A Study on the Strategies of English Dictionary Use by Students of Guangxi Normal University Affiliated Foreign Language School

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ABSTRACT: *This paper uses quantitative methods, including literature review, field interviews, and questionnaires, to investigate dictionary use strategies in English learning among junior high students at Guangxi Normal University Affiliated Foreign Language School. Data from the questionnaires were analyzed using SPSS software. Descriptive statistics were employed to calculate the mean and standard deviation of various strategies, followed by a comparison of strategy use across first, second, and third-year students. The study aims to objectively describe strategy use, analyze its causes, and provide teachers with insights to help improve students' dictionary use strategies.*

KEYWORDS: *Quantitative analysis; English learning; dictionary use strategies; SPSS*

I. Introduction

Currently, increasing attention is being paid to dictionary research, with many scholars favoring the study of bilingual dictionaries. However, there remain significant gaps in this field, particularly regarding middle school students, as most researchers focus their studies on universities. Middle school students, as beginners in English learning, have not been adequately studied in terms of their reliance on dictionaries in the early stages of learning, their mastery of dictionary use strategies, and the role dictionaries play in their learning. Therefore, investigating middle school students' use of dictionaries is of particular importance. Dictionary use strategies, as a crucial component of dictionary usage, should also receive more attention. Cowie (1983) believes that dictionary use skills are the techniques that users should master or acquire to effectively utilize the information contained in dictionaries. Hartmann and James (1998) pointed out that dictionary use skills refer to the user's ability to find information, which involves their behaviors, preferences, and habits. Dictionary use strategies refer to the ability of language learners to consult dictionaries and utilize the information they contain in language learning (Zhao Wei, 2004: 30). This study investigates dictionary use among students across three grade levels in middle school, analyzing their use of dictionaries from multiple perspectives and comparing the three grades to gain an overall

understanding of dictionary use at this school.

Guangxi Normal University Affiliated Foreign Language School is a foreign language school approved by the Guangxi Education Department, with a good reputation in Guilin, Guangxi. The school has distinct features in English education, one of which is that nearly all students use either the Longman Dictionary of Contemporary English or the Oxford Advanced Learner's Dictionary. For middle school students, they begin using these two dictionaries from the first year. As a unique case, we conducted an investigation and analysis of the dictionary use among students at this school, providing an objective description of their use of dictionary strategies and an analysis of the causes. The aim is to offer some guidance for improving students' dictionary use strategies and to assist teachers in fully utilizing dictionaries in English teaching.

II. Research Methods

This study employs quantitative analysis methods, including literature review, field interviews, questionnaires, and data analysis using SPSS software, to investigate the use of English dictionary strategies among junior high school students at Guangxi Normal University Affiliated Foreign Language School.

2.1 Research Questions

The survey aims to answer the following questions:

How do junior high school students at Guangxi Normal University Affiliated Foreign Language School use English dictionaries?

Are there any differences in dictionary strategy use among students in grades 7, 8, and 9?

What specific differences exist in the use of dictionary strategies?

2.2 Research Tools

SPSS (Statistics Package for Social Science) for Windows is a statistical software package used in social sciences, running on the Windows system. The basic functions of SPSS include data management, statistical analysis, graphical analysis, and output management. Specific features include descriptive statistics, cross-tabulation, mean comparison, correlation analysis, regression models, cluster analysis, principal component analysis, time series analysis, and non-parametric tests. SPSS is highly versatile. First, it encompasses various established statistical methods and models, offering comprehensive statistical algorithms for researchers. Second, it provides various techniques for data preparation and organization. Third, it generates flexible tables and common statistical graphs. Overall, SPSS is well-suited for analyzing the data from our survey.

2.3 Data Collection

The determination of research questions and data collection went through several stages:

First Stage: Topic Selection and Information Gathering

After intense discussions within the team and communication with our advisors, we finalized the topic. The

survey results are expected to have practical significance in promoting students' use of English dictionaries and their dictionary use strategies. Once the topic was confirmed, we gathered relevant information on the use of the Oxford Advanced Learner's Dictionary by students at the school, through phone or online communication, to finalize the survey's specific content.

