



An Empirical Statistical Research on Chinese College Students' Academic Reading Behavior Based on a Marxist view of Practice

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Abstract:

The academic reading situation of Chinese college students does not give grounds for optimism. Improving their academic reading motivation and reading ability has become a top priority. Analysis was performed by SPSS software and supplemented with open-ended questions. This paper explores the relationship between academic practice and academic reading through an independent sample t-test, variance analysis, frequency analysis, and cross-analysis. It is concluded that project guidance is the core of, and teacher–student communication is the driving force behind, academic reading, which is ultimately implemented through peer sharing. Therefore, the corresponding management departments and educational institutions should make efforts in the above three categories to promote the improvement of college students' reading motivation and reading ability.

Keywords: *Academic Reading; Marxist practice; quality education; statistical analysis*

1 INTRODUCTION

Academic reading is a professional process of acquiring meaning from abstract written words. It is a unique cognitive activity through which human beings inherit knowledge. Unfortunately, the present academic reading level of Chinese college students is generally insufficient. According to the survey data of this study, only 6.8% of them reported that their academic reading ability was “relatively strong”; 62.9% were “average”; and 30.3% were “relatively poor.” Only 17.4% of the students had read an academic book intensively during their university studies. Serious problems are, therefore, apparent in the academic reading practice and reading ability of Chinese college students. In response to this question, this study asks the following: How does academic practice affect the academic reading of college students? In this regard, this article will explore how the academic practice of Chinese college students affects their academic reading through the theoretical lens of Marxist practice and finally answer the question of how to promote academic reading under the guidance of practice.

2 LITERATURE REVIEW AND QUESTIONING

The concept of “Reading for Academic Purposes” (RAP) first appeared in “Academic Reading Teaching Approaches” published in 1987 [1]. It differs from general reading and has a utilitarian motive [7]. It is “informative reading of the profession or related to the work carried out by professionals for the purpose of carrying out the work” [2]. Its purpose “is to cultivate students' strategic awareness and teach them how to adopt corresponding reading strategies according to different reading purposes” [10]. Therefore, academic reading has a strong practical orientation, which current research does not systematically address.

The first area of research concerns the academic reading of college students. The study found that when college students in mainland China conduct academic reading activities, most prefer to use paper media [14]. A study in Taiwan found that college students' academic reading tended to consist of paper books and online e-books, but they seldom used e-book readers [11]. However, academic services such as academic blogs/microblogs, academic WeChat public accounts,

academic virtual community apps, academic social networks, and other convenient academic services [4] have turned social reading [5] [9] into an academic reading.

The second area of research concerns the academic reading service of college students. Research on reading service basically occurs under the rubric of library science. Because academic reading material tends to take a print form, libraries need to purchase printed books and periodicals, pay close attention to changes in the reading preferences of service groups, and use sufficient data to assist decision-making management [14]. On the basis of traditional reading guidance, libraries should explore reading guidance methods and new network technologies in cooperation with professional teachers [16]. College students' online reading is increasingly characterized by "de-academicization," which requires university libraries to guide college students toward good reading habits in the areas of academic care, optimization of the network environment, and reading guidance [8].

The third area of research concerns the academic reading style of college students. Academic reading mainly consists of reading literature [17]. However, a phenomenon of "fast food" shallow reading has been observed among college students, and academic reading has a certain utilitarian effect [18]. Moreover, college students exhibit serious information avoidance behaviors in academic reading, which requires cultivating their interest in reading and curiosity, and enhancing their self-efficacy [15]. In academic information acquisition, their level of information seeking is closely related to their level of cognitive needs [13].

Of course, some studies have also focused on how to cultivate college students' reading ability. For example, research has emphasized taking reading notes, increasing the standard tutorials for thesis writing, and improving the management of question opening, etc., and also notice that college students lack the ability to think critically and read voluminously, as well as correct guidance and a good academic atmosphere [3]. The above-mentioned specific measures are too trivial to truly offer insight into the substantive problems affecting college students' reading. This paper attempts to explore the dimension of academic practice, so that academic reading can be actively developed under the guidance of problem awareness.

