the researchers to come up with the aforementioned theme.

"I learn best when I manipulate or touch material to learn. So, my prefer strategies in major courses for effective learning is Kinesthetic." [I learn best when I manipulate or touch material to learn. So, my preferred strategy in major courses for effective learning is Kinesthetic.] - SP2

"Lectures and hands-on activities related to the subject" - SP10

"I learn most effectively through kinesthetic approaches. I benefit from engaging in practical, hands-on experiences." - SP12 Half of the student participants mentioned that Visual and Kinesthetic approaches are their preferred teaching methods for their major subjects. They opt for visual presentations and hands-on experiences when learning English. Thus, understanding a student's learning style can assist educators in tailoring their teaching methods to meet the needs of individual students better, resulting in better learning outcomes (Yazici, 2016).

Multimodal learning. Some student participants mentioned that they preferred various teaching methods for their major courses. These students preferred a combination of at least two of the VARK learning sensory modalities when their teachers present the topic in their major courses.

"For me, I prefer all the VARK teaching styles since it allows me to meet my learning needs." - SP3

"I prefer Kinesthetic ug Visual kay diha ko maka dali ug sabot sa discussion." [I prefer Kinesthetic and Visual because it allows me to easily understand the discussion.] - SP7

"I find that I learn most effectively through a combination of Auditory and Kinesthetic approaches. I enjoy listening to lectures or discussions, and I also benefit from engaging in practical, hands-on experiences." - SP13

The student participants have different preferences when it comes to learning styles. However, it is widely accepted that the best way to meet their learning needs is to combine a variety of teaching methods based on the VARK model (Visual, Auditory, Reading/Writing, and Kinesthetic).

Subsequently, even their teachers have mentioned that Visual, Kinesthetic, and Multimodal teaching strategies are what the BSEd-English third-year students are most responsive to during their class discussions in the major subjects they are handling.

"They are most responsive to if they are gonna be ask to perform something, so I guess, that catches their interest and also they will be encourage to do, kay wala mn pud silay mahimo...so if they are performing something like kuan they have to... that teaching strategy is what the students are most responsive to." [They are most responsive to if they are gonna ask to perform something, so I guess that catches their interest, and they will be encouraged to do it because

they do not have a choice. If they are performing something, then they really have to...I guess that teaching strategy is what the students are most responsive to.] - TP1

"...Using technology or VISUAL or AURAL teaching strategies those are the strategies that I am utilizing in which the students are most responsive to..." [Using technology or Visual or Aural teaching strategies, those are the strategies I am utilizing in which the students are most responsive.] - TP2

Undoubtedly, when the teacher-participants employed the preferred teaching strategies of the student participants, they tend to be more responsive and active during the teaching and learning process. Therefore, this implies that when students' preferred teaching strategies are catered to in the classroom, hence, active participation comes after. It is clear that students absorb and process information in a variety of ways, emphasizing the importance of adapting pedagogical approaches accordingly. Teachers who understand their students' preferred learning styles are better able to tailor their instructional methods, resulting in higher-quality instruction.

Information is taken in and processed by students in several ways. Thus, pedagogy ought to change in response. Teachers' awareness of students' preferred learning methods is key to improved teaching and learning. procedures, resulting in higher-quality instruction (Timsina et al., 2021).

# **3.4** Teachers' Means of Accommodating Students' Learning Preferences in Major Subjects

Based on the data gathered from the student participants, the teachers accommodate the students' learning styles for their major subjects. Thus, several themes emerged: Complementing strategies with students' learning styles. and the Variation of activities to target different learning preferences.

Complementing strategies with students' learning styles. Based on the data gathered from the interview conducted, almost half of the student participants alluded that their learning styles were accommodated by their teachers in major courses by employing teaching strategies that complement their learning preferences.

