

Academic reading challenges and strategies used by Chinese undergraduate students in a selected private university in Malaysia

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Abstract

Academic reading is an essential skill required of higher education for students and academic researchers. However, Chinese students lack reading skills and do not receive adequate reading instruction in academic reading. This study attempted to identify the academic reading challenges among Chinese students who study at UCSI University and to investigate the appropriate reading strategies employed by them. While being informed by the Sociocultural Theory of Learning (Vygotsky, 1978), the study used a mixed-methods research design which collected quantitative data from questionnaires and qualitative data from semi-structured interviews. Findings showed that the Chinese students lacked mastery of academic vocabulary and reading skills, typically in finding information. Another finding also showed that the Chinese undergraduate students used both cognitive strategies and metacognitive strategies in academic reading. The findings could help Chinese undergraduate students overcome their reading difficulties and propose suggestions to teachers on how to teach reading more effectively.

Keywords: Academic reading, challenges, EFL learners, reading strategy, sociocultural theory

Introduction

Academic reading is an essential part of higher education for students and academic researchers (Cox, 2003). For undergraduate students, academic reading plays a role part in their academic learning. Niven (2005) highlights that academic reading is pre-eminent: it precedes academic writing and decides its depth and quality. Academic reading differs from the leisurely reading of novels in terms of the complexities and challenges that it presents to the reader. Academic texts are challenging as they have philosophies expressed in a complex language and contain challenging words and sentences (Samira Sohail, 2015). An effective

student must apply various reading strategies to understand a text efficiently and resolve the potential doubts (Samira Sohail, 2015). In short, reading strategies are deliberate, conscious techniques that readers employ to improve the understanding or retention of texture information (Ling, 2011). In this article, the conceptualization of reading strategies as cognitive reading strategies and metacognitive reading strategies is based on O'Malley and Chamot (1990).

There are over one million Chinese students overseas which contribute to China being the largest source of overseas students globally (China Daily, 2022). Malaysia is one of the popular educational destinations for Chinese students. There are approximately 13.53 thousand Chinese international students are now studying in Malaysia (Statista Research Department, 2022). One notable educational issue is that it has become compulsory for Chinese students who want to study abroad to do well in college English tests like CET4 and CET6 (Zhang & Seepho, 2013) or the IELTS, and these exams all include academic reading.

According to research studies on postsecondary education reading and learning (Hermida, 2009), it shows that most university students today adopt a surface approach to reading and learning. A surface approach to reading is the tacit acceptance of the information contained in the text (Hermida, 2009). Secondly, for Chinese readers in particular, Wen (2003) asserts that lack of grammatical and vocabulary knowledge is the major cause of difficulty in academic reading comprehension. As EFL users, Chinese students' reading strategies cannot match those of students who come from other L1 and L2 countries. Sun (2011) also pointed out that many Chinese learners feel that they cannot effectively comprehend what they read. One major reason behind this phenomenon is that learners have not mastered and applied effective reading strategies. Convinced by the existence of these problems, the purpose of this study is to identify the academic reading challenges among Chinese students who study at UCSI University and to investigate the appropriate reading strategies employed by them.

Theoretical framework

The study is informed by the Sociocultural Theory of Learning (Vygotsky, 1978) which assumes that human learning is essentially a social process since the literature review indicated that cultural factors of reading could have been overlooked by previous studies. Vygotsky outlined three main concepts related to cognitive development: (i) culture is significant in learning, (ii) language is the root of culture, and (iii) individuals learn and develop within their role in the community (Kurt, 2020). The theoretical framework that guides this study emphasizes the symbiotic relationship between culture, social interaction, and language, where these three factors all contribute to or influence human development (Turuk, 2008). This study would relate the three elements of language, culture and social interaction to academic reading development for Chinese students.

Research objectives

1. To identify the challenges encountered by Chinese undergraduate students in UCSI university during the academic reading
2. To investigate the reading strategies used by Chinese undergraduate students in UCSI university to overcome the challenges of academic reading.

Research questions

1. What are the challenges encountered by Chinese undergraduate students in UCSI university during the academic reading?

2. What are the reading strategies used by Chinese undergraduate students in UCSI university to overcome the challenges of academic reading?

