A Review of Studies on Foreign Language Learning Styles of Middle School Students

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Abstract. Individual differences in middle school students are one of the important research areas in foreign language teaching. Research has shown that junior high school students' learning styles are an important factor affecting their foreign language learning effectiveness, but they have not been given due attention by most foreign language teachers. Learning styles refer to the relatively stable learning methods that learners are accustomed to using in the process of acquiring and processing information. The types of learning styles are categorized as analytical, global, reflective, impulsive, visual, auditory, tactile, kinesthetic, collective, independent, introverted and extroverted. There is a high correlation between students' personal learning styles and English achievement. Therefore, the study of learning styles has important theoretical and practical value. The main research content of the article is to help students and teachers better understand the meaning of learning styles and their role in foreign language learning, and to help students recognize their own learning style preferences, so that they can more flexibly cope with different learning situations and learning materials, and improve their learning efficiency.

Keywords: Learning styles; English Learning; Middle School Students.

1. Introduction

Different people have different personalities and learning styles, and each student's ability to perceive and process new information varies from person to person. However, most teachers tend to overlook this when teaching. English, as a very important foreign language, is learned differently by students in the traditional single-teacher-centered teaching model. With the changes in the new curriculum, the center of education shifted from the teacher to the student. Many researchers at home and abroad have begun to pay attention to the role played by students' individual differences in the process of foreign language learning. Learning styles are an important branch of individual differences.

The research topic of this paper is the English learning styles of middle school students. This paper studied the definition, categorization, characteristics of learning styles and the relationship between them and English language learning. Understanding the learning style helps students to better adjust the learning methods and improve learning efficiency. It can ultimately provide some implications for how students and teachers can develop an awareness of learning styles and how to make the best use of their own learning styles to improve their performance in English.

Research on learning styles can enable teachers to understand the class in a new way. Student motivation and English language learning outcomes can be promoted when students' learning styles and teachers' teaching styles are matched. At the same time, students can consciously choose learning methods that match their needs and create an appropriate learning environment to help develop their English learning potential.

2. Definition of Learning Styles

The ‘learning style’ has not formed a unified definition for a long time, and many scholars have interpreted the meaning of learning style from their own perspectives. There are several definitions of learning styles.
Keefe defines learning style as the way learners perceive and recognize the learning environment and their response to changes in learning and interactions with the learning environment, which is a relatively stable factor [1]. Dunns defines learning styles as stable behaviors of learners and the ways in which learners attempt to master and remember new or difficult knowledge and skills that vary significantly between individuals [2]. Reid defines learning styles as the natural, habitual, and preferred ways in which learners absorb, process, and retain new information and acquire new skills in Learning Styles in the ESL/EFL English Classroom [3]. Tan Dingliang defines learning style as a learner's consistent, habitual, and characteristic way of learning, which is the sum of learning strategies and learning tendencies [4].

To summarize, the definition of learning style is described differently by various scholars, but the essence is the same. It refers to the relatively stable learning methods that learners are accustomed to adopting in the process of acquiring and processing information. In this paper, Reid's definition and categorization of learning styles are selected for study because Reid's categorization has been proven to be well-designed and universally accepted by various national and international studies.

3. Categorization of Learning Styles

There are also many types of learning styles, and in 1995 Reid categorized learning styles into three main areas: cognitive learning styles, sensory learning styles, and personality learning styles [5].

Among these, cognitive learning styles are categorized as analytical vs. holistic and reflective vs. impulsive. Analytical learners like to set goals for themselves and arrive at results through rational analysis. Holistic means learning from the experiences of others and learning more effectively. Reflective refers to finding more effective ways of learning through thinking. Impulsive refers to learners who react immediately and take risks.