Second Stage: Questionnaire Design and Interviews

Based on the initial information gathered, we discussed and determined the general content of the questionnaire and the survey objectives. After organizing the questionnaire, we visited the school's academic office and conducted interviews with the Deputy Director and the head of the Grade 9 English group (see Appendix 1 for interview records). The school has 15 classes in each grade, all parallel without differentiation into key or regular classes, with over 60 students per class. Given the large number of students, we decided to distribute the questionnaires using a random sampling method. These interviews helped us better understand the survey population, and after several revisions, we finalized the questionnaire content (see Appendix 2), the number of questionnaires, and the sample size.

Third Stage: Questionnaire Distribution and Collection

This stage was conducted in two phases. A total of 240 questionnaires were distributed to students in grades 7, 8, and 9, with 80 questionnaires per grade. We collected 193 completed questionnaires.

Fourth Stage: Data Analysis, Writing, and Reflection

The 193 returned questionnaires were organized and analyzed using SPSS software. Based on the data, we conducted detailed discussions, compared them with our initial hypotheses, and began writing the research paper.

III.   Data Statistics and Analysis

This paper employs a combined research method of questionnaires and interviews. We distributed 240 questionnaires to students across three grade levels. After excluding unreturned and invalid questionnaires, we collected 193 valid responses. The survey included 15 questions related to students' dictionary use strategies. SPSS software was used to analyze the data. For data entry into SPSS, numbers 1 to 5 were assigned to represent the options: "Almost Never," "Rarely," "Sometimes," "Often," and "Always," respectively. Mathematically, this is expressed as: "Almost Never = 1," "Rarely = 2," "Sometimes = 3," "Often = 4," and "Always = 5." After entering all 193 questionnaires into SPSS, we first analyzed the students' responses to all 15 questions, calculating the overall mean and standard deviation to assess the general state of dictionary use strategies at the school. We then compared the data across grades 7, 8, and 9, conducting comparative evaluations and categorized analyses, resulting in the following data.

3.1 Overall Analysis of Dictionary Use Strategies in the Junior High School Division

number	Dictionary Use Strategies	Junior High School Students across Three Grades (N=193)	
		Mean (M)	Standard Deviation (SD)

1	Use a dictionary when reviewing or previewing lessons	2.97	1.06
2	Use a dictionary when doing homework or other after-class exercises	3.03	1.00
3	Carry a dictionary at all times	1.96	1.20
4	Take notes when looking up words in the dictionary	3.27	1.22
5	Look up words or knowledge that are interesting but unfamiliar	3.97	1.03
6	Look up frequently appearing or important words/phrases in reading materials	3.58	1.11
7	Look up words in the dictionary after reading, rather than before or during reading	3.10	1.33

Table 1

number	Dictionary Use Strategies	Junior High School Students across Three Grades (N=193)	
		Mean (M)	Standard Deviation (SD)
8	Use different dictionaries for different lookup purposes	2.74	1.33
9	Use a dictionary during writing	2.99	1.31
10	When encountering multiple meanings, use context to select the appropriate meaning	3.93	1.1
11	When encountering multiple meanings, use grammatical or syntactical knowledge to select the appropriate meaning	3.42	1.19
12	Read the appendix of the dictionary, such as explanatory notes	3.29	1.24

13	Teachers systematically teach how to use dictionaries and the types of learning they are suitable for	3.03	1.19
14	Teachers explain the types of dictionaries suitable for different learning levels and stages	2.79	1.29
15	Teachers design various exercises to help you become familiar with how to use a dictionary	2.98	1.30

Table 2

Tables 1 and 2 show the overall situation of dictionary use strategies across the three grades of junior high school. According to the charts, the average values for the three grades are roughly stable between 2.7 and 4. The data indicate that the frequency of dictionary use strategies among junior high school students generally falls under the category of "sometimes." Analyzing individual situations of dictionary use strategies in junior high school, the highest average among the 15 questions is question 5, with M=3.97, showing that the overall frequency of students looking up words they are interested in but do not understand is quite high, close to "often." Next, question 10, with M=3.93, also shows an average close to "often," indicating that students frequently use context to help select the meaning when encountering multiple meanings of a word while using a dictionary. Conversely, question 3 has the lowest average of M=1.96, close to the "rarely" option, showing that overall, students rarely carry a dictionary with them.