Significance of study

The findings of this study have important implications for educators who are interested in designing more effective teaching and learning activities for their students. By identifying the specific reading problems that students face in academic contexts, this study provides valuable insights into how these problems can be more effectively managed. For example, educators can use the recommended reading strategies identified in this study to develop targeted interventions that address the specific needs of their students. Additionally, by raising awareness of the common challenges that students face when reading academic texts, educators can help students to develop a more positive attitude towards reading and to adopt more effective reading habits. Moreover, students who are exposed to the findings of this study can apply the recommended reading strategies to their own academic reading pursuits, which may improve their reading comprehension, critical thinking skills, and overall academic performance. Overall, this study has significant practical implications for educators and students alike, and its findings can contribute to the development of more effective teaching and learning practices in academic contexts.

Literature review

Academic reading problems

Academic reading presents different challenges for different students but the reasons behind the problems are similar. Lawrence et al. (2021) affirmed a strong relation between vocabulary and reading at the individual level through their study on academic reading. Similarly, Phakiti and Li (2011) highlighted that their respondents faced difficulty in extracting and synthesizing information from various sources and recognizing and acquiring academic vocabulary for use. Manjet Kaur Mehar Singh (2014) found similar results about academic reading problems. The study examines the challenges faced in the academic reading practices and the strategies employed to overcome the challenges in the academic reading practices. The respondents in the study found challenges in reading quickly to understand the required information and overall meaning.

Previous researchers on international students linked the problems faced by the students in academic reading to linguistic proficiency in the English language. Phakiti et al. (2013), for example, pointed out that English language problems negatively affect students' reading ability. Students who are not native speakers of English found it hard to understand the professional registers. Another group of researchers highlighted social and cultural aspects as factors that impede the progress of academic reading among international students instead of vocabulary and grammar. Wang (2020) stated that Chinese students were undermined by the misconceptions of the cultural contexts of the assigned reading texts. Schein (2010) concluded that readers who interpreted reading content with reference to their past values, beliefs, and approaches because it provided a false sense of security faced challenges in reading with correct understanding.

Furthermore, Chinese students lacked motivation which is a crucial factor that affected academic reading success. Wang and Guthrie (2004) suggested Chinese students lacked intrinsic motivation which is more likely to impact students' reading ability and these students were more inclined to meet external expectations from society instead. While Ali Abdullah Ali Alghail and Omer Hassan Ali Mahfoodh (2016) concluded that academic

reading problems can be attributed to low proficiency in English, inability to comprehend the vocabulary and slow reading, this study proposes that cultural factors and motivation are important factors that affect academic reading as well.

Teaching of reading in China

In China, reading in the English language is primarily taught through the traditional teaching method which does not focus on the cultural context behind the content or developing reading strategies. Wang (2020) summarized the characteristics of English teaching in China thus: teachers still use traditional teaching methods to improve students' reading comprehension by reciting a lot of vocabulary and grammar without paying attention to the development of reading strategies. Wang (2020) also highlighted that the teacher ignores the cultural background of the text and the introduction of customs and traditions, making students base their learning only on their environmental perceptions. English reading instruction in Chinese classrooms focuses more on grammatical aspects of English.

Ling (2011) investigated the major problems in the teaching of English reading among Chinese students and attributed the problems to the teachers being too grammar-oriented or vocabulary-oriented. Because teachers were more grammar-oriented, students learned more about grammatical rules but made little progress in reading skills. Teachers further over-emphasize the importance of vocabulary. The first and most important thing they do when working with a text is to teach new words and explain the meanings of these words. This teaching approach contributed to slow reading among the students. Some students believe that the slower the reading rate, the more accurate the comprehension. Students may even use word-by-word reading. However, this does not improve students' reading skills. On the other hand, the students became so dependent on dictionaries that they interrupted the reading process.

Reading strategies used by Chinese students

Through the use of questionnaires, Liu (2005) discovered that Chinese students who were high-scorers in reading comprehension students used cognitive and metacognitive strategies more frequently than low-scoring students. In a similar vein, Sun (2011) reported that most students are at medium-level for metacognitive strategy while the low proficiency students seemed to avoid planning their organization of reading in advance. Zhang and Seepho (2013) revealed that the frequency of use of both cognitive and metacognitive strategies among Chinese EFL students were not high and similar. In summary, these studies all linked the problem of reading abilities among Chinese undergraduates to the low application of reading strategies.

