HOW LEARNING STYLES MATCH LANGUAGE LEARNER EDUCATIONAL TECHNOLOGY STUDY PROGRAM AT BATURAJA UNIVERSITY

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Abstract

Education is a crucial element in equipping students for their future. Each student has a unique way of understanding and absorbing information in every learning session. Engaging English teaching is an art that requires specific styles and techniques, making the learning process more enjoyable and the study material more easily accepted by students. The researcher applied a qualitative literary research approach, emphasizing the utilization of texts and library literature as the main sources of primary data, involving three stages, namely data reduction, data presentation, and conclusion drawing or verification. Sampling was conducted within the Educational Technology Study Program at Baturaja University, and the analysis of the samples was performed using a quantitative method. Learning style refers to the methods and techniques individuals use to learn and process information and knowledge. Students in the Educational Technology study program at Baturaja University employ visual, auditory, and kinesthetic learning styles. This is verified by the analysis results, which reveal that 18 (60%) students prefer visual learning, 7 (23.33%) prefer auditory learning, and 5 (16.66%) prefer kinesthetic learning. The research findings demonstrate that studying learning styles has beneficial effects on the learning process, aiding in the development of confidence and autonomy in managing learning. This, in turn, contributes to an improved overall learning experience.

Keywords: *Language, Learning, Styles*

1. INTRODUCTION

Education is a crucial element in equipping students for their future. Each student has a unique way of understanding and absorbing information in every learning session. When students grasp their learning styles, they can effectively process learning materials or digest information that enters their long-term memory.

Engaging English teaching is an art that requires specific styles and techniques, making the learning process more enjoyable and the study material more easily accepted by students. In teaching English, educators need to deliver lesson content well and clearly. The taught material should also be diverse, aligning with the teacher's expertise in the field. To effectively and enjoyably deliver learning materials, teachers must recognize that each learner/student has different learning styles. Learning styles significantly impact students' ability to absorb information provided by teachers. Individuals' learning styles are comprised of unique traits that contribute to the effectiveness of learning for certain people and, conversely, may lead to ineffectiveness for others. This means that represent the preferred ways in which a child learns, with each person having their distinctive learning style (Sidoarjo & Astuti, 2023; Idkhan & Idris, 2021)

Understanding learning styles is crucial. For educators, being aware of the learning style of each student enables them to employ suitable techniques and strategies, both in teaching and in fostering personal development. A student should also be aware of their

learning style, enhancing self-awareness and understanding their needs. Recognizing learning styles ensures tailored support in providing optimal learning conditions.

Language serves as a tool to shape thoughts, feelings, desires, and actions. English language learning at the educational level is synonymous with teaching a child their mother tongue. Generally, our elementary school children are not yet familiar with how to use English properly, impacting English teaching methods that tend to be introductory. Regardless of the chosen approach, differences in learning styles indicate the fastest and best way for each individual to absorb information. Understanding how each person's learning style differs can guide someone to find the right learning style, leading to more optimal results for themselves.

To attain successful learning outcomes, teachers need to carefully consider various factors during the teaching process. Both external and internal elements that impact students' academic achievements are frequently explored in research to support teaching activities (Episiasi et al., 2021). One of these factors is the student's learning style.

In the realm of learning styles, trailblazers have identified numerous variables that impact students' learning preferences, including sociological, emotional, and encompassing physical and environmental factors. Considering these factors, the learning style of English language learners should be a crucial consideration for a teacher. Students' tendency in language learning is to apply a visual learning style, especially in English language learning. Therefore, it is essential to discuss how learning styles influence language learning.

II. LITERATURE REVIEW
Theories of Learning

Learning is an action. Learning is a complex activity. This means that learning is an activity that involves several abilities, such as skills, attitudes, knowledge, and values. Meanwhile, knowledge is shaped by individuals. An individual interacts with an ever-changing environment. By interacting with the environment, an individual's intelligence can be developed (Wahyudin & Wahyuni, 2022). The foundation of language teaching should center around an understanding of how individuals learn, encompassing various learning theories. These theories delineate five primary stages in the evolution of learning theory: behaviorism, mentalism, cognitive code, affective factors, and the distinction between learning and acquisition.