From the standard deviation values, the results are generally stable, ranging from 1.00 to 1.33, with small fluctuations. The overall situation of dictionary use strategies across the three grades is relatively stable. Question 2, with SD=1.00, shows the smallest standard deviation, indicating that there is a high level of consistency among junior high school students in using dictionaries for homework and other post-class exercises, with minimal variation. However, questions 7 (SD=1.33) and 8 (SD=1.33) have relatively larger standard deviations compared to other options, suggesting that there is greater variation in dictionary lookup order during reading comprehension across the three grades. This indicates that students in the three grades differ in their learning strategies when reading English texts, and there is also greater variation in their choice of dictionaries for different lookup purposes compared to other strategies.

It's show that regarding the overall dictionary use strategies in junior high school, the frequency of looking up unfamiliar words of interest in a dictionary is higher than in other situations. The frequency of using context to help select meanings when encountering multiple meanings is also higher. However, the frequency of carrying a dictionary is low, with most students rarely carrying one. This may be related to the learning environment at the affiliated foreign language school, as field research has shown that most dictionaries are kept at school for easy reference, so students do not carry them with them.

The overall differences in dictionary use strategies among the three grades of junior high school are not significant, but there are relative differences in strategies such as whether to look up a dictionary after reading and the choice of different dictionaries for consultation.

**3.2 Comparison of Mean and Standard Deviation between Grades**

In this survey, the questionnaire data collected was analyzed using SPSS (Statistical Package for Social Science) software. Descriptive statistics were used to obtain the means and standard deviations of various dictionary use strategies, and then the differences in dictionary strategy use among first, second, and third-year junior high students were compared. The specific data is as follows:

number	Question Item	Grade	Mean	Standard Deviation
1	Use a dictionary when reviewing or previewing lessons	First Grade	3.07	0.84
		Second Grade	2.82	1.16
		Third Grade	3.08	1.06
2	Use a dictionary during homework and other after-class exercises	First Grade	3.09	0.76
		Second Grade	2.95	1.07
		Third Grade	3.08	1.06
3	Carry a dictionary with you	First Grade	2.33	0.76
		Second Grade	1.93	1.07
		Third Grade	1.75	1.06
4	Make notes while looking up words in the dictionary	First Grade	3.38	1.19
		Second Grade	3.12	1.22
		Third Grade	3.37	1.23
5	Look up unfamiliar words or knowledge that interests you in the dictionary	First Grade	4.29	0.79
		Second Grade	3.95	1.09
		Third Grade	3.79	1.06
6	Look up frequently appearing or important words/phrases in reading materials in the dictionary	First Grade	3.93	0.96
		Second Grade	3.53	1.15
		Third Grade	3.40	1.13
7	Look up words in the dictionary after reading, rather than before or during reading	First Grade	3.07	1.27
		Second Grade	3.01	1.37
		Third Grade	3.22	1,33
8		First Grade	2.71	1.29
		Second Grade	2.53	1.26

	Use different dictionaries for different lookup purposes	Third Grade	2.97	1.41
9	Look up words in the dictionary when writing	First Grade	2.93	1.18
		Second Grade	3.07	1.31
		Third Grade	2.96	1.40
10	Use context to help choose the meaning when encountering multiple meanings of a word in the dictionary	First Grade	4.16	0.90
		Second Grade	3.88	1.18
		Third Grade	3.85	1.17
11	Use grammatical and syntactic knowledge to help choose the meaning when encountering multiple meanings of a word in the dictionary	First Grade	3.82	0.98
		Second Grade	3.38	1.21
		Third Grade	3.20	1.23
12	Read the appendix section of the dictionary, such as explanations of meanings, etc.	First Grade	3.64	1.17
		Second Grade	3.39	1.20
		Third Grade	2.96	1.27
13	Teachers systematically teach how to use dictionaries and applicable types of learning	First Grade	3.18	1.21
		Second Grade	3.13	1.19
		Third Grade	2.82	1.55
14	Teachers explain dictionary types applicable to different levels and stages of learning	First Grade	2.93	1.25
		Second Grade	2.83	1.27
		Third Grade	2.67	1.35
15	Teachers design various exercises to help you become familiar with dictionary use	First Grade	3.16	1.30
		Second Grade	3.10	1.28
		Third Grade	2.74	1.31

In addition, we used SPSS for one-way ANOVA to generate mean plots for each question. By observing the 15 mean plots, we found that these plots exhibit distinctive shapes: upward V-shaped, downward V-shaped, upward check-mark shaped (√), and irregular downward straight-line patterns. Among these, the irregular downward straight-line pattern is the most common. Below, we will start with each of the mean plots and conduct a detailed comparative analysis of the differences between the first, second, and third years of junior high.