Methodology

Research design

A mixed-methods research design which involved both quantitative and qualitative methods for data collection was employed to address the research questions about challenges in academic reading and reading strategies applied. The researchers adopted a convergent parallel design whereby both types of data were gathered concurrently but analysed separately before the results from the two different datasets were compared (Creswell & Creswell, 2018). The quantitative method engaged a survey questionnaire with a Cronbach Alpha value of 0.881 which confirmed its reliability. Data from the questionnaires were analysed using the

Statistical Package for the Social Sciences (SPSS) to process frequency analysis and descriptive analysis. The qualitative method involved the use of one-to-one semi-structured interviews to collect data about academic reading challenges and reading strategies. It was hoped that semi-structured interviews with open-ended questions would allow participants to give responses freely without being dominated by the interviewer (Creswell, 2014). Thematic analysis was applied to infer the themes relating to academic reading difficulties and reading strategies in greater depth (Braun & Clarke, 2006). In summary, to address research question 1, triangulation of frequency analysis, descriptive analysis, and thematic analysis were attempted; in comparison, only thematic analysis was engaged to address research question 2.

Sampling method

Purposive sampling, in particular criterion sampling, in which all the cases are sampled which fit a particular criterion being studied (Teddlie & Tashakkori, 2009) was used in this study. The respondents had to fulfill the following criteria with participant:

1. Is proficient in English, with at least 5.5 score in their IELTS as the entry requirement into the university.
2. Is a Chinese student who is studying in UCSI university.
3. Speaks Chinese as mother tongue. English is used as a foreign language.

There was an approximately 1500 Chinese students, 100 respondents completed the questionnaire, which was the minimal number for validity in quantitative data (Delice, 2010). Six students took part in the individual interview which produced qualitative data, which was an adequate number for credibility in qualitative research (Morse, 2000). The researchers used alpha-numeric codes to ethically represent the participants (P1, P2, P3, P4, P5, P6).

Data collection

Data collection was conducted using both quantitative and qualitative methods simultaneously.

Survey Questionnaire

The questionnaire which had two sections was adapted from Evans and Green (2007) and Hyland (1997). The first section (Questions 1 – 4) aimed to obtain demographic data. The second section (Questions 5 – 14) contained ten items that related to academic reading difficulty. The respondents needed to rate the academic reading difficulty on a five-point Likert scale. The levels of rating were 1-very easy, 2-easy, 3-normal, 4-difficult, 5-very difficult. The higher the respondent's rating of an item, the higher the respondent's difficulty encountered with that item. Correspondingly, higher total score on the ten questions would imply that the respondent encountered more difficulties in academic reading. The questionnaire was shared in the form of a Google form link in a private social media group for Chinese students in UCSI on WeChat and WhatsApp.

Semi-structured interview

Semi-structured interview was used to collect qualitative data. The respondents were invited to divulge their experiences and opinions about their academic reading difficulties and how they use reading strategies to manage or overcome the academic reading challenges. The interview also explored the language, social interaction, and cultural factors behind academic

reading. The interview questions were adapted from Ali Abdullah Ali Alghail and Omer Hassan Ali Mahfoodh (2016), Miller and Merdian (2020) and Sociocultural Theory (Vygotsky, 1978). An expert with postgraduate certification in social science validated the questions. The interview for each students lasted about 30 minutes and was recorded using the mobile phone. The first author transcribed the interview after each interview was completed.

Descriptive analysis

This study employed SPSS to compute the data obtained from the survey questionnaire and process the frequency analysis since SPSS is a statistical analysis program used extensively in the social sciences (Hary Gunarto, 2019). Frequencies of academic reading difficulties were calculated for all ten items. The results would be presented in percentages and numerics in the results section. Descriptive analysis facilitates describing, displaying, or constructively summarizing data points (Ayush Singh Rawat, 2021). In order to give the reader a more detailed representation of the academic reading difficulties faced by the respondents, descriptive statistics of 10 items including standard deviation for each item which were generated with SPSS were tabulated. The mean value of each item was ranked from top to bottom to identify the factors that posed the highest difficulty for students in academic reading. Moreover, the respondents' demographic profiles were also processed as descriptive analysis.