3 THEORETICAL BASIS AND RESEARCH DESIGN

Reading is a complex information acquisition and cognitive process, and its purpose is to obtain meaning from perceptual input [6]. The Marxist concept of practice emphasizes the following: "Whether people's thinking has objective truth, this is not a problem of theory, but a problem of practice," [12] and practice is the

starting point and destination of thinking. From the perspective of Marxist practice, the object of academic research is not only the object or the direct form, but also the human perceptual activity, which is an active process. Therefore, Marxist practice criticizes both abstract ideas and perceptual intuition. Ultimately, academics are not just there to explain the world; the key is to change the world and gain a practical dimension. Chinese college students are not enthusiastic about academics because their education is only intended to prepare them for exams, and their cognition of academics can only be limited to abstract knowledge. Abstract knowledge is often empty and boring, leading them to lose interest in it, and lacking a practical orientation of learning, they will often ask, "what is the use of knowledge?" The key problem here is the lack of practical guidance. Only by entering the real problem field through academic practice, can one gain perceptual cognition of knowledge in academic reading and acquire the realistic driving force to promote its exploration of the unknown, thereby advancing academic reading.

According to the theoretical context of the Marxist view of practice, the core issue discussed in this study is how academic practice affects academic reading. According to the qualitative research of the research group on the current situation of academic reading in Chinese universities, we divide academic practice as an independent variable into three dimensions: (1) hosting or participation in Daiso projects, (2) teacher guidance or teacher-student exchanges, and (3) peer exchanges. Academic reading as a dependent variable is divided into four dimensions: (1) reading situation, (2) reading knowledge, (3) reading carrier, and (4) reading conditions. The indicators and questions were designed according to the above dimensions, and finally a set of questionnaires with 31 questions was prepared. To make the sample more inclusive, and to perform comparison and correlation analysis, (1) the sample adopts stratified sampling, considering the regions of Southwest China, South China, Central China, and Northwest China; (2) the sample considers the humanities and social sciences and natural sciences; and (3) the sample takes into account the junior college students, undergraduate students, and postgraduate students. The project team distributed the questionnaires electronically and finally obtained 696 questionnaires: in terms of gender, 209 (30%) were male, and 487 (70%) were female; in terms of academic qualifications, 6 were junior college students (0.9%), and 605 were undergraduate students (86.9%), with graduate students numbering 85 (12.2%). The project team conducted frequency analysis, correlation analysis, multiple response analysis, and an independent sample t-test on the data through SPSS software.

The statistical results show that the higher the grades of college students, the more positive the results of both academic reading and academic reading cognition. Through the single-factor ANOVA analysis of grades

and college students' cognition of the importance of reading, the results are $P = 0.033 < 0.05$, $F = 3.418 > 2.5$, indicating that the higher the grades, the higher the enthusiasm for academic reading cognition. Therefore, from a macro perspective, it can be said that the higher the grades, the more significant the growth in the

practical activities, practical ability, and cognition of practice of college students, leading them to become more aware of the importance of academic reading and to engage in active academic reading, gaining more academic reading skills. This is shown in Table 1.

Table 1. ANOVA: Effect of grades on academic reading tendencies

ANOVA					
Q4_What is your grade?					
	sum of squares	df	mean square	F	Significance
Between groups	10.531	2	5.266	3.418	0.033
Within groups	1067.584	693	1.541		
Total	1078.115	695			

The above data are measured by Q5 (do you think the academic reading of college students is important?). The result is $F > 2.5$, and there is a significant difference between the groups, indicating that grades have an impact on the academic reading tendency, $p = 0.033, < 0.05$. Therefore, from a macro perspective, it can be assumed that the higher the grades, the more significant the growth in practical activities, practical ability, and cognition of practice of college students, so they are more aware of the importance of academic reading and engage in active academic reading and gain more academic reading skills.

4 EMPIRICAL RESEARCH: THE RELATIONSHIP BETWEEN ACADEMIC PRACTICE AND ACADEMIC READING

4.1 There is a close relationship between academic experience and academic reading

For the academic experience of the university, a core indicator is whether a student has participated in the

project. The statistical results show that the “self-hosted” category accounted for 16.7%; “participating in classmates’ projects” accounted for 34%; “participating in teacher’s projects” accounted for 6.8%; and “never” accounted for 41.7%. Performing the Kruskal–Wallis test in a nonparametric test of the academic experience of program participation and the importance of academic reading leads to the following test results: significant $P = 0.026 < 0.05$, indicating a significant difference between groups, that is, whether hosting or participating in innovative practice projects significantly affects college students’ cognition of the importance of reading. In response to “Q18_Do you think innovation and entrepreneurship practice projects can promote your academic reading?” 49.3% thought it was “effective”; “general effect” accounted for 37.4% of responses; and 13.4% answered “ineffective.” The comprehensive test results echo the results of active reporting, and both support the research hypothesis that project practice is conducive to promoting academic reading, as shown in Table 2.

Table 2. Relationship between project experience and academic reading cognition

Test Statistics a, b	
	Q5_Do you think the academic reading of college students is important?
Kruskal–Wallis H(K)	9.256
Degrees of freedom	3
Asymptotic significance	0.026
a Kruskal–Wallis test	
b Grouping variable: Q17_Have you participated in innovation and entrepreneurship practice projects for college students?	