Irregular downward straight-line pattern (including questions 3, 5, 6, 10, 11, 12, 13, 14, and 15)
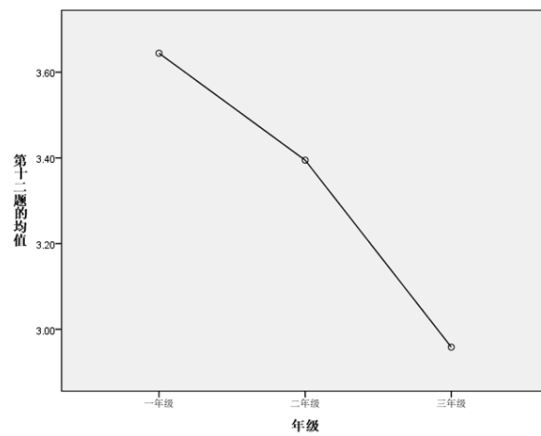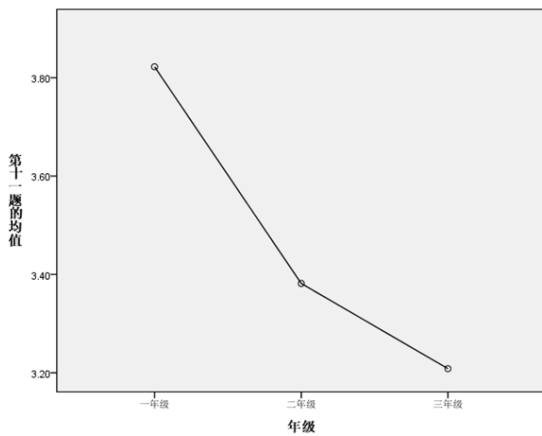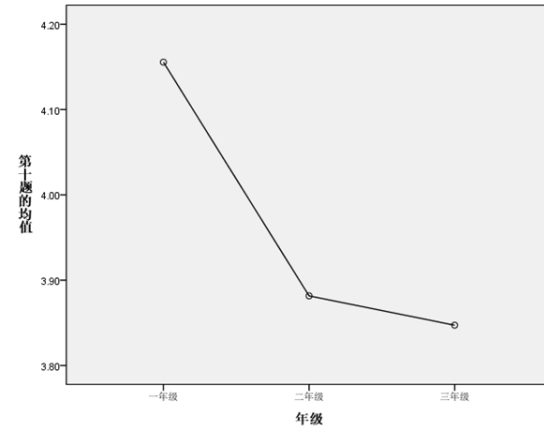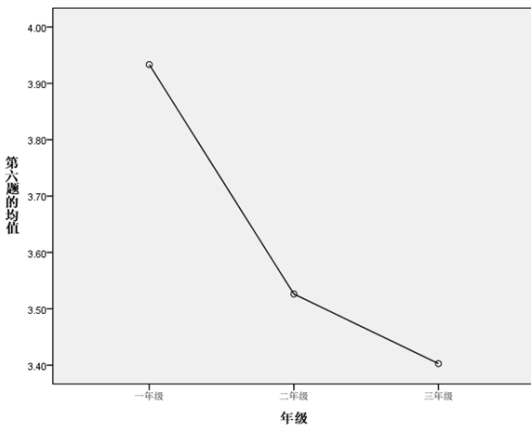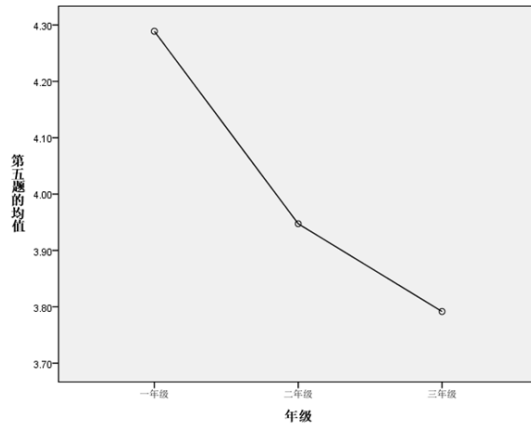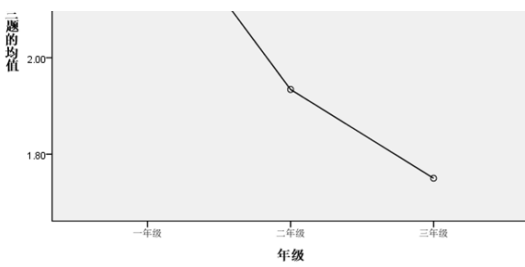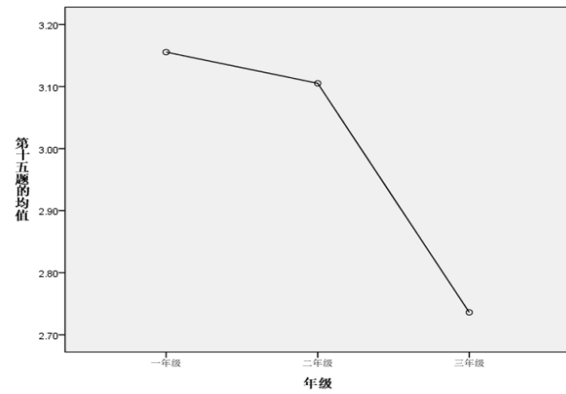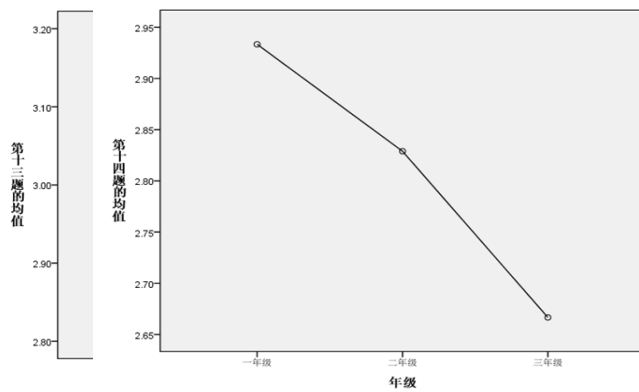
From the above mean plots, we found that the mean for first-year students is at the highest point, while the mean for third-year students is at the lowest point, showing a downward trend from first to third year. In a certain sense, this suggests that the dictionary use strategies of first-year students are more developed than those of second- and third-year students.

