Impact Factors of the Information Literacy of Humanities and Social Science Undergraduates under the Academic Perspective

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Abstract: Affected by the subject characteristics, research direction and other factors, the frequency of humanities and social science students to contact and use complex information data and technology is objectively insufficient, thus the information literacy is relatively weak. In the information age, the construction of new liberal arts puts forward higher requirements for the information literacy of humanities and social science students. Based on the academic perspective which is closer to university learning, this paper adopts quantitative and qualitative research methods to explore the external and internal factors affecting the information literacy of humanities and social science undergraduates, and puts forward suggestions on cultivating their academic information literacy.

1. Introduction

The integration of modern information technology into the field of humanities and social science has profoundly changed the way of knowledge acquisition, marking, comparison and so on. The significance of information literacy for adapting to the form of knowledge in the new era is becoming increasingly prominent [1].

In 2018, the Ministry of Education issued the Education Informatization 2.0 Action Plan, which listed the Comprehensive Information Literacy Improvement Action as one of the eight action plans. As a senior analytical talent reserve army in the future of humanities and social science students, the improvement of their information literacy is crucial to building the appearance of information education in the new era and contributing to the informatization of international education.

With the development of new liberal arts, the cultivation of humanities and social sciences has become an important part in the student training mechanism[2]To explore the information literacy of humanities and social sciences from an academic perspective not only more conforms to the actual situation of undergraduate learning, but also helps to connect with the development of graduate students and lay a solid foundation for cultivating outstanding academic talents. However, in the new era, the academic information education of humanities and social science undergraduates is still relatively backward: the lack of relevant teachers, the physiological foundation of humanities and social science is weak, and the connection between professional knowledge and data performance has not been solved, not to mention improving academic information literacy to achieve high-edge academic talents in the new era.

Therefore, it is urgent to explore the key factors affecting the academic information literacy of humanities and social science students in the information age, which is not only conducive to changing the backward situation of humanities and social science information literacy, but also can provide a reference direction for the training of humanities and social science talents in line with the construction of new liberal arts.

2. Literature review

"Information Literacy" was first proposed in 1974 by Paul Zurkowski, president of the American Information Industry Association, as the techniques and skills of people using information and information sources to answer questions. In 1989, the American Library Association (ALA) defined

information literacy as "the comprehensive ability of an individual to recognize when information is needed, retrieve, evaluate, and utilize information effectively". This is a more complete and detailed interpretation of the meaning of information literacy, and is by far the most widely used definition of information literacy [13].

As the information society enters the Web 2.0 era, researchers question whether the concept of information literacy adapts to the interaction and dynamics of information in the WEB 2.0 era. In this environment, the birth of the concept of yuan-literacy has been spawned [17]. For the background and purpose of this study, the concept of met literacy defined by the American Library Association (ALA) is "the comprehensive ability of individuals to recognize when they need information, retrieve, evaluate and utilize the information effectively, and generate other literacy".

In recent years, the research of domestic scholars on information literacy mainly focuses on three aspects: the comparative research of information literacy, talent training and influencing factors. In the comparative research, Wang Lian and others compared the theory of online information literacy education (OILI) in college libraries in China and America, believing that domestic online tutorials should integrate information, research and academic [3].In talent training, scholars propose to innovate information education in various ways for the direction of talent training in the new era. For example, Bai Mingfeng and others believe that the integration of MOOC and the cultivation of information literacy talents in universities is an inevitable trend of modern information literacy teaching [11]. In the influencing factors, Roma et al established a complete model of influencing factors, including environment, teacher and learners, based on the influencing factors of students by ISM and AHP[8]It can be seen that the above research studies information literacy from the overall perspective, focusing less on a special group. Different groups have different information needs, thus influencing factors and promotion paths, which cannot be generalized.

Although there is a domestic analysis of normal university students, higher vocational students, graduate students and other groups, for example, Li Yi has developed evaluation tools based on the "dual role positioning of normal university students" and "2.0 Talent Development Requirements" to investigate the development level of Chinese normal university students in the new era"[5]However, there is few research from the perspective of disciplines, especially the humanities and social science groups in the weak position of information literacy education. The surveys about them also only focuses on the exploration of training path, such as Liu Xiufeng and others pointed out that insufficient intensity of relevant laboratory construction and comprehensive training, and then sorted out the four improvement strategies[16]Gan Weiyu and others analyzed the necessity of humanities and social science students from general education, adaptive technology development ability and leadership, designed the promotion mechanism to cultivate a new generation of humanities and social science professionals with professional data analysis and deep model construction [6]However, the overall information literacy with humanities and social science students is mostly interpretation and lack of empirical research.