Thematic analysis

Thematic analysis, as described by Braun and Clarke (2006), was used in this study to analyze the interview transcripts and derive insights inductively. The process involved identifying a broad range of possible codes, organizing them, and using them to infer overarching themes that emerged from the data.

Findings and discussion

Descriptive Analysis

There were 100 respondents who took part in the survey questionnaire. Table 1 shows the demographic data of the respondents in terms of age, gender, and major. Among the 100 students, they were almost half of them aged between 18-20 years old and 20-25 years old, respectively. Likewise, there was a near equal number of genders for the participants recruited, 52% (female) and 48% (male). Ten of them were from the English major while 90% of them were from other majors.

Table 1

Demographic Information for The Participants

Description	Category	Frequency	Percentage (%)
Age	18-20	47	47%
	20-25	53	53%
Gender	Female	52	52%
	Male	48	48%
Major	English major	10	10%
	Other majors	90	90%

Table 2

Academic Reading Challenges of Chinese University Students

No.	Academic reading challenges	Very easy		Easy		Neutral		Difficult		Very difficult	
		N	%	N	%	N	%	N	%	N	%
1	Identify supporting ideas	6	6.0	4	4.0	10	10.0	43	43.0	37	37.0
2	Identify key ideas	4	4.0	4	4.0	14	14.0	43	43.0	35	35.0
3	Understand organization of a text	4	4.0	23	23.0	25	25.0	37	37.0	11	11.0
4	Taking brief and relevant notes	3	3.0	21	21.0	29	29.0	38	38.0	9	9.0
5	Use own words in note taking	3	3.0	5	5.0	17	17.0	45	45.0	30	30.0
6	Reading quickly to find information	2	2.0	7	7.0	12	12.0	38	38.0	41	41.0
7	Working out meaning of difficult words	6	6.0	4	4.0	11	11.0	38	38.0	41	41.0
8	Understanding specialist vocabulary	6	6.0	20	20.0	29	29.0	30	30.0	15	15.0
9	Read carefully to understand a text	3	3.0	26	26.0	26	26.0	31	31.0	14	14.0
10	Reading quickly to get overall meaning	23	23.0	29	29.0	13	13.0	19	19.0	16	16.0

Table 2 shows that the top ten skills that Chinese university students found most difficult in academic reading were mainly reading quickly to find information ($M=4.09$), working out the meaning of difficult words ($M=4.04$), identify key ideas ($M=4.01$), and identify supporting ideas ($M=4.01$). All of them are greater than 4 and are at a high level of difficulty. Reading quickly to find information ($M=4.09$) was considered the most challenging. The ranking of

the means in Table 2 shows that the ten academic reading challenges faced by Chinese university students at UCSI university and it was reported that the four most difficult challenges were: (1) Reading quickly to find information; (2) Working out the meaning of difficult words; (3) Identify key ideas; and (4) Identify supporting ideas. The most frequently reported challenge in academic reading was reading quickly to find the information (Table 3).

Table 3

Descriptive Statistics of Items on Academic Reading Challenges

Academic reading challenges		Mean	Standard deviation
1	Reading quickly to find information	4.09	1.00
2	Working out meaning of difficult words	4.04	1.11
3	Identify key ideas	4.01	1.01
4	Identify supporting ideas	4.01	1.09
5	Use own words in note taking	3.94	0.97
6	Understanding specialist vocabulary	3.28	1.13
7	Understand organization of a text	3.28	1.06
8	Understanding specialist vocabulary	3.28	1.13
9	Read carefully to understand a text	3.27	1.09
10	Reading quickly to get overall meaning	2.76	1.42

Findings from the interviews

Table 4 presents in summary the main themes related to academic reading challenges which were informed by the theoretical framework. These themes were language (82 times), social interaction (27 times) and culture (16 times). The newly derived themes which were inductively gathered from the data were content (17 times) and lack of motivation (10 times).

Table 4

Main Themes Related to Academic Reading Challenges

Major Themes	Sub-themes
Language	1.Vocabulary 2.Sentence Patterns 3 language skills 4.Grammar 5.Mother tongue 6.Translation
Social interaction	1.Environment 2.Speech community 3.Guidance by skilled person 4.Instructor-to-Student 5. Interaction
Culture	1.Value 2.Custom
Content	1.Idea 2.background knowledge 3. Organization
Lack of motivation	1.Internal factor 2.External factor

Language

The theme of language included sub-themes such as vocabulary, sentence pattern, language skills, grammar, mother tongue and translation. Respondents reported vocabulary as the most intimidating challenge. For instance, respondents feared the presence of professional terms in professional reading. This problem was reported to be difficult to solve even with the help of translation software.