Upward V-shaped (including questions 1, 2, and 4)
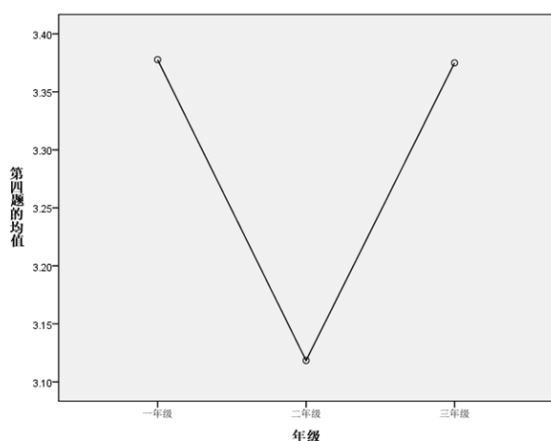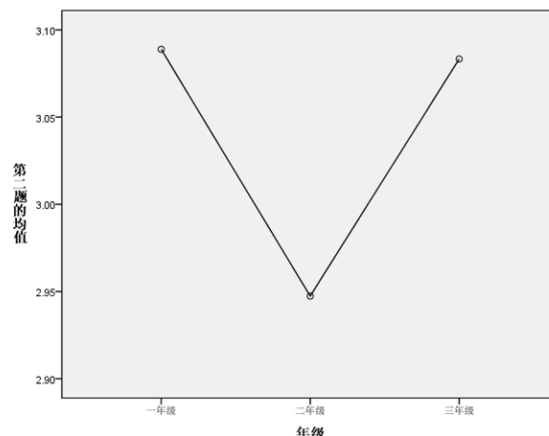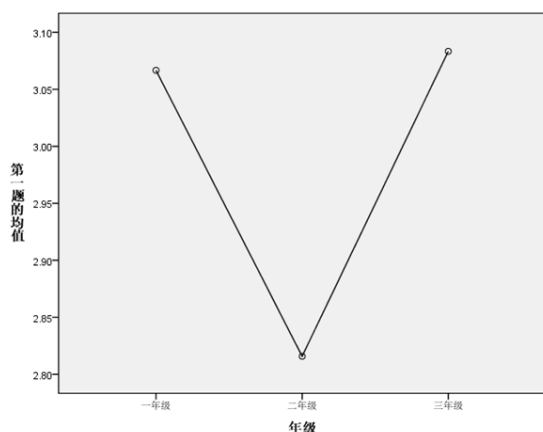
From the three mean plots above, it can be observed that the mean for second-year students is at the lowest point. For question 1 (using a dictionary when reviewing or previewing lessons), the mean for second-year students (M=2.82) is lower compared to the mean for first-year students (M=3.07) and third-year students (M=3.08), indicating that second-year students use a dictionary less frequently when reviewing or previewing lessons than students in other grades.