Information literacy is the basic premise of scientific research. With information literacy paying increasing attention to in the field of higher education research, academic information literacy has gradually entered the research field. The British National and University Library Association released the revised Information Literacy Standards in 2011, which reflects the characteristics of "actively absorbing academic skills and enriching the teaching content". The Information Literacy Framework for Higher Education issued by the United States in 2015 proposes that universities should combine information literacy education with the academic research process in the information era. The Japanese standards also suggest that the information literacy-related skills that undergraduate and graduate students should master can be used as the evaluation standards for information collection and academic writing in the learning process. It can be seen that countries' focus on information literacy has shifted from surrounding the initial process of acquisition and utilization of information to focusing on academic activities [13].

In 2011, Jiang Xiaoxi first put forward the concept of "academic information literacy"[4]That refers to the information literacy should have in scientific research activities, since scholars mainly discussed the academic graduate and university library information education and evaluation system, such as

Zhang Xiaoyang, Jiao Haixia conducted the graduate academic information literacy structure analysis and coordination evaluation, using the composite system coordination model for the coordination of the academic information literacy structure [14].

The above research proves the outstanding position of information literacy in the intelligent era. But in general, there are still the following limitations: 1. the targeted grpup is single, mainly for whole college students. They lack in-depth investigation of special groups such as humanities and social sciences.2. The method is single, surveys of the information literacy of humanities and social science students are mostly interpretation and lack empirical research.3. Ignoring characteristics. Humanities and social science undergraduates have unique information demands different from science and engineering and postgraduates. The past surveys have ignored the academic investigation of undergraduates, and are biased with unified definition and evaluation standards. Therefore, this research conducts empirical research on the humanities and social science undergraduates based on the academic perspective, combined with the questionnaire survey and interview methods, to explore the influencing factors and in order to provide some reference for the cultivation of the information literacy of the new humanities and social science students.

3. Quantitative analysis

In the quantitative analysis part, this research is carried out by questionnaire survey. The questionnaire includes three aspects: basic personal information, information literacy test in academic writing (17 radio and multi-topics), and self-evaluation of academic literacy (20 scoring questions).The information literacy test of the academic writing link is based on the Survey and Research on the Status of Information Literacy Embedded in the Research Process of Chinese Academy of Sciences, and the self-evaluation of academic literacy is based on the Status Survey of Academic Information Literacy and Countermeasures Analysis——Take Taiyuan University of Science and Technology as an example. Onside ring that the publishing experience of undergraduate papers is less than that of graduate students, some journals are deleted and the difficult use of science and technology technology combined with the academic writing characteristics of science and social science students. He questionnaire survey was mainly undergraduate students in the humanities and social sciences of Shandong University. 172 questionnaires were distributed, 172 were effectively recovered, and the effective recovery rate was 100%. After spss analysis, the questionnaire reliability was 0.946, .938 and good.

The Project	Variables	Frequency number	Frequency
Gender	Male	60	34.88%
	Female	112	65.12%
Grade	First year	31	18.02%
	Sophomore year	56	32.56%
	Junior year	54	31.40%
	Senior year	31	18.02%
Professional level	Philosophy class	14	8.14%
	Economics category	32	18.60%
	Art category	31	18.02%
	History class	3	1.74%
	Law class	11	6.40%
	Literary languages	30	17.44%
	Management class	51	29.65%
Achievement	Top 1 / 3	75	43.60%
	Medium 1 / 3	81	47.09%
	Back 1 / 3	16	9.30%
Place of origin	The Town	81	47.09%
	Rural areas	91	52.91%
Total		172	100

Table 1.Sample Basics.

