

Analysis of Factors Influencing the Use of Informationization Teaching Technology by Vocational College Teachers

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Abstract

By utilizing the technology acceptance and use model in the field of information technology, as well as the integration theory of information technology and curriculum, a theoretical framework has been constructed for the influencing factors of the use of information teaching technology by vocational college teachers. The author used quantitative research methods to determine the dimensions of factors affecting the use of information technology in vocational education teachers, including practice, cognition, emotion, and morality. The original sample data was collected using the Likert five level questionnaire method, and the independent samples T-test and one-way ANOVA data analysis methods in SPSS 22.0 were used, To reflect the overall development level of the use of information technology in teaching by vocational college teachers. The research results indicate that the overall level of development in the use of information technology is not ideal, with significant differences in gender attributes, age, educational background, and job titles.

Keywords: vocational teachers, information technology, influencing factors

1. Background of the study

With the rise of the Internet, information technology has continuously enriched people's lives and brought great changes to their way of life. The application of technology in education has also brought about significant changes in the form of education. A piece of chalk and a blackboard can no longer meet the current classroom teaching needs, and the responsibility of teachers is no longer simply limited to "preaching, teaching, and dispelling doubts". Students return to the main body of the classroom. In the era of 5A (Anyone, Anytime, Anywhere, Anyway, Anything), students can obtain the resources they want through various channels, which challenges the authority of teachers. The innovation brought by information technology to teaching is extraordinary. If teachers blindly confine themselves to traditional teaching models, they will inevitably be eliminated by the society. Since 2012, the Chinese government (2012, 2016, 2018, 2019) has successively issued plans, notices, and measures for educational informatization, with the overall development goal of forming an educational informatization system that is compatible with the national educational modernization development goals, basically building an information-based learning environment where everyone can enjoy high-quality educational resources, basically forming an information-

based support service system for a learning society, and basically achieving comprehensive coverage of broadband networks in all regions, levels, and types of schools, The informatization level of education management has significantly improved, and the level of integration and development of information technology and education has significantly improved. The development of a country lies in education, and the purpose of education is to cultivate high-quality talents needed by society. The key to affecting the quality of education lies in teachers, who need to keep up with the pace of informatization and improve their self-learning ability.

2. Current situation of the use of information technology in teaching

(1) Current Situation of Information Technology Teaching

In the past two decades, education informatization in China has made significant progress, especially in the important role that information technology plays in achieving high-quality resource sharing, promoting fair development of education, promoting modernization of education, supporting changes in teaching methods, building a lifelong learning system, and building a learning society. The realization of the value of information technology teaching is mainly reflected in classroom teaching and promoting the development of students' quality. However, looking at the application of information technology in classroom teaching, it is found that there are mainly several common problems.

1) The application of information technology teaching becomes mere formality

In the application process of information technology teaching in middle school, there is often a phenomenon of technology becoming mere formality and media showcasing. Jiao(2004) found through a survey of the current situation of the integration of information technology and subject teaching in primary and secondary schools in Lanzhou that the use of technology in many subject teaching has become a fashion, especially in public and demonstration classes, which will inevitably use a large amount of media technology. Sometimes, technology is even treated as a "vase", and conventional teaching will return to its original state. Wu and Yu (2006) pointed out that in the process of integrating information technology with curriculum, there has been a phenomenon of understanding "integrated courses" as "open courses, award-winning courses, and demonstration courses". The application of information technology is mainly for display purposes, rather than for daily classroom teaching reform. Some schools require young teachers to use multimedia teaching, and the multimedia teaching rate is not less than 50%. Some teachers have blindness in using information technology, such as in mathematics or physics teaching, using slides to present the process of formula derivation is difficult to present the teacher's thinking process; The use of this technology not only fails to stimulate students' enthusiasm, but also affects teaching effectiveness. Li (2023) conducted in-depth research on the feasibility of applying virtual reality technology in physical education teaching and training in universities, exploring the application channels of virtual reality technology in physical education courses, striving to enable university students to master more sports knowledge and skills, and become high-quality sports talents that meet market demand.