"... my teachers on my major subjects used strategies to cater to the different learning styles of each learner ..." - SP2

"I think one of my major teachers gina consider jud nya ug unsang learning

styles sa naku ug akung mga classmates." [I think one of my teachers in the major considers my learning style as well as my classmates.] - SP4

"...naga consider ang teacher in a way nga like sa atung every Tuesday natu mangutana si ma'am ug unsa atung learning style or what way ta maka learn..." [...the teacher considers in a way that like in our Tuesday class schedule in which the teacher asked what are our learning styles or in what way we can learn...] - SP7

"She will use different teaching strategies so I can do better next activity/session." - SP8

"Since our preferred learning style is through kinesthetics, our teachers are always trying their best to perform hands-on activities or demonstrations for us further to acquire learning and knowledge in our everyday topic." -SP10

The students mentioned that their teachers used teaching strategies that suit their learning styles. These learning styles are generally acknowledged in education as a strategy to promote the concept that every student learns in various ways. It is not a teaching prescription, but they scaffold a teacher in recognizing a student's preferred method of processing and retaining information. According to Yazici (2016), some students prefer visual aids, while others prefer auditory or kinesthetic learning methods. Thus, understanding a student's learning style can assist educators in tailoring their teaching methods to meet the needs of individual students better, resulting in better learning outcomes.

The teacher participants have further mentioned that they incorporate activities and assessments that best suit the students' cognition and learning style after they observed and identified the students' learning preferences. They cater to the needs of the students by keeping the activities aligned with students' learning styles and by tailoring their assessments accordingly.

"First, before you can identify what teaching strategy to use...you also identify your students napud." [Before you can identify what teaching strategy to use, you need to identify and observe first your students.] - TP1

"For example, Nakita man ta mo na pero sa VARK kay naa man ninyu tanan, magaleng mo tanan. Kuhang kuha nyo." [For example, I have observed you already; however, based on the VARK, you possessed all four sensory modalities. You are all good. You all got it!] - TP2

The teacher-participants elucidate their own means of accommodating the learning preferences of the student-participants during the one-on-one interview about the teachers' accommodation of the students' learning preferences for their major courses.

They explained that to better accommodate the students' learning styles, the students must be under observation first to identify their learning preferences. This will further help the teacher to adjust and tailor their instruction and modify their teaching strategy to better accommodate the students' learning preferences in the major courses they handle.

Variation of activities. Some of the student participants bring up that their teachers administered several activities and assessments that supplement and cater to their varying learning styles.

"...they used differentiated strategies nga gi consider ang different learning styles sa ilang students. They understand the different learning styles and tailor their teaching strategy to suit the students." [They used differentiated strategies that considered the different learning styles of their students. They understand the different learning styles and tailor their teaching strategy to suit the students.] - SP2

"...they use or make different activities that target different learning styles." - SP5

It is clear that the educators or teachers in question have a thorough understanding of the various learning styles present among their students. They have demonstrated a commitment to creating a supportive and inclusive learning environment through the use of differentiated strategies and activities. These educators can tailor their teaching approaches to their students' individual needs and preferences by recognizing and considering their students' individual needs and preferences.

Teachers play a critical role in creating an inclusive and effective learning environment for their students in today's dynamic educational environment. They are constantly striving to understand and respond to the unique needs of each learner, ensuring that each student can reach

their full potential. One critical component of this process is the incorporation of activities and assessments that are appropriate for the students' cognition and learning style.

"...you also identify your students napud so if you observe na your students learns best kinesthetically then perhaps you can incorporate some performances..." [...you have to observe your students. So, if you observe that your students learn best kinesthetically, then perhaps you can incorporate some performances...] - TP1

"...diba lain-lain man ko ug pamaagi naku how I give a question, how I let you answer the questions so, I can see there them most useful the uses of VARK. Different learning styles, the four of them are considered well so that your needs were met at the time." [I have differentiated ways in which I give a question and how I let you answer the questions. So, I can see the most useful uses of VARK. The four learning styles are considered well so that your needs were met at the time.] - TP2

The various learning styles displayed by students, as well as the various teaching strategies employed by teachers, play a critical role in determining a student's academic success. Recognizing and addressing the mismatch between teaching methods and students' learning preferences is critical for effective education. To meet the individual needs of each student, teachers must have a repertoire of teaching methods and actively identify and use their students' preferred learning styles. Teachers can create a more inclusive and accommodating learning environment for all students by doing so. The incorporation of student-centered instructional approaches benefits not only individual students but also the overall success of the program and the classroom as a whole.

Learning is a continuous process, and a process is a series of actions that culminate in a result. Learning barriers can cause the learning process to stall or stop in this situation. An effective learning strategy, on the other hand, can overcome those barriers and create learning that is tailored to the learner. The mismatch in the teaching-learning approach is one of these barriers. This barrier may be caused by an incorrect application of methods, techniques, and strategies to the learners. Recognizing a learner's learning style can lead to more effective learning (Cabual, 2021).