3.1 Water average analysis of academic information literacy

	Variables	Meverage	Standard error	Statistical values	P
Gender	Male	61.27	2.285	t=-3.288	0.001
	Female	69.74	1.193		
Place of origin	The Town	66.00	1.68	t=-0.642	0.522
	Rural areas	67.48	1.583		
Parent culture degree	Primary school and below	65.68	2.936	F=1.804	0.148
	Junior high School	68.35	1.933		
	High school / technical secondary school	70.00	2.369		
	College / undergraduate and above.	63.45	2.126		
Academic achievement.	Top 1 / 3	67.05	1.732	F=0.645	0.526
	Middle 1 / 3.	65.81	1.586		
	Back 1 / 3	70.44	4.882		
Grade 1	First year	62.32	3.304	F=9.268	0.000
	Sophomore year	60.70	1.952		
	Junior year	71.46	1.816		
	Senior year	74.10	1.504		
Professional level	Philosophy class	67.07	3.97	F=4.436	0.000
	Economics category	65.94	1.886		
	Art category	56.48	2.967		
	History class	62.00	14.434		
	Law class	73.55	2.024		
	Literary languages	66.90	3.229		
	Management class	72.25	1.793		

Table 2. Independent sample t test and variance analysis
of academic information literacy levels under different basic variables.

For the self-evaluation score of academic information literacy, the difference comparison between men and women was conducted using the independent sample T test. P =0.001 <0.05, women have significantly higher academic information literacy than men. This difference may be due to women's strong perception, sensitivity and affection. They are better at discovering surrounding academic information sources and actively accept valuable information. Moreover, the humanities and social science majors have high requirements for the expression ability, and women also have more advantages in expressing the academic information needs of the humanities and social science, such as being able to use more accurate retrieval words to obtain information.

For the self-evaluation score of academic information literacy, the differences between towns and rural areas of origin were compared using the independent sample T test.) P value =0.522> 0.05. Differ differences between different parental education and academic performance were conducted by single-factor ANOVA test. P values are 0.148 and 0.526, greater than 0.05, indicating that there is no significant difference in academic information literacy level between urban and rural areas, different parental education level and different academic performance. The reason may be the impact of resource explosion and the characteristics of university learning in the information age. In the

information age, all kinds of top teaching resources are shared equally and free, which weakens the role of the original social resource channels (source and family environment). The students from poor backgrounds are less limited by them. With their spirit of "poor children take charge early", they may be more able to catch up with the students with good background. Under the trend of cultivating diversified talents in university education, academic performance is only part of the conditions for evaluating the quality of students. The correlation between academic performance and academic information literacy is becoming weaker and weaker. Even students with poor performance will boost information awareness and improve information skills due to personal lack of interest or blowout information sources. Similarly, good academic performance does not represent high academic information literacy. At present, the academic information literacy in humanities and social science majors is more reflected in the acquisition of paper resources and text analysis. The dependence on the use of information technology and information innovation is low, and the academic information literacy cannot be fully transformed into academic performance.

Comparing differences between four grades for academic information literacy scores using a single-factor ANOVA test. P value =0.000 <0.05, freshman and sophomore academic information literacy is significantly lower than that of the junior and senior years. At different stages of scientific research, students need to achieve a different "threshold" of information literacy Secondary students just began to contact professional knowledge, scientific research application, implementation, topic conclusion and so on are in urgent need of guidance on professional knowledge and literature skills, and are in the entry stage. In the junior year, the curriculum is gradually professional and academic, students engaged in scientific research and writing and projects is getting higher and higher, and the improvement of information literacy is inevitable. In addition, learners are more mature, more can consider their own needs, such as postgraduate protection, postgraduate entrance examination, graduation thesis and other planning, so as to improve the information literacy.

For the self-evaluation score of academic information literacy, the difference-major comparison was conducted using the single-factor ANOVA test The P value is =0.000 <0.05, and the humanities majors are significantly lower than the academic information literacy of social science majors The reason is that the two are different for information processing in academic writing Social science majors use more quantitative and qualitative research methods, and humanities majors are mostly interpretation and significance research Therefore, for social science students to master more data processing software than humanities students, they need to constantly improve their information literacy to complete more difficult social science courses, and the overall academic information literacy will be better.