2) There is a phenomenon of technological abuse in classroom teaching

There are many phenomena of "technology abuse" in primary and secondary school teaching, which makes it difficult to achieve good results. A survey conducted by Qi (2004) found that many teachers,

especially young teachers, prefer to use multimedia technology indiscriminately. They believe that only the use of technological means is modern education and teaching reform. For example, in the observation class of "Winter in Jinan" in seventh grade, the communication time between teachers and students does not exceed 10 minutes, and the rest of the time is basically played by teachers through courseware; There is little two-way communication between teachers and students in this class, and the teaching atmosphere is not active. Presenting a large amount of pictures and text makes it difficult for students to absorb this information in a short period of time, especially when playing Fei Xiang's "A Fire in Winter" in the end, which not only takes up a lot of teaching time but also fails to achieve teaching results.

3) The application level of information technology is generally low

Yang and Fu (2012) argue that although a considerable portion of classroom teaching has already developed an advanced technological environment, due to the limited ability of teachers to design and apply information technology in information teaching, they cannot effectively utilize media resources for teaching. Instead, they only use PPT to assist teachers in teaching, using multimedia as an electronic blackboard. Some slides even lack reasonable design and layout, with the entire screen filled with dense text, and some slides lack color contrast in the background and text, resulting in students not being able to see the content on the screen clearly. This shallow level of technological application not only fails to improve teaching effectiveness, but also brings a heavy cognitive load to students, and even makes them have a rebellious mentality towards information-based teaching. **Yang , Huang , and Zhang (2014)** conducted a survey on the application ability of information technology among primary and secondary school teachers in Fujian Province. The main function of using information technology among teachers is to present teaching information and activate the classroom atmosphere, only considering how to facilitate teachers' "learning", with little consideration given to how to promote students' "learning". Obviously, using information technology to present teaching information is the easiest to achieve, and there is not a high demand for teachers' abilities; However, the application of technology in the stage of information presentation is limited in improving teaching effectiveness.

(2)Factors Influencing Information Technology Teaching

Wang, Shen, and Zhang(2020,2022) analyzed that the comprehensive literacy of teachers and the creation of a good atmosphere for campus informatization construction are the main influencing factors for the improvement of vocational college teachers' informatization teaching ability. **Hou Huifang, Hou,Zhang and Yang (2021,2022)**based on the research on the application of information technology teaching methods by vocational college teachers as classroom teaching, mainly understood the information technology teaching ability, awareness and attitude of English teachers in vocational colleges, training related to information technology teaching, and problems in the development of information technology teaching ability. The author searched through China National Knowledge Infrastructure (CNKI) and found 3836 articles on the topic of information technology teaching. The main factors limiting the use of information technology in teaching are reflected in the following aspects:

1) Teachers cannot actively adapt to the requirements of modern education

At present, some teachers, especially those in underdeveloped areas, still use the traditional teaching method of chalk and blackboard, lacking modern education awareness and enthusiasm for education reform. Their reform awareness is not strong, and their ability to use multimedia computers and teaching software is limited, making it difficult to integrate multimedia computer-assisted teaching methods into classroom teaching effectively. Many teachers have not yet fully realized the importance and impact of integrating information technology with curriculum. In our teaching process, we often encounter situations where schools organize public classes, and our teachers use modern educational methods to complete public classes. However, in our daily teaching process, we cannot see the application of information technology in teaching. The integration of teaching work and information technology is not sufficient, and teachers have low enthusiasm in adapting to information based teaching tools and methods. Some teachers are complacent with the current situation, lack innovation significance, and have a low understanding of educational information technology and insufficient learning, which restricts the reform of information based teaching. **Li (2023)** believes that university teachers should better adapt to the needs of the times, establish the concept of information technology teaching, learn more about information technology professional knowledge, recognize their own problems, timely correct their own shortcomings, communicate with colleagues more, improve their information literacy, and enhance their information technology teaching ability, so as to apply the knowledge learned to classroom teaching and build an efficient information technology teaching classroom.