4.2 A close relationship exists between teacher–student communication and academic reading

According to frequency statistics, only 6.2% of students “frequently communicate” with teachers, while 28% “have little communication.” However, students generally believe that teachers have a relatively large influence on their studies (61.6%); 31.2% think the influence is “general”; and only 7.2% think it is “not too big,” while 89.7% think that it is “necessary” that undergraduates accept the teacher’s guidance. This creates a rupture between the results of practice and students’ expectations, which profoundly affects the academic reading of college students.

According to the model by multivalued logistic regression (as shown in Table 3) the likelihood that the teacher has instructed the student in their academic reading and that the teacher has led the student to engage in classroom academic reading is less than 0.05, indicating a significant impact on students’ book reading. The significance of whether the college has special undergraduate student tutors is greater than 0.05, indicating no significant impact on students’ book reading. VIF is a value for testing collinearity, which needs to be below 5 in a strict statistical sense. In the analysis of this problem, the values are all less than 5, indicating no strong collinearity between the three variables to be used.

Table 3. Impact of teacher–student communication on academic reading

Model	coefficient ^a				t	Saliency	Tolerance	
	B	standard error	Beta	Significance			Statistics	VIF
	Unstandardized coefficients		standardized coefficient					
1 (constant)	3.176	0.132		23.984	0.000			
Q7_Has the teacher guided your academic reading?	-0.333	0.061	-0.237	-5.500	0.000	0.697	1.434	
Q8_Has the teacher led you to engage in academic reading in class?	-0.210	0.066	-0.136	-3.163	0.002	0.700	1.428	
Q10_Does your college have a special tutor for undergraduate students?	0.036	0.030	0.045	1.190	0.235	0.904	1.106	

a. Dependent variable: Q24_ What is the number of academic books you read each year?

The model was established according to the β value in the regression analysis: $y = -0.333X_1 - 0.210X_2 + 0.036X_3 + 3.176$. It shows that the frequency with which students are guided by teachers and the extent to which teachers lead academic reading in the classroom are positively correlated with the number of academic books read each year, and the school’s ability to provide corresponding teacher support for academic reading is positively correlated with students’ academic literacy. According to the multivalued logistic regression model (Table 2), the significance of both Q7 and Q8 is less than 0.05, indicating a significant impact on Q24, and the significance of Q10 is greater than 0.05, indicating no significant impact on Q24. VIF is a value for testing collinearity, which needs to be below 5 in a strict statistical sense. The values in this example are all less than 5, indicating no strong collinearity between the three variables to be used.

4.3 There is a close relationship between peer communication and academic reading

Through the analysis of the data, the degree of discussing academic issues with academically experienced classmates was positively correlated with academic reading ability ($p = 0.0001 < 0.01$,

$r = 0.432$). This suggests that students who frequently talk to academically experienced classmates tend to perceive themselves as being more academically competent. The degree to which academic issues are discussed with senior classmates is positively correlated with academic reading ability ($P = 0.0001 < 0.01$, $R = 0.423$), indicating that students who often discuss academic issues with senior classmates generally consider their academic ability to be stronger. Table 4 also comprehensively analyzes and shows the following: From the above data, it can be concluded that $r = 0.553$,

indicating that the influence of peers and peer groups on students' academic reading ability is moderately related to reading ability, and $P = 0.0001$, indicating a 99.99%

possibility of correlation, which is very significant. This is shown in Table 4.

Table 4. Correlation Analysis of Peer Influence

Correlation				
			Q34	Q35
Spearman Rho	Q34	Correlation coefficient	1	0.518**
		Sig. (two tails)		0.000
		N	696	696
	Q35	Correlation coefficient	.518**	1
		Sig. (two tails)	0.000	
		N	696	696
** The correlation is significant at the 0.01 level (two-tailed)				

(Q34 is obtained from Q20+Q21, indicating peer communication; Q35 is obtained from Q22+Q23, indicating reading ability)

4.4 The relationship between reading conditions and academic reading

As far as reading carriers are concerned, statistics show that the average value of academic reading on paper

falls into the range of “almost none” and “30 minutes”; the average e-academic reading falls into the “under 30 minutes” and “30 to 60 minutes” ranges. This shows that e-reading has become more widely accepted. This is shown in Table 5.