3.2 The impact of information support on paper writing and information literacy

According to the above mean analysis, both the traditional demographic factors (place of origin, parental education) and academic performance have no significant impact on academic information literacy According to the cross-analysis card side test, the construction of school information resources and tutor teaching, as a more significant information support, show a stronger posterior influence in the academic writing and the meta-cognition of information literacy

3.2.1 The impact of information support on academic writing

School information resources construction	Source of the paper topic selection	
	Mentor designation	Independent choice.
Bad one.	69.70%	30.30%
Good one.	14.40%	85.70%
Card-side inspection.	χ=48.964*	df=6

Table 3. Source of thesis topics and the construction of school information resources.

Menttor instruction	Source of the paper topic selection	
	Mentor designation	Independent choice.
Bad one.	54.80%	45.30%
Good one.	15.40%	84.60%
Card-side inspection.	$\chi=32.123*$	df=6

Table 4. Source of topic selection and teaching of tutors.

According to Table 3, among the students who believe that the self-school information resources are well built, obviously more students (85.70%) tend to choose independently in the paper topic selection. The reason may be that the construction of school information resources students have stronger information sensitivity, is better at mining and using resources, so in school can provide richer information sources, the part of the students are more likely to with the help of resources to find hot topics, common topics, for the topic also have their own ideas But among students who believe good knowledge, fewer (15.40%) rely on mentor designation (see Table 4) The traditional view is that the more mentoring helps, the more likely students will follow In fact, the more guidance the tutor, the more it can help students establish a sense of independence, but the students with less guidance by the tutor are easier to "hold their hands temporarily" Start to strict management, more, and finally can open up the struggle, which is the training mode of higher education hope

School information resources construction	Paper innovation point			
	Submit it directly to the tutor for judgment.	Retrieve the latest comparison.	Entrusted the library to check the new.	This issue was not considered.
Bad one.	9.10%	24.20%	9.10%	57.60%
General rule.	13.70%	64.70%	5.90%	15.70%
Very good.	16.20%	59.50%	10.80%	13.50%
Card-side inspection.	$\chi=29.848*$	df=6		

Table 5. Innovation and school information resources.

Menttor instruction	Paper innovation point			
	Submit it directly to the tutor for judgment.	Retrieve the latest comparison.	Entrusted the library to check the new.	This issue was not considered.
Bad one.	9.50%	31.00%	2.40%	57.10%
General rule.	8.80%	63.70%	12.10%	15.40%
Very good.	28.20%	64.10%	2.60%	5.10%
Card-side inspection.	$\chi=48.385*$	df=6		

Table 6. Innovation Points and tutor teaching.

It comes from Table 5 and 6 that more than half of the students (57.60% and 57.10%) who believed that the self-school information resources construction and tutor teaching situation did not consider how to determine the innovation points of the paper The construction of school information resources is not good, the more narrow students 'access to information channels, the scarcity of information sources will restrict the development of students' information awareness, especially for the metacognitive ability of self-information literacy Students cannot be aware of the shortage of self-information evaluation ability, and they cannot pay attention to the innovation of self-thesis through evaluation comparison Tutors play a key role in training students' academic information literacy

Undergraduate students have short academic time, little experience, and good academic habits and abilities almost all rely on their tutors If students think that the tutor does not play a good guiding role, they play a negative role in correct academic attitude and familiarity with scientific research and writing.

Interestingly, students who believe that the construction of school information resources and tutor teaching are good rely more on the tutor's judgment, which is not consistent with the public cognition. In fact, the better the guidance of the tutor, students will have a better attitude towards academic writing and can realize the importance of paper innovation, so as to hope that the tutor as an authoritative representative will provide practical opinions.

3.2.2 The impact of information support on academic information literacy

School information resources construction	Methods to managing the literature.			
	Use the literature management software.	Keep the full text in the folder.	Print and then be bound into volumes.	It was not deliberately managed
Bad one.	12.10%	15.20%	12.10%	60.60%
Good one.	28.10%	52.50%	8.60%	10.80%
Card-side inspection.	$\chi=46.289*$	df=6		

Table 7. The Methods of Management Documents
and the Construction of School Information Resources.