2) Insufficient understanding of information technology and curriculum integration among teachers

The integration of information technology and curriculum is currently a hot issue in the application of educational technology in primary and secondary schools. But many teachers' understanding of educational technology is only limited to the application of information technology in education. The integration of information technology represented by computers with subject teaching. The integration of information technology and curriculum is usually divided into three forms: information technology as the learning object, information technology as a teaching tool, and information technology as a learning tool. This understanding has to some extent promoted the widespread application of educational technology in primary and secondary schools, but in fact, as an educational technology that solves problems in educational and teaching practice activities, the integration of information technology and curriculum is not limited to these three forms. **Cai (2023)** conducted a research on the integration of information technology and ideological and political education, and found that there is a phenomenon of "three heavy and three light", characterized by emphasizing the presentation of information technology while neglecting the achievement of teaching objectives; Emphasizing the form of information technology teaching and neglecting the content of ideological and political courses; Emphasize the application of information technology and overlook the improvement of information literacy. **Zhang (2023)** explored the main reasons for the poor teaching effectiveness of the current course "Logistics Information Technology", which overemphasizes the learning of theoretical knowledge in the curriculum design process, neglecting students' hands-on operation and practical ability, and the content of the textbook cannot keep up with the needs of social development, with very little involvement in emerging technologies.

3) The school lacks high-quality computer teaching software

At present, there are many teaching software on the market, but not many of them are truly suitable and effective(Li,2022). A considerable portion of teaching software, driven by the concept of exam oriented education, places more emphasis on textbook knowledge, resulting in the phenomenon of moving books or electronic exercise books. This teaching software clearly narrows the content and role of integrating information technology with courses.

4)The school's hardware conditions do not meet the requirements

Dai and Tao (2021,2023) believes that many schools are now equipped with computer rooms, but some schools do not manage them meticulously and only place them as decorations, completely unable to play the role of computer teaching. Some school computer rooms have not yet been connected to the internet, which affects students' access to information. Even some school computer room equipment is outdated or lacks necessary maintenance, making it unable to function properly. In this way, the existing school conditions invisibly create a psychological distance between ordinary teachers and computers. Therefore, in the minds of some primary and secondary school teachers, they always believe that computers are high-tech, although close in front of them, but far away. This has to some extent affected the enthusiasm of teachers in learning and using computers as a modern teaching medium.In actual teaching, Zhou (2023) formulated targeted improvement plans based on issues such as inadequate overall planning and inadequate management mechanisms, including improving management systems and software and hardware guarantees, to encourage teachers to actively update their teaching concepts, effectively master information technology, and continuously improve their teaching abilities and levels, thereby effectively strengthening the feasibility and scientificity of information technology teaching, and continuously delivering skilled talents to society.

5) Insufficient institutional construction

The application of information based teaching incentives is not in place. With the rapid popularization of the Internet, the deployment and implementation of network-based information systems has become a trend, and sharing of learning resources and interoperability of educational information systems have become basic requirements. At present, there is still a phenomenon of fragmentation in the construction of educational informatization, lacking standardization, standardization, and compatibility, making it difficult to share information resources. The key to solving these problems lies in planning the construction of various education systems based on educational technology standards. Although many regions in China attach great importance to "overall planning and distributed implementation" in the process of educational informatization, there are still some shortcomings in the overall promotion of educational informatization in some regions, mainly due to the lack of extensive participation in planning. In the overall planning process, in addition to emphasizing the participation of educational informatization experts and relevant leaders of the Education Bureau, it is also important to emphasize the participation of the principal of the experimental school and representatives of frontline teachers. If the teachers and educational decision-makers of experimental schools, school districts do not truly participate in the planning and design of the project, it will inevitably lack in-depth analysis of the actual needs of the school, and it will not be able to mobilize or attract the sustained participation of frontline school principals and teachers. Each region should formulate reasonable and targeted regional policies and systems for the application of educational informatization based on the actual situation, which is beneficial for

individual education units to promote the formulation and inclination of policies for the application of educational informatization, and greatly promote the enthusiasm of local universities and teachers to engage in related work.

3. Research Methods for Informationization Teaching Technology

Based on the practical problems of the development of information technology teaching in China and the existing problems in teacher education in China, a quantitative research method is adopted from the perspective of technology acceptance theory to construct a research model, explore the relevant factors that affect the development of information technology teaching for vocational teachers, and determine the interaction relationship between the relevant factors of information technology teaching development for vocational teachers from the perspective of technology acceptance theory, This has high practical value for the development of information-based teaching for vocational teachers in China and the improvement of their comprehensive literacy.

Based on literature review and relevant theoretical research, a hypothetical model of the influencing factors on the use of information technology by vocational college teachers is constructed, which includes five variables: practical factors, cognition factors, ethics factors, emotional factors, and usage behavior.