Sensory learning styles are categorized as visual, auditory, tactile, kinesthetic, collective, and independent. Visual refers to learners learning more effectively by watching videos and books. Auditory refers to learners' ability to improve their English listening skills by listening to information through their ears. Tactile refers to learners always touching objects in the language classroom, such as taking notes to enhance learning. Kinesthetic means that learners learn more effectively by moving their whole body and participating in activities. The collective type means that learners learn efficiently when working with others. Independent means that learners learn more effectively when they are alone.

Personality learning styles are categorized as introverted and extroverted. Extroverted learners tend to learn in specific environments that are connected to the outside world. However, introverted learners like to learn knowledge in situations they create themselves and they always come up with unique ideas or concepts.

4. Characteristics of Learning Styles

Learning styles are defined and categorized according to different principles established and views expressed from different perspectives. However, there are some common threads in all of these ideas, and Zhang Li of Shanghai Normal University summarizes some of the following characteristics of learning styles in her article [4].

4.1. Uniqueness

Learning styles are influenced by specific family, educational and socio-cultural influences based on the learner's individual neurological organization. They are developed over long years of study and have distinctive individual characteristics. Different people like to learn in different ways, and everyone's learning style is unique. For example, some people increase their knowledge by reading a lot of literature; others learn by listening to audio recordings; others like to participate in group work, and still others are used to thinking independently.
4.2. Stability

Learning styles develop over time through a variety of learning experiences. Once formed, it does not easily change with the content of the learning task or the learning environment. As a result, learning styles are quite stable. However, this does not mean that learning styles are permanent. In fact, some parts of learning styles change to adapt to new learning environments and learning tasks. At the same time, learning styles can be diversified and expanded through training to enhance a variety of learning needs. Subconscious or unconscious learning styles can be turned into conscious learning styles with proper training.

4.3. Directness

A person's personality, habits, and other factors in the area of individual differences have the potential to influence learning activities, but this influence is indirect. However, learning styles are gradually formed during the process of continuous learning and practicing, which directly affects the learning process and has a great impact on learners' academic performance. Thus, directness is an intrinsic characteristic. Learners often fail to perceive or consciously utilize it to acquire new information. Therefore, a proper understanding of the relationship between learning styles and academic performance is important for improving learners' learning outcomes.

4.4. Mutuality

The mutuality of learning styles refers to the interdependence and interconnectedness of the uniqueness and stability of learning styles. Uniqueness is due to students' individual characteristics. Uniqueness is also characterized by stability. But the stability of learning styles can change gradually as students' personality traits develop and their ways of thinking change. These new ways of thinking and behaviors may become stabilized and then altered as the individual develops relative stasis, a cycle of stability to variability.

In summary, learning styles can change somewhat while remaining stable overall. Exploring the characteristics of learning styles can lead learners to explore and clarify their own learning style preferences and make changes to meet the demands of characteristic learning tasks and improve their learning. What is more important is that developing a specific learning style is more beneficial for foreign language learners and thus facilitates foreign language learning.

5. Factors Affecting Learning Styles

Learning styles are mainly influenced by internal factors, but to some extent, they are also influenced by external factors, such as social factors, cultural factors, learning environment, family background, gender, and age.

5.1. Culture

The cultural context has a subtle and inescapable influence on the learner's style. Reid has studied many English language learners from different cultural backgrounds [6]. He found that most English language learners from Spain favored auditory learning styles, while Vietnamese and Chinese English language learners preferred visual learning styles. He believes that this phenomenon is due to the fact that Spaniards are better at verbalizing, while the figurative nature of Chinese characters influences to some extent the Chinese habit of learning the language. On the other hand, the idea of harmony advocated in Chinese culture makes Chinese people more inclined to a collective type of learning style. However, the individualism promoted in Western culture makes them more inclined to learn independently.

5.2. Learning Experience

Learning experiences have a significant impact on learning styles. Learning styles are developed gradually during learning activities, while learning experiences are the processes and experiences that
learners go through during learning activities. The accumulation of learning experiences allows students to better understand their own learning characteristics and learning styles, so that they can gradually develop a learning style that suits them. Learning experiences can contribute to students' cognitive development, which in turn influences learning styles. In addition to this, learning experiences allow students to better adapt to different learning environments and learning tasks.