a. Behaviorism
   According to this theory, learning is a mechanical process involving habitual sequences. It prescribes methodological principles based on the behaviorist stimulus-response framework. It assumes that language acquisition mimics the natural process of acquiring one's mother tongue. Teachers are encouraged to expose learners to activities and language inputs that stimulate interest and encourage interaction.
b. Mentalism
   Chomsky's perspective asserts that thinking follows rule-governed processes, utilizing a finite set of rules to handle a potentially infinite range of experiences. A well-structured cognitive framework facilitates mastery of the target language.
c. Cognitive Code
   This theory regards learners as thinking individuals actively trying to make sense of data. Learning is seen as a process where learners strive to impose meaningful

interpretations or patterns on data. Problem-solving tasks are fundamental to teaching in accordance with cognitive language learning theory.

d. Affective Factors

Recognizing learners as emotional beings, this stage emphasizes the emotional aspect of learning. Language learning is portrayed as an emotional experience, with feelings playing a crucial role in success or failure. The interplay between cognitive and affective elements is especially vital in foreign language settings and the development of English for Specific Purposes (ESP).

e. Learning and Acquisition

Distinguishing between learning and acquisition, this stage categorizes learning as a conscious process and acquisition as an unconscious one. Both processes are deemed valuable in second language learning, with each playing a distinct role.

Learning Style

Learning style refers to the methods and techniques individuals use to learn and process information and knowledge. Experts provide various definitions of learning styles. Essentially, individuals' abilities to understand differ in levels. Some are quick, some are moderate, and others are very slow. Therefore, students often need to adopt different approaches to comprehend the same information and lessons. Learning style is a distinctive way of learning for each student. Irrespective of the selected approach, variations in learning styles signify the quickest and most effective way for each individual to assimilate information from their surroundings. If someone can understand the differences in everyone's learning styles, it can guide them to find the right learning style that yields optimal results for them.

Students' learning style, or learning style, is how they react to and use stimuli received in the learning process. A person's learning style encompasses the way they take in, organize, and process information (Wahab & Nuraeni, 2020). Learning style encompasses factors such as processing information through writing, hearing, seeing, and speaking, as well as the global, analytical, sequential, or right-brained and left-brained processing of information. Another facet is how students react to their learning environment, distinguishing between abstract and concrete absorption of knowledge. Learning style also reflects students' inclination to adopt specific strategies in their learning as a means of taking responsibility for discovering an approach that aligns with the learning demands in class/school and the requisites of the subject.

Based on the insights provided by the experts above, it can be deduced that a learning style is the favored manner in which students naturally respond and utilize stimuli to absorb, organize, and process information during the learning process. Learning style is the preferred or habitual way individuals process knowledge and turn it into personal knowledge. This is the educational condition where students are most likely to learn the process of teaching and learning; the significance of studying learning styles is twofold. Firstly, it enables teachers to aid students in recognizing their individual learning styles. This awareness, in turn, empowers students to develop confidence and acquire skills in self-directed learning. Second, students' learning styles influence how teachers teach, and teachers need to know what style students have and how it compares to others. Knowledge of learning styles should also help students become aware of others' styles and how to use different styles when in a teaching environment (Shilfani et al., 2019).

In the context of learning styles, there are terms known as multi-modalities and single-modalities. Single-modality refers to a single type of learning style, such as visual learner, auditory learner, read-write, or kinesthetic learner. Conversely, within the context of multi-modalities, an individual may exhibit more than one type of learning style. Every

individual has the potential to possess a multi-modal learning style depending on how all their senses can be engaged and trained. Essentially, with multi-modalities, an individual can undergo the learning process by adapting to their preferred learning models. Research has been conducted to compare the academic performance of students with single-modal and multi-modal learning styles. The results suggest that there is no significant variance in learning achievements.

Various Learning Styles

According to experts, learning styles are categorized into four, namely Visual, Auditory, Read-write, and Kinesthetic as follows (Rahayu & Sibawaih, 2017):

a) Visual

In this context, tendency refers to the inclination to represent information through graphs, diagrams, flow charts, maps, and visual symbols like circles, arrows, hierarchies, and other materials employed by instructors to convey concepts that can also be expressed verbally. This encompasses the use of design, patterns, shapes, and various formats for marking and conveying information.

   a. Some characteristics of Visual Learners are Always looking at the lips of the teacher who is teaching, Preferring written instructions, photos, and illustrations to be seen; When instructions to do something are given, they usually look at their peers before taking action themselves; Having a tendency to utilize body movements as a means to convey or substitute a word while expressing something; Disliking speaking in front of a group and less likely to listen to others; Usually unable to remember orally given information; Preferring diagrams, calendars, and timeline graphs to remember event parts; Always observing all physical elements of the learning environment; Having a preference for demonstrations rather than oral explanations; typically able to remain seated quietly in a noisy or crowded situation without feeling disturbed; Carefully organizing their learning materials; attempting to remember and understand information through the use of tables, diagrams, and maps; and learning the material by reading notes and summarizing.