Menttor instruction	Methods to managing the literature.			
	Use the literature management software.	Keep the full text in the folder.	Print and then be bound into volumes.	It was not deliberately managed
Bad one.	14.30%	26.20%	7.10%	52.40%
Good one.	28.50%	51.50%	10.00%	10.00%
Card-side inspection.	$\chi=40.103*$	df=6		

Table 8. Management methods and tutor instruction

According to Table 7, 8, among the students who think that the self-school information resources construction and tutor teaching situation are not good, most students do not specially carry out literature management. The construction of school information resources can not only implicitly promote students' information awareness, but also provide tools for students to conduct information behavior. Resource construction is not good, which not only affects students 'awareness of information management simultaneously, but also it cannot provide free and convenient access to document management tools, which limits the development of students' information literacy in terms of awareness and tools. Tutors are more teaching students 'relevant knowledge, and the better the situation, the more tutors can cultivate students' comprehensive academic writing. This training is not only limited to the specific links of writing, but also attaches importance to academic ethics, information management and other awareness. Therefore, strengthening the construction of school information resources and grasping the teaching ability of tutors is beneficial to building a good information use environment and cultivating good information use habits.

	Variables	Mever age	Standard error	Statistical values	P
School resource construction					
	Bad one.	2.21	0.274	F=25.504	0.000
	General rule.	3.73	0.095		
	Very good.	3.86	0.178		
Menttor instruction	Bad one.	2.48	0.227	F=20.683	0.000
	General rule.	3.82	0.102		
	Very good.	3.69	0.184		

Table 9. Variance analysis of willingness to participate in
academic information literacy training under different basic variables.

For the willingness to participate in information training, the single-factor ANOVA was used to analyze the construction of information resources and tutor teaching differences in different schools, and obtained the P value of =0.000 <0.05, which all showed significant differences. Among them, the better the above outside support, the stronger the students 'willingness to participate in information training, which shows that external resources can not only help students improve academic information literacy, but also help develop students' meta-cognitive ability, reflect on self-shortcomings, and actively participate in the training.

To sum up, both academic writing and academic information literacy are closely related to external support. The better the school information construction and tutor teaching, the stronger the students' independent topic choice ability, innovation ability, management consciousness and utilization consciousness, and the better the meta-cognition of self-academic information literacy However, not all external support can have a significant impact. Traditional factors such as the source of origin and the degree of parent education are dissipated by online education, and the construction of school information resources and tutors more closely related to online education have become more significant influence factors in the new era.

4. Qualitative analysis.

The key external factors affect the academic information literacy of humanities and social science students. However, considering the characteristics of universities paying attention to independent learning, the author believes that it is necessary to introduce internal factors. However, because internal factors are more difficult to measure and quantitative methods are not highly sensitive, qualitative methods are used to explore internal factors. In the qualitative research part, the author collected six cases of information literacy development of humanities and social science students of Shandong University through semi-structural interviews (Table 10).

First Name	Grade	Age	Gender	Professional level	Academic information literacy level score value
Y	My sophomore year	19	Female	Finance	92
L	Junior year	21	Female	Management	90
Z	My sophomore year	20	Male	The Economy	90
W	Senior year	22	Female	The Chinese language.	86
X	Big year	18	Female	Chinese Language International Education.	80
Q	My sophomore year	21	Female	Chinese Language International Education.	46

Table 10. Basic information of the respondents.

4.1 Sensitivity and attribution mode.

"The sensitive point is very good, especially in learning. If I can notice the details that others can't notice, and what the teacher inadvertently mentioned when commenting on the paper, I can remember and use my own article." (L)

"The unique advantage of our liberal arts students should be our rapid perception of information, the sensitivity of science students, and if liberal arts students are not sensitive, I feel so difficult to write a paper." (Y)

"Sensitive" is a word that each interviewee mentions, and is regarded as the primary condition for the academic information literacy of humanities and social science students But their "sensitivity" is different from the sentimentality in the general sense, which cares about the surrounding information sources and can quickly capture the valuable ingredients. Students with sensitive characteristics are keenly aware of the academic information they want to obtain and keep continuous attention, not only considering them more comprehensively and carefully in retrieving the evaluation of academic information, but also when others' words prompt them to reflect faster and make write adjustments as they do academic writing. Interestingly, not all sensitive people have good academic information literacy, such as "I hate that I always focus on the outside world, and the more I write, the more I feel bad." Q's sensitiveness instead strikes her desire to write. When the author further asked them about their behavior after decoding the external information, I found that they had formed different attribution modes under the "sensitivity"[18].