Consequently, the themes acquired from the student participants of this study were parallel to the teachers' responses. That proves that when teachers are better equipped

to meet the individual learning demands of each student when they are aware of the features of various learning styles and the corresponding teaching tactics. Furthermore, the alignment of themes between teachers and students suggests that effective teaching strategies extend beyond information dissemination. Rather, it entails forging meaningful links between instructional methods and students' preferred learning styles. Teachers can improve comprehension, retention, and overall academic performance by using a variety of teaching techniques that cater to different modalities and preferences.

This is crucial for developing engaging classroom experiences and assisting students in remembering what they have learned. It is crucial to maintain flexibility in how the lesson is presented. Thus, a teaching method considering varied learning styles guarantees that all learners are included (Kennedy, 2022).

# 3.5 Recommendations to Better Accommodate Students' Preferences in Learning English

Teachers play a critical role in creating inclusive and effective learning environments for their students in the everchanging landscape of education. Each student has a unique set of abilities, preferences, and learning styles that can greatly influence their educational experience. Recognizing this, educators are increasingly focusing on identifying students' learning styles and tailoring instruction to their diverse needs. The VARK model, which divides learners into four sensory modalities (visual, auditory, reading/writing, and kinesthetic), is a popular framework used by teachers. Understanding students' learning styles within these modalities allows teachers to provide differentiated instruction and activities that improve learning outcomes and promote student engagement.

Based on the students' perspectives about better accommodation of their learning preferences in learning English based on VARK. The following themes emerged: Matching students' preferred teaching strategies and Keeping the teaching strategies aligned with the students' learning styles.

Matching students' preferred teaching strategies. At the minimum, two of the student participants broached that teachers must engage their learning styles and preferred teaching strategy to accommodate better their preferences in learning English based on the four sensory modalities of VARK.

"My recommendation is that future English teachers must be aware that the field of English is very important, and teachers must have a good preparation to effectively engage of the English learners so that they can accommodate the learning preference of us students." - SP1

"A teacher must engage the student in having a conversation about the subject matter so that the teacher can cater to or accommodate the student's preferences in learning." - SP2

Engaging their learning preferences and preferred teaching strategies were suggested by the students to better accommodate their learning preferences in studying their major courses. According to one study by Zhou (2011), students choose to absorb and process information in various ways, such as through listening and seeing, reflecting on their actions and acting on those reflections, and using logic and intuition for reasoning, analyzing, and visualizing. Thus, the compatibility of the students and the teacher's learning and teaching styles also affect how much a student can learn. The researchers conclude that teachers must be aware of their student's preferred learning styles in teaching English since this information will enable them to tailor their lesson plans to each student's needs at different phases of their learning process.

Teacher participants also suggested that employing differentiated instruction and activities was essential to better accommodate and engage the students' preferred teaching strategies in learning English based on the four sensory modalities of VARK they belong to.

"The teacher may also administer a posttest and pretest to accommodate the four sensory modalities of VARK." - TP1

"...if they are all Kinesthetic in that group; if you have something for them to work then there should be a differentiated instruction that belongs to that group which is Kinesthetic..."TP2

Thus, teachers can create a classroom environment that caters to the individual needs of each student by acknowledging these variations in learning styles. This not only improves their learning experience but also fosters a sense of inclusivity and engagement. When students are actively involved in their studies, they become more motivated, enthusiastic, and willing to try new things. This involvement leads to improved academic performance and a better understanding of the subject matter.

According to Boender (n.d.), they need to be aware that every student has a unique learning style. Learning styles vary among students, with some preferring auditory, others kinesthetic, and others visual. Students are more likely to succeed in the classroom if they are more involved in their studies. To fulfill each student's specific needs, teachers should be aware of the different learning styles and be able to provide them with a range of learning opportunities.

Keeping the teaching strategies aligned with the students' learning styles. No less than two student participants suggest that teachers must keep their teaching strategies aligned with their learning styles to better accommodate their learning preferences based on VARK sensory modalities.