   b. Appropriate media or materials encompass: Teachers incorporating body language or visuals during explanations; Visual media, such as videos and posters; Books featuring numerous diagrams or pictures; Graphs; Flow charts; Using different colors to highlight crucial sections in teaching materials; and Visual symbols.

   c. Learning strategies involve replacing words with symbols or pictures.

b) Aural atau Auditory Learning (A)

This modality characterizes a preference for information that is heard or spoken. Students with this modality excel in learning through lectures, group discussions, tapes, tutorials, speaking, and discussing material. This may involve verbalizing information aloud or engaging in self-talk.

   a. Auditory learners possess distinctive characteristics that shape their preferred mode of learning. They excel in remembering information when it is conveyed verbally, either by themselves or others. This learning modality is marked by a tendency to retain information through constant speaking out loud and repeating sentences. Auditory learners particularly enjoy and thrive in group discussions, favoring longer conversations, especially when grappling with complex or

unfamiliar topics. Their strength lies in recalling and absorbing material discussed in group settings or classes.

Furthermore, auditory learners often showcase their proficiency by knowing and accurately imitating numerous songs or TV commercials. While they relish engaging in conversations, they tend to dislike reading tasks and encounter challenges in reading comprehension. Additionally, auditory learners may find difficulty in remembering recently read information, performing essay or writing tasks, and focusing in quiet environments, often getting distracted by noise. These characteristics collectively define the unique learning preferences and challenges associated with the auditory modality.

b. Appropriate media or materials encompass Participating in classes, Engaging in discussions, Collaborating on a topic with peers, Discussing a subject with the teacher; Clarifying new concepts to others, Employing a recording device, Recalling captivating stories, examples, or jokes, Describing visually acquired content (such as pictures or PowerPoint presentations).

c. Learning strategies include the following: Notes made may be very inadequate. Add information obtained by talking to others and collecting notes from books; Record a summary of the notes and listen to the recording; ask others to hear the understanding received about a topic; and Read books or notes out loud.

c) Read-write

a. Suitable materials/tools include dictionary; handout; textbook; notes; list; essay; and reading a manual book. Learning strategies include Writing words repeatedly, Reading your notes (silently) multiple times, Expressing ideas or information using different sentences, and Converting all diagrams, pictures, etc., into written words.

d) Kinesthetic

Based on this definition, this modality refers to experiences and exercises, whether in the form of simulations or real events; even when the experience incorporates other modalities, this encompasses videos, demonstrations, simulations, and films that faithfully depict the lessons, akin to case studies, exercises, and practical.

a. Some of its characteristics involve Enjoying touching everything encountered, Having difficulty sitting still, Preferring to work on everything with hands, Usually having good body coordination, Enjoying the use of physical objects as learning aids, Understanding abstract concepts (such as maps, mathematical symbols, etc.)

Recalling information effectively when physically engaged in the learning process; finding satisfaction in physically organizing or handling learning materials; frequently attempting to make notes for the purpose of later review without depending on them; demonstrating a preference for the use of computers; expressing interest and enthusiasm for physically active tasks. Having difficulty being still or staying in one place for a certain period without physical activity, and Often playing with objects around while listening or doing something.

b. Appropriate media/tools encompass: Engaging all senses (touch, sight, hearing, smell, taste); Laboratory work; Field trips; Speakers offering real-life examples;

Application exercises; samples, exhibits, photography; and Collections of diverse plants, insects, and the like.
c. Learning strategies involve remembering real events, providing various examples to facilitate understanding of concepts, using objects to illustrate ideas, returning to the laboratory or learning location to conduct experiments, recalling experiments, making field trips, and so on.

III. RESEARCH METHOD

The researcher employed a qualitative literary research method, focusing on utilizing texts and library literature as primary data sources. The sampling was conducted within the Mathematics Study Program at UKI Toraja University, and the analysis of the samples was performed using a quantitative method. Two main approaches were employed: the historical approach, which documented events including their time, place, object, background, and participants to unveil the socio-historical context, and the philosophical approach, which delved into the thoughts of notable figures to uncover the underlying essence of observable phenomena.

Data for the study comprised both primary and secondary sources. Primary data was obtained directly from the original source and recorded firsthand, while secondary data originated from external parties beyond the researcher and included literature such as books, papers, articles, and other works and communism.