Sensitivity with positive attribution psychology after capturing others' failure evaluation of self-academic writing, tend to attribute "failure" to lack of effort, causing guilt and high expectations of "success", and will work harder to pay attention to, collect and evaluate information to better improve their academic papers. Z is typical of this category. He published three journal papers in his sophomore year and was a leader in his major. He regards the writing process of academic papers as a competition of "King of Glory", and is keen on challenging the difficult data analysis software for undergraduates and analyzing others' evaluation of their own papers. If others negative negatively, he will be braver: "I want to practice the kind of 'soldiers to block, water to hide' feeling" On the contrary, she thinks sensitivity is an interference with writing. "I can't help following who and who sent the paper again. That sense of shame and inferiority is really uncomfortable. I feel that I am really not suitable for study and just want to get a good job and find a good job. "Q is a sensitive person of negative attribution, attributing" failure " to a lack of self-ability, and inducing the various negative emotions that hinder their way to improve academic literacy It can be seen that learners with positive attribution mode will actually play the effect of "sensitive" characteristic and be better used to improve their self-academic information literacy

4.2 Self-dialogue and metacognitive ability.

"Sensitive" is regarded as the stepping stone for the academic information literacy, and the "active attribution" encourages the sensitive people to form a willingness to continue to improve the academic information literacy. However, after being encouraged, how to maintain the correct direction of their academic information literacy? Frequent self-dialogue and improved metacognition are the answer of respondents.

X, a freshman, is a small scientific research student, but she became a powerful player in her mentor's research project in just a few months. X believes that this qualitative leap in academic information literacy is attributed to self-communication. For example, in the survey method course, X want to use the quantitative method that the teacher did not speak, but was rejected by the teacher with novice ability, "but I carefully comb research ideas, constantly ask myself whether the quantitative method is appropriate, and evaluate whether I can learn the quantitative method in a week, finally I did, which opened a new door to my paper writing." For example, in W:", I often ask and answer myself, for example, I don't understand any principles, but it seems convenient to operate spss, mechanically, but can I really improve my quality?" When other students were eager to complete the paper and swallowed the spss operation, W was able to reflect on the problems through self-dialogue.

There is no doubt that W was perfect in the defense, and many students were confused about their data analysis process. Y also said that every time her classmates would ask her to help retrieve the paper, her external appreciation made her feel good: "If the full score of 10, I could score 8 points", but when alone, I couldn't help asking myself: "Am I really good? I just have strong access, but information application and innovation."

Through the above behavior, we can see that the respondents all have a good sense of "self-dialogue". They can always take care of their own academic cognitive activities, conduct deliberate control and adjustment, and show a good metacognitive ability. Metacognitive capabilities is divided into metacognitive knowledge, metacognitive experience and metacognitive monitoring [9].Combined with the action mode of respondents' paper writing, it can be seen that the stronger the meta-cognitive ability in academic aspects, the more the learners can store the status quo and problems of self-academic information literacy, analyze the current needs of academic information literacy, and produce good or bad cognitive experience. Experience then encourages learners to take strategies to monitor and adjust, making academic information literacy present a better look, and this process also deepens the learners' perception of the importance of information literacy in academic writing, and further encourages learners to strengthen their self-dialogue in information literacy and form a virtuous circle.

4.3 Compatibility between field independence and field-dependent cognitive style

Cognitive style affects how people view the environment in which the information is obtained, how the information is organized and interpreted, and how these interpretations are used to guide the individual's behavior. Field independence and field dependence are two typical cognitive styles. Among them, field independence refers to that the individual is more dependent on their own internal reference, which is not easy to be affected and disturbed by foreign factors, and is used to make independent judgments on things independently. Field dependence refers to the individuals who rely more on the external reference of their surrounding environment to define knowledge and information in the stimulation of the environment [19].Through the interview, the author found that humanities and social science students are more inclined to field-dependent types, very sensitive and dependent on the external reference of their surrounding environment, vulnerable to environmental suggestion. For example, the Q habit above judges the level of their information literacy from the evaluation of others. Although they are good at expressing and dialogue themselves, learning and remembering materials containing social content, they are not abstract and theoretical as independent in abstract learning materials.