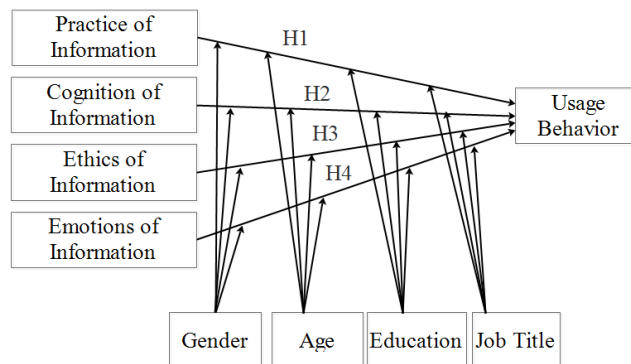


Figure 1 Analysis model of influencing factors on the use of information technology in teaching

4. Data analysis

Based on the relevant theoretical design of the existing survey questionnaire on teachers' information technology application level in foreign countries, the theoretical design of the current situation of information technology application in foreign countries is localized and redesigned. At the same time, this study selected 505 vocational teachers from 12 schools in Guangdong Province as the research subjects, and collected raw sample data using the Likert 5-level questionnaire method. The independent samples T-test and one-way ANOVA in SPSS 22.0 were used to analyze the differences in the informationization teaching level of vocational teachers, in order to reflect the overall development level of informationization teaching for vocational teachers, Determine the influencing factors of information technology teaching ability of vocational college teachers and the interaction relationship between the influencing factors.

(1) Selection of research site and research object

The study selected 12 vocational colleges in Guangdong Province, China as the survey sites. The researchers selected 12 full-time teachers from vocational colleges as research samples. The researchers conducted questionnaire testing through on-site distribution of survey questionnaires. A total of 505 survey questionnaires were distributed and 505 questionnaires were collected, with a survey questionnaire recovery rate of 100%. The study presents basic information on the sampling of vocational teachers from four dimensions: gender, age, education level, and professional title, as shown in the table.

Table1 Basic Information of Sampling Vocational Teachers

Basic information		Frequency	Percent(%)	Cumulative Percent(%)
gender	Male	215	42.6	42.6
	Female	290	57.4	100.0
age	26-30 years old	120	23.8	23.8
	31-35 years old	133	26.3	50.1
	36-40 years old	106	21.0	71.1
	41-45 years old	64	12.7	83.8
	46-50 years old	37	7.3	91.1
	above 50 years old	45	8.9	100.0
educational background	College	94	18.6	18.6
	Undergraduate	314	62.2	80.8
	Master's	84	16.6	97.4
	Doctoral	13	2.6	100.0
job title	No professional title	52	10.3	10.3
	Junior	77	15.2	25.5
	Intermediate	296	58.6	84.2
	Advanced	65	12.9	97.0
	Senior	15	3.0	100.0

Basic information	Frequency	Percent(%)	Cumulative Percent(%)
Total	505	100.0	100.0

As can be seen from the above table: the final effective sample size of this study was 505. of which 215 were males (42.6%) and 290 were females (57.4%). In terms of age, the two categories with the highest percentage were 31-35 years old and 6-30 years old, which accounted for 26.3% and 23.8%, respectively, while 36-40 years old, 41-45 years old and 46-50 years old accounted for 12.7%, 7.3% and 8.9%, respectively. In terms of educational attainment, Undergraduate accounts for the highest proportion of 62.2%, while College, Master's and Doctoral account for 18.6%, 16.6% and 2.6% respectively. In terms of job title, Intermediate has the largest number of students, totaling 296, accounting for nearly 60%, followed by Junior with 15.2%, and Senior with the least, accounting for 3.0%.