For question 2 (using a dictionary during homework and other after-class exercises), the mean plot shows that the frequency of dictionary use for first-year and third-year students is very similar (first-year mean = 3.09, third-year mean = 3.08), falling between "sometimes" and "often." However, the frequency for second-year students is not as high (second-year mean = 2.95), falling between "rarely" and "sometimes."

For question 4 (making notes while looking up words in the dictionary), we found that second-year students are the least active in taking notes while using a dictionary (first-year mean = 3.38, second-year mean = 3.12, third-year mean = 3.37).

Downward V-shaped (Question 9)

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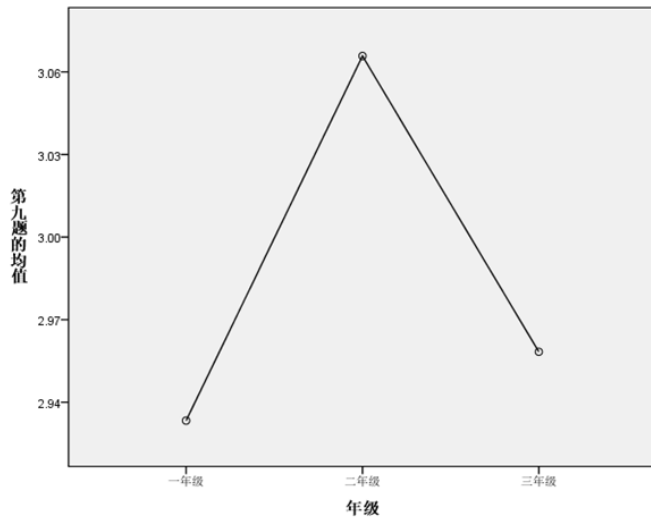
This is the only downward V-shaped pattern among the 15 mean plots, which deserves special attention. From the mean plot for question 9, we can see that second-year students are the group with the highest frequency of "using a dictionary when writing." We also attempt to explore the reasons for this phenomenon.

Upward check-mark shaped (√) (including questions 7 and 8)
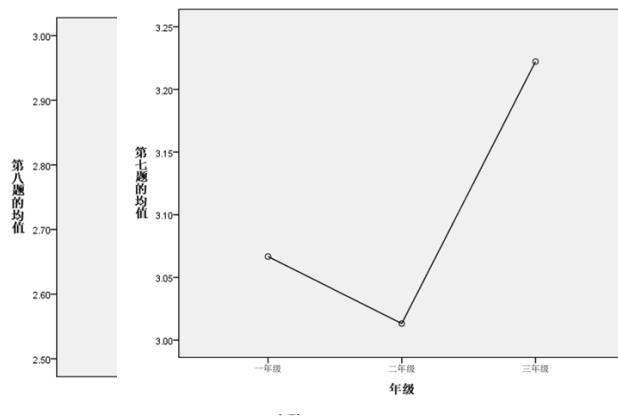
From the two mean plots above, we found that the mean for third-year students is at the highest point. Third-year students are more likely to look up words in a dictionary after reading rather than before or during reading. At the same time, third-year students have a stronger awareness of using different dictionaries for different lookup purposes and are more proficient in doing so.

3.3 Classification of Four Different Dictionary Use Strategies

		Question1	Question2	Question3	Question4	Question5	Question6	Question7
Mean		2.97	3.03	1.96	3.27	3.97	3.58	3.10
Standard Deviation		1.06	1.99	1.21	1.22	1.03	1.12	1.33

Table：Overall School Mean and Standard Deviation

We divided the questionnaire questions into four main sections, which are: situations in which dictionaries are used, including questions 1, 2, and 5; types of words being looked up, including questions 5 and 6; methods for determining word meanings, including questions 10 and 11; and ways to become familiar with dictionaries, including questions 13, 14, and 15. Now we will conduct data analysis for each section.