Table 5. Reading conditions and reading time

Descriptive statistics	N	Minimum	Max	Mean	Standard deviation
Q27_How long do you spend on average per day reading print academic literature?	696	1	5	1.82	0.969
Number of valid cases (in columns)	696				
Descriptive statistics					
Descriptive statistics	N	Minimum	Max	Mean	Standard deviation
Q28_How long is your average daily reading time of electronic academic literature?	696	1	5	2.19	0.966
Number of valid cases (in columns)	696				

In terms of electronic document platforms, CNKI is far ahead (36.4%), followed by Baidu Scholar (17.1%), Baidu Search (15.8%), and Google Scholar (11.3%). As

far as academic knowledge supply platforms are concerned, Station B (31.10%), WeChat official account (24.6%), and MOOC (21.1%) occupy the top three,

respectively, while the audio-focused Himalaya (7.5%) platform is not conspicuous. This shows that video-sharing knowledge is more acceptable, and sociality (WeChat) and professionalism (MOOC) are also the core elements that must be considered.

5 COUNTERMEASURES AND SUGGESTIONS

According to the Marxist view of practice, academic practice is the internal engine that promote academic reading. The above statistical results prove that academic experience, teacher–student communication, and peer-to-peer communication significantly support and promote the academic reading of college students. On the issue of promoting the academic reading of college students, these results indicate the need for practical improvements in the following areas.

First, college students should have more opportunities for scientific research, entrepreneurship, or research projects. China's primary and secondary education is basically intended for exam preparation, which often leads to college students "reading for the sake of reading" after entering school, and their thinking is still limited to the scope of the text. As a result, students lose their enthusiasm for learning and lack a real understanding of much of the knowledge gained. More importantly, they do not understand the purpose of university study, so they often ask, "What is the use of knowledge?" Only through the promotion of "projects" and "problem orientation" can the vivid relationship between knowledge and practice be truly solved, which will help students understand the knowledge gained, and can knowledge learning be also combined with problem solving, to answer the question of "what is the use of knowledge?" and solve the problem of providing quality education.

Second, the quality of teacher–student communication should be guaranteed in terms of the academic system or atmosphere. It is not easy for college students to get out of their own habits of thinking about exam-oriented education, so it is very important for teachers to guide and help them. Because teachers have very rich experience in academic research, they can provide students with a practical way of thinking, topic selection, and reading methods. According to the survey results, college students are also eager to communicate more with teachers to gain their help, but the current reality of teacher–student communication is far from meeting their requirements for improved teacher–student communication in terms of workload calculation, curriculum design, communication space design, project design, and practical participation, and for promotion of teacher–student communication through various practical opportunities, so as to encourage students to solve problems through academic reading.

Third, an effective communication mechanism between students of different grades should be established. From the survey results, peer-to-peer communication has a far greater impact on academic reading than the communication between teachers and students. Peer-to-peer communication can provide more personal experience in communication and is more equal and in-depth. Of course, peer-to-peer communication, project guidance, and teacher–student communication are not diametrically opposed but promote each other. In fact, project guidance is the core, the carrier, and the foundation for the development of exchanges; teacher–student exchanges provide the guidance and serve as the driving force for openness and ideas; peer exchanges can further implement projects and teachers' guidance. Moreover, mutual exchange can enhance the understanding and application of knowledge. In addition, in the corresponding system design, more exchanges between different grades and different majors can be encouraged to enhance mutual promotion between peers and achieve cross-disciplinary thinking.

Finally, the development of digital and visual academic resources should be strengthened, and the social nature of academic platforms should be enhanced. Statistical results show that college students increasingly receive information through digital, visual, and social means, which requires society and schools to fully open or purchase more relevant academic resources. China's education sector is developing courses such as MOOCs, first-class courses, and online courses on a large scale. At the same time, with the rise of many Internet knowledge platforms, many online lectures or courses are collected on the platform, becoming a rich resource for college students. In the Internet age, the acquisition of knowledge is no longer a difficult and special thing. However, academic resources provide only background support for academic reading, and the key lies in the acquisition of academic reading motivation.

6 CONCLUSION

Through empirical research, this paper confirms the worrying academic reading status of Chinese college students and that both their motivation and ability to read for academic purposes are closely related to project guidance, teacher–student communication, and peer communication. Among the open-ended questions at the end of the questionnaire, students most often mentioned the question of teacher guidance. This reflects both the habitual thinking of Chinese college students' dependence on teachers and the leading role of teachers in students' academic reading. However, without project guidance, teachers' guidance may remain abstract. The statistical results also show that RAP is inseparable from academic experience. This article is only a macro survey, and the specific details need further qualitative research to be enriched.

ACKNOWLEDGEMENTS

Research on the development of educational resources for the awareness of the Chinese nation's community among mainland Hong Kong and Macau college students, JDGTT202124.

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