(2) Analysis of Differences in the Current Situation of Information Technology Teaching Applications in Different Dimensions

1) Overall level of information technology teaching application

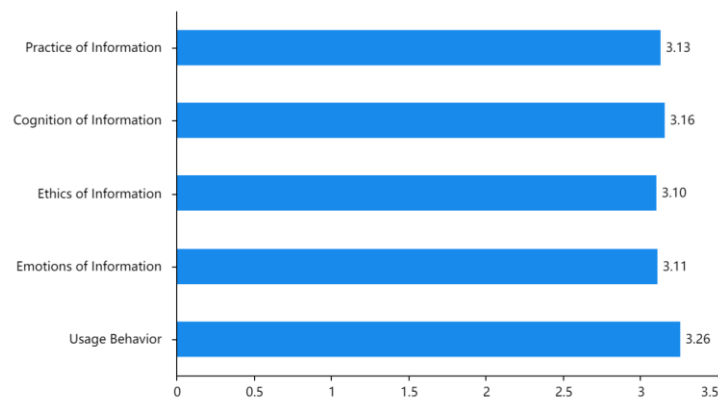


Figure 2 Overall level of information technology teaching

The analysis of survey data shows that the overall average E of the application level of information technology teaching among vocational teachers is 3.1528, and the difference is not significant. The mean E of the practical dimension is $3.133 < 3.1528$, the mean E of the cognitive dimension is $3.160 < 3.1528$, the mean E of the moral dimension is $3.103 < 3.1528$, and the mean E of the emotional dimension is $3.111 < 3.1528$. From the perspective of the overall level of teachers' use of teaching technology, the level of information technology teaching application among vocational teachers is not ideal, and the average values of each dimension are around the overall average. The specific analysis results and data are shown in the table.

Table 2 Descriptive Analysis

Items	N □	Min	Max	Mean□	Std. Deviation□
Practice of Information	505	1.000	5.000	3.133	0.978
Cognition of Information	505	1.000	5.000	3.160	1.050
Ethics of Information	505	1.000	5.000	3.103	0.981
Emotions of Information	505	1.286	4.714	3.111	0.914
Usage Behavior	505	1.333	4.667	3.257	0.991

2) Analysis of Differences in the Application of Information Technology Teaching in Different Gender Attributes

The analysis of survey data shows that there are significant differences in the reflective level of integrated technology teaching among vocational teachers with different gender attributes. Different genders show 0.01 level of significance for Practice of Information ($t=3.523$, $p=0.000$), and the specific comparison difference can be seen that: Male's mean (3.31) is significantly higher than Female's mean (3.01). Different genders show 0.05 level of significance for Cognition of Information ($t=-2.251$, $p=0.025$), and the difference in specific comparisons shows that Male's mean (3.04) is significantly lower than Female's mean (3.25). Different genders show 0.01 level of significance for Ethics of Information ($t=-2.889$, $p=0.004$), and the difference in specific comparisons shows that the mean of Male (2.96) is significantly lower than the mean of Female (3.21). Different genders show 0.01 level of significance for Emotions of Information ($t=4.152$, $p=0.000$), and the specific comparison difference can be seen: the mean of Male (3.30) is significantly higher than the mean of Female (2.97). In conclusion, the levels of Practice of Information, Cognition of Information, Ethics of Information, and Emotions of Information of different gender samples show significant differences.

Table 3 Differences in Gender Attributes

	gender (Mean±Std. Deviation)		<i>t</i>	<i>p</i>
	Male (<i>n</i> =215)	Female (<i>n</i> =290)		
Practice of Information	3.31±0.89	3.01±1.02	3.523	0.000**
Cognition of Information	3.04±1.02	3.25±1.06	-2.251	0.025*
Ethics of Information	2.96±1.01	3.21±0.94	-2.889	0.004**
Emotions of Information	3.30±0.86	2.97±0.93	4.152	0.000**

* $p<0.05$ ** $p<0.01$

3) Analysis of Differences in the Application of Information Technology Teaching at Different Age Stages