Situations in Which Dictionaries Are Used Section: The overall mean (M) is around 3, with a minimum value of 2.97 and a maximum value of 3.29. This indicates that the frequency of using dictionaries when reviewing or previewing lessons is the lowest, while the frequency of looking up unfamiliar words of interest is the highest. This suggests that the students at this school are more likely to use dictionaries out of interest, which also reflects the school's emphasis on fostering students' interest in learning English. The standard deviation (SD) is relatively small, indicating little overall fluctuation.

Types of Words Being Looked Up Section: The two methods for determining word meanings have higher means, both above 3.5. The mean for looking up words of interest is M=3.93, while the mean for looking up unfamiliar words in reading materials is M=3.58. This shows that students at this school frequently encounter unfamiliar words while reading and often use dictionaries to understand them. The high usage rates of these two methods are also accompanied by low SD values, indicating stable use of these methods to determine word meanings.

Methods for Determining Word Meanings Section: The two methods for determining word meanings have relatively high means, both above 3.4, indicating high usage rates. However, the mean for using context to help determine word meanings is higher than that for using grammatical and syntactic knowledge, with M=3.93. This suggests that students at this school are more inclined to use context to infer word meanings. The SD is also low, indicating stability in using these two methods to determine word meanings.

Ways to Become Familiar with Dictionaries Section: The overall means are relatively low, with two indicators below 3. This suggests that teachers at this school have provided relatively fewer opportunities to teach students how to use dictionaries. The minimum mean (M) = 2.79, showing that among the few methods available for becoming familiar with dictionaries, the mean for teachers explaining the types of dictionaries suitable for different learning levels and stages is the lowest.

Conclusion: Most of the students at this school look up words driven by their interest, but when encountering unfamiliar words during reading, they often use dictionaries to learn new vocabulary. However, there is still some

deficiency in teachers' efforts to teach dictionary usage methods, and not enough emphasis has been placed on teaching how to use dictionaries effectively.

Statistics (N=193)				
	Situations in which dictionaries are used	Methods for determining word meanings	Types of words being looked up	Ways to become familiar with dictionaries
Mean	3.32	3.68	3.78	2.94
Standard Deviation	.81	1.03	.95	1.09

Table: Overall Situation of the Four Categories

We divided the questions in the questionnaire into four main sections: situations in which dictionaries are used, methods for determining word meanings, types of words being looked up, and ways to become familiar with dictionaries. From the graph above, we can analyze that the means (M) in the categories of dictionary usage, methods for determining word meanings, types of words being looked up, and ways to become familiar with dictionaries at Guangxi Normal University's Second Affiliated Middle School tend to be consistent. The data from the means show that most of the values are between M=3 and M=4. In these areas, the frequency for students at this school ranges between "sometimes" and "often." However, despite the overall consistency, one indicator is noticeably lower than the other four: the mean for the category of ways to become familiar with dictionaries is M=2.94, the lowest value. This means that students generally report "rarely" having access to ways to become familiar with dictionaries. Analyzing the standard deviation (SD), we can see that the values fluctuate around 1, with relatively small overall values, indicating that fluctuations around the mean are minimal, and the overall situation is stable.

Conclusion：Students at this school "sometimes" use dictionaries, determine word meanings, and look up types of words, but they rarely have opportunities to become familiar with dictionaries. The overall usage rate of dictionaries at the school is relatively high and stable.

IV.   Discussion and Suggestions

Through analysis, the conclusion is discussed, focusing on:

4.1 Is the survey valid?

The questionnaire was designed according to the main content to be tested, divided into sections. The validity of the data from the returned questionnaires was confirmed after eliminating invalid responses, such as incomplete

answers or unmarked responses. The remaining data is considered valid. The survey used scientific methods, including SPSS technology, to process the data, confirming the survey's validity.

Were valuable conclusions drawn?

The analysis shows that the dictionary use strategies at Guangxi Normal University's Affiliated Foreign Language School have strengths and weaknesses. For example, students have a strong desire for knowledge about topics they are interested in, but the school does not place enough emphasis on the importance of dictionaries as powerful learning tools.

What is the significance of the survey?

The survey provided a comprehensive understanding of students' dictionary usage at the school, allowing the school to identify achievements and issues in dictionary use, and to make adjustments for further improvement.