W, a student of the School of Literature, reflected: "When I wrote a paper, I found that those abstract theories upset me. I did not think very well rationally. I lacked the feeling of studying and thinking independently like many science and engineering students." Therefore, she taught herself high number, strengthened the ability to think about information, weakened the implication of external information, and cultivated the ability to judge information independently. Now W not only retains the sensitivity of humanities and social science students to information, but also can analyze abstract concepts independently and rationally with their internal motivation. Its academic level has impressed many students. Reviewing W, metacognitive ability makes her reflect on the lack of self-academic information literacy, and then learn science and engineering knowledge to enrich information processing thinking, so as to take into account the advantages that field dependents are good at perceptual thinking and field independent people are good at logical thinking. This practice of field dependence and field independent cognitive style is also reflected in many respondents, they draw the advantage of independent style, fusion adjustment, towards the direction of new arts, namely can multiple access to relevant information, break through the limitations of personal knowledge architecture, have the ability to quickly adapt to and learn new information technology, become an interdisciplinary talent.

5. Conclusion and Discussion

Summarize the qualitative and quantitative research results, this paper concludes the key factors affecting academic information literacy in both internal and external factors. In external factors, grade, professional, school information resources construction and tutor teach information knowledge presents a significant impact on academic information literacy, traditional demographic factors such as parents' culture, students did not show a significant impact on information literacy, this may be due to the information age of all kinds of top free resources, and resource access is relatively equal. Among the internal factors, the author found that "sensitive", "metacognitive ability" and "field independence and field dependent cognitive style" are an important condition for humanities and social science students to obtain good academic information literacy. These three factors run through the whole improvement of individual academic information literacy. Based on this, this paper further proposes suggestions to promote the academic information literacy of humanities and social science students:

5.1 Improve the construction of information resources in colleges and universities, and unblock the channels for the learning and use of information resources of humanities and social science students

College information construction includes information infrastructure construction, database construction and information teaching resources construction. While strengthening the investment in resources construction, universities should pay attention to cultivating the perception of students 'resources acquisition and intelligence awareness, improve the quality and efficiency of students' information collection, and truly achieve the construction of information resources for college teachers and students [7]At the same time, special attention should be paid to the uneven distribution of academic information teaching resources in humanities and social science majors: managed information teaching resources are good and philosophy and art information teaching resources are good. In this regard, colleges and universities should carry out high-quality academic information literacy general compulsory courses within the whole school, hold special courses on information literacy, salons, knowledge competitions, etc., so that information literacy education can be widely distributed and covered.

5.2 Strengthen the information awareness of humanities and social science teachers and the integrated training of teaching, research and learning

According to the quantitative research results, the tutor information knowledge teaching has a significant impact on the academic information literacy level. Based on this, humanities and social science teachers should make the teaching classroom teaching integration, the academic information literacy access ability, application skills, information ethics into their own teaching link, to help students get familiar with the use of humanities and social science professional database and information resources search skills, carry out regular information literacy lectures, in the process of practical operation to improve students 'information skills, and through the appropriate amount of research task exercise test students' academic information literacy. At the same time, teachers are encouraged to explore interdisciplinary research, pay attention to empirical research methods, and guide students to develop information literacy in the process of scientific research. In addition, teachers in the process of imparting information knowledge should also take into account the humanities social science students cognitive characteristics, thinking habits, learning style, focus on cultivating the sensitivity of humanities social science students to information, through teachers' speech and verbal behavior guide students to form a positive attribution, and pay attention to interdisciplinary knowledge transfer, must not ignore the uniqueness of humanities social science students.

5.3 Encourage students to exchange interdisciplinary disciplines and boost the academic advantages of professional characteristics

Affected by subject characteristics, research direction, humanities and social science students in learning contact, use of complex information data, technology frequency is objectively insufficient, in this case, the school should according to the new arts construction direction, to carry out innovative

interdisciplinary communication classroom, encourage humanities and social science and technology students in the learning, thinking methods, etc. After class, we should actively hold academic competitions, encourage interdisciplinary teams, cultivate students' ability to quickly adapt to and learn new information technology, so that students can carry forward the original advantages of professional academic information literacy, and cultivate a number of interdisciplinary high information literacy talents.

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