For data analysis, the researcher employed qualitative descriptive analysis involving three stages: 1) Data reduction, which included categorization, direction, and removal of irrelevant information; 2) Data presentation, where the reduced data was narratively presented; and 3) Conclusion drawing or verification, which involve drawing conclusions based on the presented data. The researcher employed both inductive and deductive thinking methods, with deductive thinking starting from specific statements towards general applicability.

IV. FINDINGS

Within the Mathematics Study Program at the University of Christian Indonesia Toraja, 18 out of 30 individuals exhibit a visual learning preference (Shilfani et al., 2019). Their inclination is consistently towards learning through videos or TV as opposed to other forms of media. Additionally, they find a more comfortable environment for study or work when the surroundings include posters and images. These learners tend to emphasize or highlight crucial information while reading and use color-coded systems to aid their understanding during study or work. Written instructions are essential for their tasks, and they rely on visual cues to comprehend spoken information.

Within the Mathematics Study Program at the University of Christian Indonesia Toraja, 7 out of 30 individuals exhibit a visual learning style, while 7 out of 30 students possess an auditory learning style (Shilfani et al., 2019). Those with an auditory preference consistently favor listening to lectures or recordings over reading. They also have a strong recall when information is discussed aloud. These learners demonstrate ease in understanding spoken content, exhibit better memory retention, and can recognize individuals by their voices.

Within the Mathematics Study Program at the University of Christian Indonesia Toraja, 5 out of 30 students exhibit a kinesthetic learning style (Shilfani et al., 2019). These individuals consistently find enjoyment in physical activities, experience enhanced thinking when in motion, and have an inclination towards construction or creative

endeavors. They avoid restlessness during prolonged periods of sitting and require frequent breaks while working or studying. Furthermore, they have a tendency to move their lips when reading silently.

Based on the research findings, it's clear that the investigation into learning styles has a twofold impact on the learning process (Shilfani et al., 2019). Firstly, it empowers teachers to assist students in recognizing their distinct learning styles, contributing to the development of confidence and autonomy in managing their learning. Secondly, the learning styles of students shape the teaching approach of educators, highlighting the significance for teachers to comprehend these styles and their individual connections with students. The understanding of learning styles is also anticipated to motivate students to identify alternative styles and adjust in different learning environments. In the end, the incorporation of diverse learning styles enriches the overall learning experience.

4.1. Challenges in Mastering English

Several challenges impede the learning of English, including (Maru'ao, 2020):

a. Teachers infrequently using English in the classroom, which students find inhibiting as it hampers their exposure to spoken English.

b. Overemphasis on grammar over conversational skills, with students lacking guidance on the practical application of the grammar rules they study.

c. The vocabulary taught often lacks relevance to everyday conversations. Students struggle with technical terms learned in school, finding it challenging to understand commonly used words in English-language media. Some students can memorize political terms in English but struggle with naming everyday objects.

. Lack of consistency in English learning materials between junior and senior high school levels. Students note repeated content without clear connections between concepts learned in junior high and senior high school, affecting their understanding and application in daily life.

4.2. Types of Learning Style

Barsch, as mentioned by Anita, (2015), analyzing learning styles through the lens of perceptual modality preferences reveals three main types:

a. Visual learners

Visual learners are most effective when learning through sight. They work well alone or with a partner, especially for reading and reviewing, gaining a good understanding of information by seeing words in books. They remember and comprehend information better when it is presented visually, such as through reading. Oral explanations are not as crucial for them as they are for auditory learners. Visual learners often prefer solitude for reading or studying, distancing themselves from verbal learners who thrive on discussion. They tend to benefit from writing down or illustrating auditory information.

b. Auditory learners

Auditory learners are most effective when learning through hearing. Background music might be beneficial for them. They learn by listening to spoken words and oral explanations. Reading aloud or moving their lips as they read helps them remember information, especially when learning new material. Auditory learners find audiotapes, lectures, and class discussions helpful. While they may not necessarily create mental pictures, they clarify information through their listening and repeating skills, encompassing both listening and auditory learners.

c. Tactile learners

Tactile learners excel in their learning when engaged through touch or hands-on experiences. Participating in hands-on activities, such as conducting experiments in a laboratory, manipulating and constructing models, and physically interacting with materials, offers them the most effective learning environments. Taking written notes or instructions contributes to their memory, and actively participating in class-related activities enhances their comprehension of new information. Tactile learners often benefit from concrete experiences to grasp abstract concepts. In a classroom setting, they tend to thrive when assignments involve hands-on activities like experiments, the use of tangible materials, trial and error approaches, and field trips.