"I think it will be better if ang teaching strategy samga maestra is align siya sa learning style based on VARK sa mga studyante..." [I think it would be better if the teaching strategy of the teacher is aligned to my learning style based on VARK and the students...] - SP4

"Get to know more of the students and observe on which styles they prefer and excel the most when it is being utilized." - SP11

Even teachers have suggested that identifying the students' learning styles to match their preferred teaching and giving differentiated instruction. The teacher participants suggest that to better accommodate the students' preferences in learning English based on VARK, hence, their learning styles and preferences must be identified first. Thus, the quoted transcripts are hereunder.

"...first, i guess for me you need to ask your students na okay class what are your preferred learning style do you prefer nga visual you will be presented with pictures, images or do you prefer nga its aural you will hear ...for me will that is one of my recommendation ask your students or kuan make a poll siguro ask easy as that naa gani na siya sa messenger you have to put that four..." [...first, I guess for me, you need to ask your students about their preferred learning style, do you prefer visual? you will be presented with pictures, images or do you prefer that it is aural? You will hear and then ask...so, maybe for me, that is one of my recommendations, ask your students or make a poll, maybe as easy as that, that can be found even in messenger, you have to put that four...] - TP1

"...I have 30 students dapat kanang 30 naku nga estudyante aku na silang ma

diagnose kung aha sila ma belong, kay dili man parehas ug mastery diba naay bata nga magaleng sa KINESTHETIC. Naa pud sa READ/WRITE... so, importante kaayu sa classroom ma identify naku sila kung asa sila nga nabelong para ma master nila..." [...I have 30 students, those 30 students of mine, I should diagnose them or categorize where they really belong because they do not have the same level of mastery, there is a student that is good in Kinesthetic... thus, it is essential in the classroom for me to identify my students, so that they can master it...] - TP2

The various learning styles acknowledge the existence of learner diversity and emphasize the importance of understanding and accommodating different learning styles. Teachers can improve their students' learning experiences by recognizing and utilizing their unique skills and preferences. While taking notes may benefit some students, others may benefit more from active listening or visual aids such as charts and graphs. It is critical to recognize that individuals do not all have the same learning style and their preferences can vary across contexts. Although students can use multiple learning styles depending on the situation, they frequently prefer one or two. As a result, educators must strive to create inclusive learning environments that accommodate a variety of learning styles.

According to Shier (2020), learning styles are one theory that considers learner diversity, which helps understand the various learning styles. Knowing and utilizing the students'skills to improve learning may also be helpful for teachers. While some students like to take notes, others may find that listening to the teacher helps them learn more. On the flipside, one student learns better by reading a book, while another gets the most out of the charts, graphs, and pictures the teacher shows them during a lecture. Thus, it is significant to remember that individuals may not have a common style. Although students can employ a variety of styles in various contexts, they frequently prefer one or two types.

Educators who recognize and accommodate different learning styles foster a sense of inclusivity in the classroom. Students are no longer constrained by a one-size-fits-all approach, but rather empowered to engage with the material in ways that best suit their individual learning preferences. An inclusive classroom environment ensures that all students feel valued and supported, whether they are visual learners who thrive on visual aids, kinesthetic learners who benefit from hands-on activities, or auditory learners who absorb information through listening.

#### 4 CONCLUSION

The researchers concluded that the research participants described their experiences and observations in their major subjects' class discussions throughout their voyage in learning English.

The VARK learning style questionnaire version 8.01 by Fleming in 1987 revealed that students have distinct learning styles based on their sensory modalities. Aural, Kinesthetic, and Multimodal learning styles are prevalent among BSEd English third-year students, with some students not entirely aware of their preferences. However, the themes of students' preferred teaching strategies matched the results, making the questionnaire vital for predicting and determining students' preferred teaching strategies. The theory of Multiple Intelligences and learning styles are interrelated, as understanding the different types of intelligence in students can help teachers choose the best learning approach. Multimedia presentations can enhance problem-solving skills, cultivate optimism, and explore a broader range of learning. Identifying students' learning styles and considering multiple types of intelligence can make the teaching process more engaging and effective.