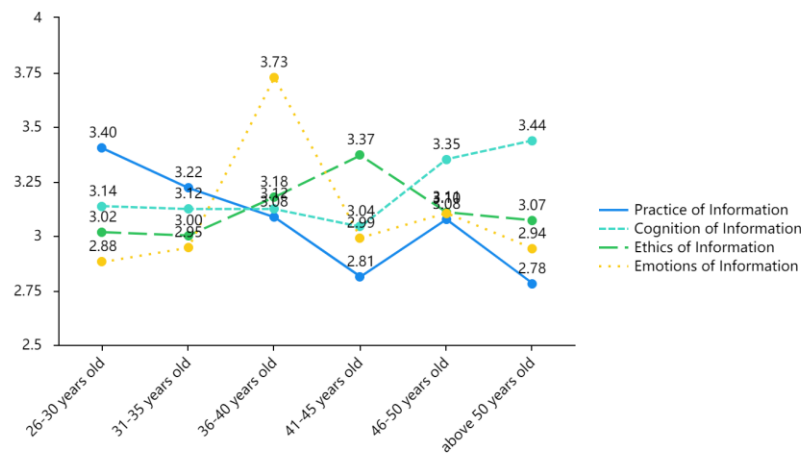


Figure 3 Analysis of differences in different age groups

From the table, it can be seen that: different age samples will not show significance ($p>0.05$) for a total of 2 items for Cognition of Information, Ethics of Information, implying that different age samples show consistency and no difference for Cognition of Information, Ethics of Information all show consistency and there is no difference. age samples show significance ($p<0.05$) for a total of 2 items for Practice of Information, Emotions of Information, implying that different age samples have differentiation for Practice of Information, Emotions of Information.

Different age for Practice of Information showed 0.01 level of significance ($F=4.807$, $p=0.000$), specific comparison of the differences can be seen: there is a more obvious difference in the comparison of the mean score of the group as "26-30 years old>36-40 years old; 26-30 years old>41-45 years old; 26-30 years old>41-45 years old; 26-30 years old>36-40 years old; 26-30 years old>41-45 years old; 26-30 years old>41-45 years old; 26-30 years old>above 50 years old; 31-35 years old>41-45 years old; 31-35 years old>above 50 years old". Different age for Emotions of Information showed 0.01 level of significance ($F=14.173$, $p=0.000$), specific comparison of the differences can be seen: there is a more obvious difference between the group mean score comparison results for "36-40 years old>26-30 years old; 36-40 years old>31-35 years old; 31-35 years old>above 50 years old; 36-40 years old>31-35 years old; 31-35 years old>above 50 years old". 36-40 years old>31-35 years old; 36-40 years old>41-45 years old; 36-40 years old>46-50 years old; 36-40 years old>above 50 years old".

Table 4 Differences in Gender Attributes

age(Mean±S.D.)	Practice of Information	Cognition of Information	Ethics of Information	Emotions of Information
26-30 years old(n=120)	3.40±0.92	3.14±1.05	3.02±0.98	2.88±0.93
31-35 years old(n=133)	3.22±1.08	3.12±1.08	3.00±0.95	2.95±0.92
36-40 years old(n=106)	3.08±0.89	3.12±0.91	3.18±0.95	3.73±0.63
41-45 years old(n=64)	2.81±0.86	3.04±1.08	3.37±1.04	2.99±0.82
46-50 years old(n=37)	3.08±0.85	3.35±1.04	3.11±1.01	3.10±0.88
above 50 years old(n=45)	2.78±1.06	3.44±1.21	3.07±1.00	2.94±0.97
<i>F</i>	4.807	1.109	1.551	14.173
<i>p</i>	0.000**	0.355	0.172	0.000**
<i>LSD</i>	1>3;1>4;1>6;2>4;2>6		3>1;3>2;3>4;3>5;3>6	

* $p < 0.05$ ** $p < 0.01$

1=26-30 years old;2=31-35 years old;3=36-40 years old;4=41-45 years old;5=46-50 years old;6=above 50 years old

To summarize, the levels of Cognition of Information and Ethics of Information of different age samples do not show significant differences, and the levels of Practice of Information and Emotions of Information of different age samples show significant differences.

4) Analysis of differences in the application of information technology teaching in different educational backgrounds