4.3. How to Identify Learning Style

The Learning Style Inventory is a simple yet effective test designed to assist students in understanding their strengths and weaknesses as learners. It assesses learning styles by considering perceptual modality preferences and consists of 30 questions aligned with leading perceptual modalities. In this study, the author chose the Learning Style Inventory because it adeptly unveils essential characteristics of individual learners based on their preferences in perceptual modalities. Importantly, these learning styles exhibit a clear practical connection with media, types of materials, and how instructional strategies are

implemented. Identifying learning styles is crucial for understanding and grouping students. Unfortunately, many teachers overlook the possibility that students may struggle to learn because they are not given the opportunity to use their preferred learning style in the classroom.

4.4. Learning Style in Second Language Acquisition

The process of acquiring a second language is exceptionally complex, involving numerous factors that resist easy description and explanation. The systematic exploration of how individuals acquire a second language is a relatively recent development, emerging in the latter half of the twentieth century. Although the term "second language acquisition" might appear self-evident, it requires careful clarification. In this context, the term 'second' pertains to any language acquired after the mother tongue, and it is not meant to be in contrast with 'foreign.' Whether acquired naturally by residing in a country where the language is spoken or learned through instructional methods in a classroom, the umbrella term 'second' language acquisition is universally applied. Therefore, second language acquisition is characterized as the process through which individuals learn a language other than their mother tongue, encompassing both classroom and non- classroom settings. The study of this phenomenon is known as SLA (Second Language Acquisition).

In the realm of instruction, it is crucial to consider the physical aspects of learning style. In the context of second language acquisition, learners may demonstrate preferences for auditory, visual, tactile, or a combination of these learning styles. The ESL (English as a Second Language) program seems to be successfully catering to the perceptual learning styles of students. The acknowledgment of one's own learning style is crucial in the journey of "learning to learn." Students can enhance their likelihood of successful language acquisition by employing strategies for studying, adopting effective study methods, and cultivating collaborative learning skills.

4.5. Learning Styles and Memory

Learning styles are closely connected to memory, with sensory memory playing a crucial role for styles like visual, auditory, and tactile. Sensory memory serves as the entry point for information into the brain through individuals' senses. When learning styles align with individuals' strengths, attention becomes actively involved, facilitating the processing of information into short-term memory. (Silitonga et al., 2020).

Previous studies on the relationship between learning styles and memory have identified several influencing factors, such as background knowledge, interest level, physical and emotional states. Comprehending a learner's position in relation to these factors is crucial for attaining an optimal learning experience. Kratzig and Arbuthnott propose that guiding individuals in adopting effective memory across diverse stimulus modalities and contexts can enhance the overall learning process.

Broadly speaking, the identification of learning styles highlights that an individual's preference plays a significant role in shaping the learning strategies employed when
acquiring a foreign language. By understanding learners' styles, teachers can create groups based on these preferences for effective grouping.

When learning a foreign language, students express their preferences for absorbing and retaining new information in diverse ways, impacting their behavior. Learning styles encompass individual qualities, activities, and behaviors that endure over time,

reflecting habitual, natural, and preferred ways and skills. These tendencies persist irrespective of teaching methods and content areas.

Learning style models can be categorized into dimensional models encompassing perceptual, cognitive, and affective dimensions. Perceptual learning styles encompass the physical and sensory elements learners utilize to interpret external stimuli, including visual, auditory, and tactile elements, taking into account cultural and gender differences. In ESL (English as a Second Language) teaching, a crucial aspect is the comprehension of vocabulary, given that vocabulary constitutes the inventory of words in a language.

V. CONCLUSION

Learning style refers to the methods and techniques that individuals employ to learn and process information and knowledge. According to experts, learning styles are generally categorized into four types: Auditory, Visual, Kinesthetic and Read-write. Students in the Mathematics Education study program in UKI Toraja employ visual, auditory, and kinesthetic learning styles. This is verified by the analysis results, which reveal that 18 (60%) students prefer visual learning, 7 (23.33%) prefer auditory learning, and 5 (16.66%) prefer kinesthetic learning. The research findings demonstrate that studying learning styles has beneficial effects in the learning process, aiding in the development of confidence and autonomy in managing their learning. This, in turn, contributes to an improved overall learning experience.

Reference
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Anita, F. (2015). Student Learning Style In The English Education Study Program. *Language Education Journal*, *4*(1). https://journal.ikippgriptk.ac.id/index.php/bahasa/article/download/41/40