P6: *‘Let’s say we’re talking about the tax or other financial words. Some of the financial aspects of the noun. In fact, I don’t understand good at these financial terms. Translation software will not give a clear explanation.’*

Similar to professional vocabulary, unknown vocabulary affected the students’ comprehension and frequently became a vocabulary challenge.

P3: *‘Well, I and everybody are just words problems. I will face some unfamiliar words in the academic reading.’*

Another language challenge referred to the ineptness of respondents in the effective reading speed in academic reading. Respondents felt that they wasted too much time on reading.

P6: *‘To me, I always read very slowly. I always need to spend one hour to read.’*

Compared to reading in the Chinese language, reading in the English language undermined the comprehension and exploration of ideas in a text.

P6: *'When you read the Chinese article, although you will not understand totally. I can understand most. However, to the English reading article, I may hard to understand what the key ideas.'*

Culture

The theme of culture which was further broken down to sub-themes of value and culture, was guided by the definition of culture as attitude, value, custom, and behaviour patterns that characterize a social group (Turuk, 2008). As an ingrained cultural value, Chinese conservatism subconsciously undermined the respondents in their academic reading process by preventing the respondents from thinking critically about the texts.

P1: *'Chinese culture is traditional and conservative. We don't actively explore whether the article is correct or not, we just accept it and don't criticize it.'*

Social interaction

Social interaction refers to a dynamic sequence of social actions between individuals, groups or environment who change their actions and reactions because of the actions of their interaction partners (Argyle, 2017). Thus, the theme of social interaction consisted of environment, speech community, guidance by skilled person and instructor-to-student Interaction. In terms of the environment, the fact that the respondents had been taught reading in the past in a Chinese teaching environment that was focused on meeting exam requirements affected their academic reading ability.

P1: *'Before entering the university, I did not get in touch with advanced academic reading. The most I do is It was about the competition reading in the exam at that time.'*

Participants had not been exposed to reading of the high level of academic reading at university in past teaching environments. And their teachers did not focus on developing academic reading skills, yet they focused more on drilling of grammar or exam-oriented teaching only. Throughout their formative years of schooling, the respondents were instructed in knowledge of vocabulary and grammar.

P2: *'I thought I didn't face the academic reading environment which the level is like in our university the teacher in my school always persuaded us to remember many vocabularies and grammar. However, they seldom teach me reading skills. They thought we should know.'*

Content

Content is about the presence or absence of certain concepts in the text (Marying, 2004). In this study, the theme of content emerged from inductive analysis and refers to idea, background knowledge and organization. First and foremost, the content of academic reading that respondents faced with was too extensive. As a result, the respondents were not able to explore key ideas thoroughly and ended up misunderstanding the ideas.

P6: *'On the other hand, due to my major. I have to find my key ideas in the academic reading. However, it made me very hard. The academic reading is too long. The key ideas are always wrong.'*

As the second most cited challenge in content, the respondents reported that they lacked a strong background knowledge of their discipline.

P2: *'The author wrote an article. It is going to spend his entire article talking about medical area. I didn't contact this field before.'*

Lack of motivation

In addition to the themes of language, culture and social interaction that were deduced from the theoretical framework, the lack of motivation was a theme that was inductively derived besides the theme of content. The theme of lack of motivation consisted internal factors and external factors which caused this challenge in academic reading. The respondents in this study indicated that internal factors were the primary factor to lack of motivation compared with external factors. In specific, the respondents did not show a great deal of interest in academic reading and some respondents even resented compulsory academic reading.

P4: *'There is the motivation aspect. It's when the teacher forces you to read some of the more difficult articles. Then I don't want to read it and I'm not interested in it.'*

Respondents who had more positive attitude towards learning about academic reading admitted that motivation and interest may arise from their desire to meet social needs.