#### 5 REFERENCES

- Accommodating Different Learning Styles: 3 Tips to Guide You. (n.d.). Hey Teach! https://www.wgu.edu/heyteach/article/accommodating-different-learning-styles-3-tips-guide-you-01702.html
- Alkasawneh, E. (2013). Using VARK to assess changes in learning preferences of nursing students at a public university in Jordan. *Implications of nursing. Nurse Today*, 33(12), 1546-9. https://bit.ly/44vn26n
- An, D., & Carr, M. (2017). Learning styles theory fails to explain learning and achievement: recommendations for alternative approaches. *Personality and Individual Differences, 116*, 410–416. https://doi.org/10.1016/j.paid.2017.04.050
- Baihaqi, B., & Isda, I. D. (2020). A study of EFL students' learning styles in English classroom interaction. ResearchGate. https://bit.ly/46v2EV0
- Balasubramaniam, G., & Indhu, K. (2016). A study of learning style preferences among first year undergraduate medical students using VARK Model. *Education in Medicine Journal*, 8(4). https://doi.org/10.5959/eimj.y8i4.440
- Bhandari, P. (2022). *Ethical considerations in Research | types & examples*. Scribbr. https://www.scribbr.com/methodology/researchethics/?fbclid=IwAR0IucqNHZPBcVpFIYgzRDsxRE3 Sz8DFr8109FpvESIIMzcp hjt3FzRGoNY
- Black, G., & Kassaye. W. (2014). Do students' learning styles impact student outcomes in

- marketing classes? Academy of Educational 18(4), 149-162. Leadership Journal, https://files.eric.ed.gov/fulltext/EJ1168958.pdf
- Boström, L. (2011). Students' learning styles compared with their teachers' learning styles in upper secondary school - a mismatched combination. Education Inquiry, 2(3), 475-495. https://doi.org/10.3402/edui.v2i3.21995
- Bostrom, L., & Hallin, K. (2013). Learning styles and differences between nursing and teaching students in Sweden: a comparative study. International Journal of Higher Education, 2(1), 22-34. https://bit.ly/44vn26n
- Busilaoco, F.C. and Lao, S.R. (2014). Learning style and students' achievement in Science. IAMURE International Journal of Multidisciplinary Research, 7. - References - Scientific Research (n.d.). https://www.scirp.org/(S(czeh2tfqw2orz553k1w0r4 5))/reference/referencespapers.aspx?referenceid=29 60210
- Cabual, R. A. (2021). Learning styles and preferred learning modalities in the new normal. OAlib, O8(04), 1-14. https://doi.org/10.4236/oalib.1107305
- Chermahini, S.A., Ghanbari, A. and Talab, M.G., 2013. Learning styles and academic performance of students in English as a second-Language class in Iran. Bulgarian Journal of Science and Education 7(2), Policy. p.322. https://doaj.org/article/ab874b1a0bf64e30b5ccc750 c0670df3
- Clark, A. (2022). Learning styles vs. multiple intelligences: Related, but not the same - Classcraft Blog. Resource schools for and https://www.classcraft.com/blog/learning-styles-vsmultiple-intelligences/
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A. J., & Sheikh, A. (2011). The case study approach. BMC Medical Research Methodology, 11(1). https://doi.org/10.1186/1471-2288-11-100
- Dey, A. K. (n.d.). Dissecting the case study Research: stake and merriam approaches. www.linkedin.com. https://bit.ly/3rjtOOg
- Hou. Y. (2015). Raising self-awareness of learning styles: from a gender difference perspective. International Journal of Learner Diversity & Identities, 21(3/4),1-10.https://files.eric.ed.gov/fulltext/EJ1168958.pdf
- Ilçin, N., Karadibak, D., Savci, S., Tomruk, M., & Yeşilyaprak, S. S. (2018). The relationship between learning styles and academic performance Turkish physiotherapy students. https://doi.org/10.1186/s12909-018-1400-2
- Jie, L. & Xiaoqing, Q. (2016). Language learning styles and learning strategies of tertiary-level English learners China.