5.3. Personality

Students' personalities are a major factor in determining their success or failure in language learning. Among them, the differences between extroverted and introverted learners were more pronounced. Extroverted learners are sociable and enjoy practicing English with others, so they are more confident in their oral expression. In contrast, introverted learners prefer quiet learning environments and dislike socializing. They prefer reading and writing learning tasks, so they do better at developing language learning skills.

5.4. Age

Age is one of the factors that contribute to individual differences in second language acquisition. As people grow older, their attitudes, methods and habits of learning English change accordingly. Younger learners are more inclined to use interactive learning tasks, while some older learners may prefer to learn alone or through reading to improve their English skills.

5.5. Gender

Gender also has an effect on English learning styles, but it is not a determining factor. Girls are usually more inclined to use more interactive learning methods, such as group discussions and role-playing. They also pay more attention to details and rules and are good at memorizing and reciting. Boys, on the other hand, prefer to study independently on their own, and they are more focused on understanding and the big ideas, not on the details. Zhang Qingyong tested 85 students in Zichuan Second Middle School in Zibo City, and found that boys' learning styles were more pronounced than girls', with boys preferring a "moving" style of learning, while girls favored "listening" [7].

In summary, learning styles are influenced by a variety of factors. In the process of learning English, learners should choose appropriate learning styles and learning methods according to their own situation to improve their learning effectiveness. Teachers should also provide targeted instruction to better meet the learning needs of their students based on their characteristics.

6. Learning Styles and English Language Learning

6.1. The Relationship between Learning Style Preferences and English Language Learning

Hongxia Wang administered Reid's Perceptual Learning Style Questionnaire to middle school students from two different kinds of schools [7]. The results showed that Chinese junior high school students preferred all perceptual learning styles, preferred tactile and auditory learning styles the most, and preferred visual learning styles the least, and there was a correlation between English academic performance and learning styles. Li Zongqiang and Zhang Meng conducted a survey of junior high school students in two middle schools in Shenyang City, both urban and rural areas, and the results of the study showed that junior high school students favored experiential, hands-on, group, and auditory learning styles [8]. The only significant difference between junior high school students of different grades was in the group learning style.

<table>
<thead>
<tr>
<th>Person Correlation Sig. (2-tailed)</th>
<th>Visual</th>
<th>Auditory</th>
<th>Kinesthetic</th>
<th>Individual</th>
<th>Group</th>
<th>Impulsive</th>
<th>Reflective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.246*</td>
<td>-0.045</td>
<td>-0.061</td>
<td>0.268**</td>
<td>0.021</td>
<td>-0.146*</td>
<td>0.284*</td>
</tr>
</tbody>
</table>

Table 1. Each item’s sig value and Pearson correlation value [4].
The research statistics in Table 1 indicate that there is a high correlation between students' personal learning styles and English achievement, i.e., the higher the students' personal learning style preference, the higher the students' English achievement. Among them, impulsive learning styles are negatively correlated with English performance. If a student has a high preference for impulsive learning styles, he or she will have lower English scores, so there is a need to curb this learning style. Visual and reflective learning styles are positively correlated with English performance. The correlation values indicate that by developing these learning styles, students can improve their performance in English. There is no significant correlation between other learning styles and English performance.

Table 2. Differences in Learning Styles between High and Low Foreign Language Achievement Subgroups [9].