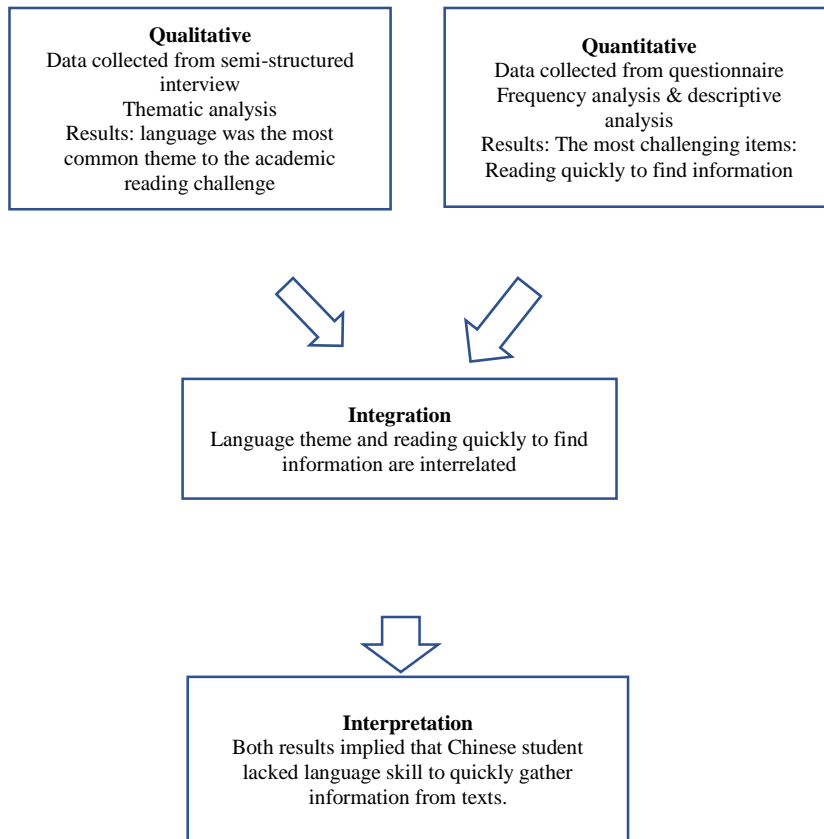
P5: *'When the friends spoke some words in English, you can't understand. I might want to look up words or how do you think this will improve your expression. Then you can make friends with them and communicate with them.'*

Summary of results for RQ1

Integrating the qualitative results with the quantitative results implied that Chinese students lacked the language skill to gather information from texts quickly. Refer to Figure 1 for a visual summary of the data collection and analyses which led to this conclusion.

Figure 1

Integrating Quantitative and Qualitative Results



Results for RQ2

Results for the second research question were inferred from thematic analysis of qualitative data in the form of student interviews. Table 5 presents in summary the major themes related to reading strategies.

Table 5

Main Themes Related to Reading Strategies

Major theme	Sub-theme
Reading Strategy	Cognitive strategy Metacognitive strategy
Support	Software and tools Share experience Academic staff

Reading strategy

One important finding from the study showed that cognitive strategy and metacognitive strategy were cited by the respondents as main reading strategies which they applied to manage academic reading. However, those who used cognitive strategies used different cognitive reading strategies. There was not a single cognitive strategy that was used by every respondent. For instance, one respondent used summarizing key ideas as a cognitive strategy:

P5: *'Get a general idea of what it means. Just get to the point, you want to see which part of the people want to see him at the beginning and the reason why he wrote this article or see how he studies it and then you have to look directly at his results. Go to a particular place and then do a quick reading to get a general idea of it. Getting the meaning of point will make it interesting to read on.'*

Another respondent used inferencing as a cognitive reading strategy by using available information from the content to infer the meaning of an unfamiliar item:

P6: *'Well, I will guess meaning from the context and understand the academic reading. Because some of them must have connection.'*

In contrast, another respondent used translation as a cognitive reading strategy. P2 used his mother tongue which is Chinese as a springboard for understanding in the English language.

P2: *'I might translate them into Chinese to help me understand.'*

For metacognitive strategy, monitoring emerged as a significant reading strategy. The respondents appear to spontaneously use metacognitive reading strategies. Here is an example:

P1: *'Yes, just as I finished reading this article then I might ask myself, what is this article really about? I would judge every number and every financial statement I could look at.'*

At the same time, they all used the comprehension monitoring to check or verify their own understanding. The following is an example.