4.2 Suggestions:

The school's teaching content should be more aligned with students' interests to foster independent learning.

Teachers should emphasize teaching students how to use dictionaries effectively, providing them with the tools for learning.

V.   Conclusion

Through six months of investigation, including topic selection, data collection, interviews, questionnaire design, distribution, and retrieval, learning the SPSS software, data entry, analysis, and report writing, we used scientific methods to analyze the dictionary use strategies at Guangxi Normal University's Affiliated Foreign Language School from three perspectives. The conclusions are as follows:

5.1 Overall Situation of Dictionary Use Strategies:

Junior high school students at this school use dictionaries more frequently to look up unfamiliar words they are interested in than in other situations. They frequently use context to choose meanings when encountering multiple meanings of a word. However, they rarely carry dictionaries with them, likely due to the school environment, where students tend to leave dictionaries at school for easy access, reducing the need to carry them.

There are no significant differences between the three grades in terms of overall dictionary use strategies, but there are differences in whether students look up words after reading and which dictionaries they choose to consult.

5.2 Comparison of the Three Grades:

First-year students use dictionary strategies more effectively than second- and third-year students.

Second-year students use dictionaries less frequently when reviewing or previewing lessons. They are also the least likely to take notes when using a dictionary. However, second-year students have the highest frequency of looking up words when writing.

Third-year students are more likely to look up words after reading, rather than before or during reading. They also have stronger awareness and proficiency in using different dictionaries for different purposes.

Interviews and Survey Findings:

The results from interviews and the survey confirmed our previous assumptions. Guangxi Normal University's Affiliated Foreign Language School has a high ownership rate of Oxford Advanced Learner's Dictionaries, but not every student owns one. First-year students tend to use dictionaries more actively than second- and third-year students. The usage rate of the Oxford Advanced Learner's Dictionary is moderate to high, and dictionary usage is stable.

Appendix 1: Interview Records

Date: April 27, 2024

Location: Guangxi Normal University's Affiliated Foreign Language School

Interviewees: Vice Director of the Academic Affairs Office, Head of the Third-Year English Department

Appendix 2: Student Dictionary Usage Survey

(Questions about Oxford Advanced Learner's Dictionary usage)

Question	Options
Use the dictionary when reviewing	Never, Rarely, Sometimes, Often, Always
Use the dictionary during homework	Never, Rarely, Sometimes, Often, Always
Carry a dictionary with you	Never, Rarely, Sometimes, Often, Always
Take notes when using the dictionary	Never, Rarely, Sometimes, Often, Always
Look up unfamiliar words of interest	Never, Rarely, Sometimes, Often, Always
Look up key words/phrases in reading	Never, Rarely, Sometimes, Often, Always
Look up words after reading	Never, Rarely, Sometimes, Often, Always
Use different dictionaries for different purposes	Never, Rarely, Sometimes, Often, Always
Use the dictionary when writing	Never, Rarely, Sometimes, Often, Always
Use context to determine meanings	Never, Rarely, Sometimes, Often, Always
Use grammar to determine meanings	Never, Rarely, Sometimes, Often, Always
Read dictionary appendices	Never, Rarely, Sometimes, Often, Always
Teachers systematically teach dictionary usage	Never, Rarely, Sometimes, Often, Always
Teachers teach appropriate dictionary types	Never, Rarely, Sometimes, Often, Always
Teachers design exercises for dictionary usage	Never, Rarely, Sometimes, Often, Always

Thank you for taking the time to participate in this survey! The purpose of the survey is to understand the current use of English dictionaries among junior high school students and explore their dictionary usage strategies. Your answers will improve the scientific validity of this research and help us obtain more accurate results.

References

[1] Cowie, Anthony P. English Dictionaries for the Foreign Learner [A]. In R.R.K. Hartmann (ed), 1983: 135-144.

[2] Hartmann, R.R.K. & James, G. Dictionary of Lexicography [M]. London & New York: Routledge, 1998: 117.

[3] Zhao Wei, A Survey on the Use of Dictionaries in English Learning among Non-English Majors, Foreign Language World, 2004(02): 29-34.

[4] Zhao Yuzhen, A Comparative Study on Dictionary Use Skills among English Majors of Different Grades, Journal of Beijing International Studies University (Foreign Languages Edition), 2007: 34-38.