<table>
<thead>
<tr>
<th>Learning styles</th>
<th>Relevant data</th>
<th>High score</th>
<th>Low score</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinesthetic</td>
<td>average</td>
<td>10.97</td>
<td>10.38</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>2.79</td>
<td>2.87</td>
<td></td>
</tr>
<tr>
<td>Sociable</td>
<td>average</td>
<td>10.63</td>
<td>10.07</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>2.72</td>
<td>2.92</td>
<td></td>
</tr>
<tr>
<td>Auditory</td>
<td>average</td>
<td>10.59</td>
<td>9.02</td>
<td>1.57**</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>3.88</td>
<td>3.87</td>
<td></td>
</tr>
<tr>
<td>Logical</td>
<td>average</td>
<td>11.59</td>
<td>8.48</td>
<td>3.10***</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>2.96</td>
<td>3.21</td>
<td></td>
</tr>
<tr>
<td>Verbal</td>
<td>average</td>
<td>10.79</td>
<td>8.55</td>
<td>2.24***</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>3.29</td>
<td>3.05</td>
<td></td>
</tr>
<tr>
<td>Independent</td>
<td>average</td>
<td>10.42</td>
<td>8.08</td>
<td>2.34***</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>3.38</td>
<td>2.98</td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>average</td>
<td>9.16</td>
<td>7.90</td>
<td>1.26**</td>
</tr>
<tr>
<td></td>
<td>standard deviation</td>
<td>3.18</td>
<td>3.08</td>
<td></td>
</tr>
</tbody>
</table>

The research statistics in Table 2 indicate that high achievers in English preferred all these learning styles compared to low achievers in English, with significant differences in independent, auditory and visual learning style scores. High achievers in English have strong motivation and learning autonomy, are very diligent in their studies and have good study habits. They like to call on a variety of learning styles to learn, making them good at all aspects of their craft. However, those with low scores in English generally lack motivation and initiative in learning, and many of them lose confidence in learning and give up on themselves due to poor original foundation, failure to make up for the shortcomings in time, and inability to catch up with other students in English learning. As a result, those with low English scores are not well practiced in all aspects of their abilities, their multiple intelligences are not fully developed, and in the long run, they do not have the same degree of preference for various learning styles as those with high scores.

6.2. Learning Methods for Different Learning Styles

In English language learning, students' learning styles can have a significant impact on learning outcomes. Different people have different learning styles and are suited to different learning styles [10].

6.2.1. Visual

Learners of visual learning styles prefer to learn through visual stimuli. They are good at getting information by looking at pictures, charts, videos, etc. In English learning, they can transform the English knowledge they have learned into the form of charts and diagrams, such as knowledge trees and framework diagrams, etc. At the same time, they can further strengthen their awareness of note-taking and consciously mark the important and difficult points with colorful pens in the process of learning.

**p<0.01, *p<0.05
6.2.2. Auditory

Learners of auditory learning style prefer auditory stimuli for learning. This type of learner is adept at acquiring information by listening to audios, lectures, and conversations. Therefore, they can listen to more audio and online lectures to help learn new points during the English learning process, and they can have conversations with native English speakers to improve their speaking and listening skills.

6.2.3. Visual

People with kinesthetic learning styles prefer hands-on practice. This type of learner is good at acquiring information by doing experiments, practicing, and solving problems. In English learning, they can participate in more activities of role-playing, conversation practice and writing practice [11].

7. Conclusion

The study of learning styles has significant theoretical and practical value. In middle school, students' English learning, the common learning styles are visual, auditory, kinesthetic, collective and independent. Factors that influence middle school students' learning styles include students' own personalities, social background, culture, learning environment, gender, and age. Different learning styles have an impact on academic performance. Each student has his/her own language learning style, so they should choose appropriate learning methods and resources according to their own learning styles in order to improve their learning effectiveness and interest in learning. At the same time, teachers should be flexible in adapting classroom activities to enable students to make full use of their learning styles. There is a close relationship between learning styles and individual differences, and understanding students' individual differences can help teachers better tailor their teaching to each student and provide teaching methods and strategies that fit their characteristics. There is no single learning style that can be applied to all knowledge learning, and the same is true for language learning. While individual learning styles are stable, they are also malleable in their own way.

References