P2: *'Then do some self-expectation. I will ask myself: Do you exactly have read and understand what the text mean and do I understand the structure at all.'*

Aside from that, it was found that respondents were not in favour of metacognitive strategy. This implied that respondents lacked awareness of the metacognitive strategy and did not practise them in regular academic reading. Respondents even felt that this strategy was redundant and did not benefit their academic reading performance. As one respondent put it:

P4: *'I don't think about the article's structure. I don't even think about what the key idea is, right? I don't care what the structure is. I just need to finish my exam about reading.'*

Support

The respondents frequently engaged support as a simple reading strategy, and the types of support could be software and tools, shared experience and academic staff. Most respondents used software and tools both for searching for word meanings to manage the vocabulary-related academic reading difficulty. Translation software and dictionary were able to alleviate the respondents' sense of distress in academic reading:

P2: *'Well, I think a little bit. Because at the beginning it may be completely impossible to master an article without the help of translation software.'*

Nonetheless, the respondents showed an over-reliance on translation software. The following is an insight from one respondent.

P4: *'I don't think any Chinese students can read a whole English literature by themselves.'*

It needs to be pointed out that the respondents were aware of the limitations of what translation software can achieve in terms of finding key ideas and overcoming academic reading challenges.

P6: *'I think my reading strategy like translation software gave me a lot of help on my reading ability. I read faster than before. I thought it is most significant of my strategies. But if you ask me whether I understand the paper totally. I will say no. Maybe I still need more reading skill.'*

Discussion

The finding that the most frequent academic reading challenge is 'Reading quickly to find information' corroborates the finding by Manjet Kaur Mehar Singh (2014) The study elaborated Chinese students who speak English as a second language may spend a third to twice as much time reading as first language students, and they often read a text repeatedly for comprehension.

This study showed that students find the most difficulty in identifying key ideas of reading texts when they are attempting to comprehend the content. This finding was similar to a study done on international graduate students in a Malaysian university (Ali Abdullah Ali Alghail & Omer Hassan Ali Mahfoodh, 2016). From the cultural aspect, Chinese students in this study are influenced by their traditional values in their attempts to process academic reading, preventing them from thinking critically about the text. One explanation could be that when readers do not have sufficient reading comprehension, they substitute their past values, beliefs, and methods into the reading (Schein, 2010). This approach provides them stability and peace of mind. The final factor which could contribute to challenges in academic reading among Chinese students is lack of motivation which may most likely arise from internal factors such as lack of interest. This is corroborated by Wang & Guthrie (2004).

In terms of strategies to manage the challenges in academic reading, the frequency of cognitive strategy and metacognitive strategy use is at a moderate level for the respondents, which echoes previous studies (Sun, 2011; Zhang & Seepho, 2013). Sun (2011) explicated that low-proficiency students seem to avoid the advanced organizer and organizational planning strategies. Instead of engaging metacognitive reading strategies and cognitive reading strategies, the Chinese undergraduates prefer to get support from software and tools with translation functions such as dictionaries. The convenience offered to students by the

translation function has created a dependency on academic reading tools. The finding is in line with previous research that highlighted the frequency of dictionary usage in higher education (Manjet Kaur Mehar Singh, 2014) and over-dependency among Chinese students on the dictionary (Ling, 2011).

Conclusions and recommendations

The primary significance of this study is its identification of language difficulties as the most common challenge facing Chinese undergraduate students in academic reading. Specifically, students struggled with academic vocabulary and lacked sufficient reading skills, particularly in terms of speed reading to locate information. While the students did demonstrate some use of cognitive and metacognitive strategies, they tended to rely heavily on translation software and dictionaries.

The researchers recognize that this study has certain limitations, including the inability to generalize the findings to the entire student population due to the small sample size, and the reliance on self-reported interview data to identify the reading strategies used by Chinese students. Future research could address these limitations by verifying the findings with a larger and more representative sample, and by investigating additional perspectives that could shed light on the challenges of academic reading. Furthermore, incorporating more advanced technologies such as eye-tracking devices and virtual reality may enable the collection of more comprehensive and precise data on the challenges faced by students and the strategies they use to overcome them.

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