- https://journals.sagepub.com/doi/abs/10.1177/0033 688206063475?journalCode=r ela
- Kara, S. (2023). Learning styles and teaching styles: a case study in foreign language classroom. ResearchGate. https://bit.ly/3JCrAAc
- Karim, H., Khajavikhan, J., Nahal, M. M. H., Peyman, H., Rasool, M. T., Sadeghifar, J., 23 Yaghoubi, Y., & Yasemi, M. (2014). Using VARK approach for assessing preferred learning styles of first year medical sciences students: a survey from Iran. Journal of Clinical and Diagnostic Research. https://doi.org/10.7860/jcdr/2014/8089.4667
- Kennedy, C. (2022, August 10). ESS / accommodating different learning styles in the classroom. ESS. https://ess.com/blog/accommodating-differentlearning-styles-in-the-classroom/
- Lathan, J. (2021). Complete guide to teacher-centered vs. student-centered. https://onlinedegrees.sandiego.edu/teachercentered-vs-student-centered-learning
- Litonjua, E. (2020). What Is Multimodal Learning? what is multimodal learning? - elearning industry. https://elearningindustry.com/what-is-multimodallearning
- McKenna, L., Copnell, B., Butler, A. E., & Lau, R. (2018). Learning style preferences of Australian accelerated postgraduate pre-registration nursing students: A cross-sectional survey. Nurse Education in Practice, 280-284. https://doi.org/10.1016/j.nepr.2017.10/.011
- Moussa, N. (2014). The importance of learning styles in education. https://bit.ly/46wV4sO
- Nikolopoulou, K. (2022). What is purposive sampling? | examples. Scribbr. definition https://bit.ly/3CZg7XI
- Pariafsai, A., Ghazanfari, M., Akbari, O. and Hosseini Borabadi, T., 2015. High-school students' dominant learning styles preferences in learning English: How are "good language learners" different from the ordinary ones? Two Quarterly Journal of English Language Teaching and Learning University of Tabriz, 7(16), pp.85-111. http://ensani.ir/file/download/article/201602161515 00-9818-61.pdf
- Shier, M. (2020, September 11). 2.1 Learning preferences and strengths. Pressbooks. https://opentextbc.ca/studentsuccess/chapter/learnin g-preferences-and-strengths/
- Silverman, M. (2015). Gender differences in learning styles among project managers: implications for leadership development programs. Retrieved from Dissertation Abstracts International Section A: Humanities and Social Sciences Vol. https://files.eric.ed.gov/fulltext/EJ1168958.pdf

- The VARK Modalities: Visual, Aural, Read/write & Kinesthetic. (2014, July 30). VARK a guide to learning styles. <a href="https://vark-learn.com/introduction-to-vark/the-vark-modalities/">https://vark-learn.com/introduction-to-vark/the-vark-modalities/</a>
- Top Hat. (2019). Learning style definition and meaning | Top Hat.
  - https://tophat.com/glossary/l/learningstyle/#:~:text= A%20style%20of%20learnin
  - g%20 refers, %2C%20 auditory %2C%20 tactile %20 and %20 kinaes thetic.
- VARK Learn Limited. (2022). VARK Learning style questionnaire: How do you learn best? VARK Helping You Learn Better. https://vark-learn.com/the-vark-questionnaire/
- VARK Learn Limited. (2023). The VARK modalities: visual, aural, read/write & kinesthetic. VARK a guide to learning styles. https://vark-learn.com/introduction-to-vark/the-vark-modalities/
- *VARK Strategies VARK.* (2014). VARK a guide to learning styles. <a href="https://vark-learn.com/strategies/">https://vark-learn.com/strategies/</a>
- View of Preferred Learning Style of Students of Nangkor
  Central School, Bhutan. (n.d.). View of Preferred
  Learning Style of Students of Nangkor Central
  School,
  Bhutan.
  <a href="https://journals.library.brocku.ca/index.php/jiste/article/view/3659/2752">https://journals.library.brocku.ca/index.php/jiste/article/view/3659/2752</a>
- What are VARK Learning Styles? (n.d.). What Are VARK Learning Styles? <a href="https://blog.definedlearning.com/blog/what-are-vark-learning-styles">https://blog.definedlearning.com/blog/what-are-vark-learning-styles</a>
- Willingham, D. T., Hughes, E. M., & Dobolyi, D. G. (2015). The scientific status of learning styles theories. *Teaching of Psychology*, 42(3), 266-271.
- Yazici, H. (2016). Role of learning style preferences and interactive response systems on student learning outcomes.
  - https://www.semanticscholar.org/paper/Role-of-learning-style-preferences-and-interactive Yazici/7e47309a2ff2b22b758e9713600a98dec5236
- Zhou, M. (2011). Learning styles and teaching styles in college English teaching. *International Education Studies*, 4(1). https://doi.org/10.5539/ies.v4n1p73