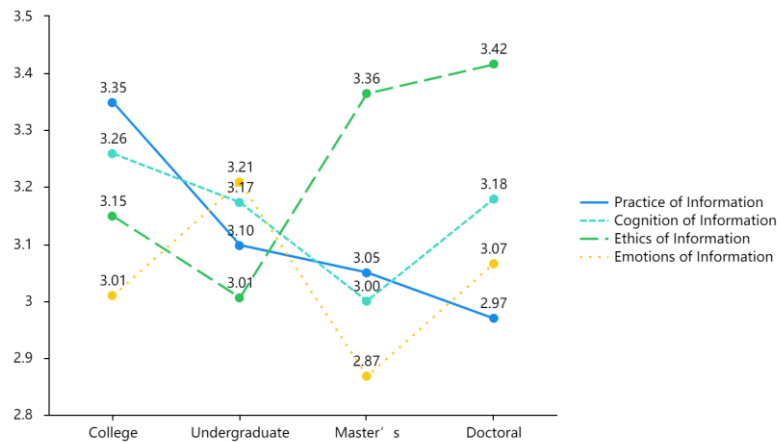


Figure 4 Analysis of differences in educational backgrounds

From the table, it can be seen that: different EDUCATIONAL BACKGROUND samples will not show significance ($p>0.05$) for Practice of Information, Cognition of Information, implying that different EDUCATIONAL BACKGROUND samples for Practice of Information, Cognition of Information all show consistency and there is no difference.

Different educational background for Ethics of Information showed 0.05 level of significance ($F=3.581$, $p=0.014$), specific comparison of the differences can be seen: there is a more obvious difference in the group mean score comparison results for "Master's>Undergraduate". 's>Undergraduate". Different educational background for Emotions of Information showed 0.05 level of significance ($F=3.630$, $p=0.013$), specific comparison of the differences can be seen: there is a more obvious difference in the group mean score comparison results for " Undergraduate>Master's".

Table 5 Differences in Educational Backgrounds

educational background(Mean±S.D.)	Practice of Information	Cognition of Information	Ethics of Information	Emotions of Information
College($n=94$)	3.35±1.05	3.26±1.03	3.15±0.96	3.01±0.94
Undergraduate($n=314$)	3.10±0.93	3.17±1.03	3.01±0.98	3.21±0.84
Master's($n=84$)	3.05±1.01	3.00±1.12	3.36±0.96	2.87±1.07
Doctoral($n=13$)	2.97±1.18	3.18±1.17	3.42±0.97	3.07±0.98
<i>F</i>	1.997	0.945	3.581	3.630
<i>p</i>	0.113	0.418	0.014*	0.013*
<i>LSD</i>			2>3	3>2

* $p<0.05$ ** $p<0.01$

1=College;2=Undergraduate;3=Master's;4=Doctoral

In summary, the Practice of Information and Cognition of Information levels of different educational background samples do not show significant differences, and the Ethics of Information, Emotions of Information levels of different educational background samples show significant differences.

5) Analysis of Differences in the Application of Information Technology Teaching in Different Job Titles

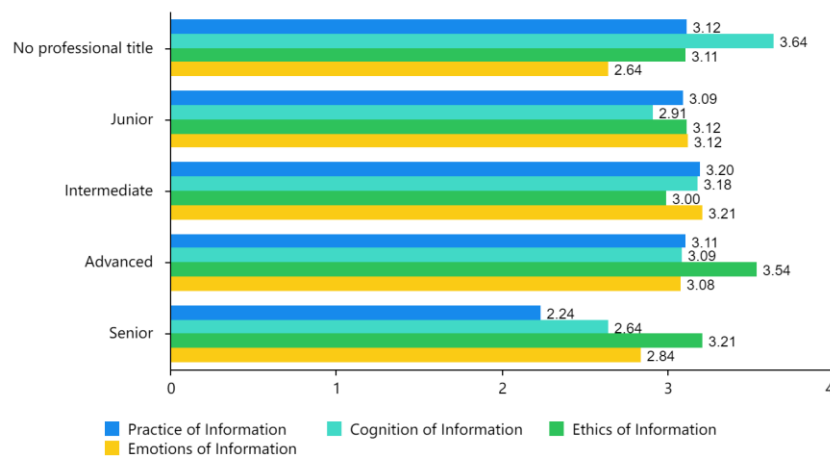


Figure 5 Analysis of differences in job titles

From the above table, it can be seen that: different job title for Practice of Information presents 0.01 level of significance ($F=3.546$, $p=0.007$), the specific comparison of the differences can be seen: there is a more obvious difference between the group mean score comparison results for "No professional title>Senior; Junior>Senior; Intermediate>Senior; Advanced>Senior". Different job titles for Cognition of Information showed 0.01 level of significance ($F=4.958$, $p=0.001$), and the specific comparison of the differences can be seen as follows: the comparison of the mean scores of the groups with more obvious differences are "No professional title>Junior; No professional title>Intermediate>Senior; Advanced>Senior". Junior; No professional title>Intermediate; No professional title>Advanced; No professional title>Senior; Intermediate>Junior; Intermediate>Senior". Senior". Different job titles for Ethics of Information showed 0.01 level of significance ($F=4.294$, $p=0.002$), the specific comparison of the differences can be seen: there is a more obvious difference between the group mean score comparison results for "Advanced>No professional title; Advanced>No professional title; No professional title>Advanced; No professional title>Senior; Intermediate>Junior; Intermediate>Senior". job title; Advanced>Junior; Advanced>Intermediate". job title for Emotions of Information shows 0.01 level of significance ($F=4.775$, $p=0.001$), the specific comparison of the difference can be seen: there is a more obvious difference between the group mean scores of "Advanced>No professional title" and "Advanced>Junior". The group mean score comparison result with more obvious difference is "Junior>No professional title; Intermediate>No professional title; Advanced>No professional title".

Table 6 Differences in Educational Backgrounds

job title(Mean±S.D.)	Practice of Information	Cognition of Information	Ethics of Information	Emotions of Information
No professional title(n=52)	3.12±0.90	3.64±0.80	3.11±0.98	2.64±0.91
Junior(n=77)	3.09±0.97	2.91±1.09	3.12±1.01	3.12±0.80
Intermediate(n=296)	3.20±0.99	3.18±1.07	3.00±0.95	3.21±0.92
Advanced(n=65)	3.11±1.02	3.09±0.98	3.54±0.97	3.08±0.96
Senior(n=15)	2.24±0.29	2.64±0.99	3.21±1.11	2.84±0.65
<i>F</i>	3.546	4.958	4.294	4.775
<i>p</i>	0.007**	0.001**	0.002**	0.001**
<i>LSD</i>	1>5;2>5;3>5;4>5;1>2;1>3;1>4;1>5;3>2;3>5	4>1;4>2;4>3	2>1;3>1;4>1	

* $p<0.05$ ** $p<0.01$

1=No professional title;2=Junior;3=Intermediate;4=Advanced;5=Senior

In conclusion, different job title samples show significant differences in Practice of Information, Cognition of Information, Ethics of Information, and Emotions of Information.

6) Related analysis

Pearson's correlation analysis showed that there was a significant positive correlation between Practice of Information and Usage Behavior ($r=0.447$, $p<0.01$), Cognition of Information and Usage Behavior ($r = 0.463$, $p<0.01$), a significant positive correlation between Ethics of Information and Usage Behavior ($r=0.399$, $p<0.01$), and a significant positive correlation between Emotions of Information and Usage Behavior ($r= 0.411$, $p<0.01$). However, the related research can only initially explore the direction of correlation between variables, which is not enough to provide sufficient basis for the hypothesis of this study, and further corresponding analysis can be conducted to verify whether the hypothesis of this paper is valid or not.

Table7 Pearson Correlation

	Practice of Information	Cognition of Information	Ethics of Information	Emotions of Information	Usage Behavior
Practice of Information	1				
Cognition of Information	0.408**	1			
Ethics of Information	0.363**	0.392**	1		
Emotions of Information	0.389**	0.442**	0.397**	1	
Usage Behavior	0.477**	0.463**	0.399**	0.411**	1

5. Data Analysis Conclusion

The study constructed a hypothesis model for the influencing factors of the application of teacher information technology in teaching. Using 505 vocational teachers as sample data, the hypothesis model was tested for fit, and appropriate modifications were made to the hypothesis model based on the analysis results. Through research, it has been found that the application of information technology by vocational college teachers in daily teaching activities is influenced by practical factors, cognitive factors, moral factors, and emotional factors. The four research hypotheses proposed in the study have been established:

H1: The practical factors of information technology will have an impact on the application of information technology in teaching by vocational teachers.

H2: Cognitive factors of information technology will have an impact on the application of information technology in teaching by vocational teachers.

H3: The ethical factors of information technology will have an impact on the application of information technology in teaching by vocational teachers.

H4: The emotional factors of information technology have an impact on the application of information technology in teaching by vocational teachers.

Overall, data analysis shows that practical factors, cognitive factors, moral factors, and emotional factors significantly affect the technology use of vocational teachers. Among them, cognitive factors have the greatest impact on the willingness of vocational teachers to use information technology in teaching activities, followed by practical factors, emotional factors, and moral factors.

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