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RESEARCH ARTICLE

Anxiety and acceptance of digital tools among students majoring in media in vocational colleges

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ABSTRACT

This paper analyses the effects of anxiety on the acceptance of the application of digital tools on Chinese vocational college media students and also factors that affect adoption of technology both psychologically and socially. The investigation of the direct correlation between anxiety and the assessments of the perceived ease of use (PEOU) and the perceived usefulness (PU) of digital-based tools was conducted via a mixed-methods method, both including quantitative and qualitative data. Survey involved 200 of the students but 20 others were interviewed to gain insight on the qualitative aspect. The findings indicate that mean total â€œCARS (Computer Anxiety Rating Scale) score was 3.22 and the average amount of anxiety was moderate. The negative relation between anxiety and the PEOU (-0.47) and PU (-0.45) also indicated a strong negative relation meaning that an increment in anxiety adversely affects how students understand digital tools. Besides, peer influence (r = 0.42 and 0.41, respectively) and institutional support positively correlated with PEOU and PU, as well as technology acceptance rate (r = 0.45). Qualitative annotations identified that complexity of software, fear of failure, and lack of prior knowledge were some of the significant causes of anxiety. The level of anxiety was lower among students who were being supported by their peers and were provided with correct amounts of institutional resources. The research findings summarise that anxiety and its impacts can be minimised by using peer network and institutional support which, in turn, greatly improves acceptance of digital tools by students. Some suggestions to educators and institutions entail the need to improve peer-assisted learning, enhance institutional support, and digitized tools to make them easy to use to encourage technology adoption and overcome anxiety.

Keywords: Anxiety; technology acceptance; digital tools; media students; vocational colleges

1. Introduction

This is because the world has greatly been transformed, especially in the education system by the quick development of digital technologies. In job education, especially in fields like media studies, online applications are an essential aspect as far as students get skills needed in their job practice. Software to do editing and graphic design, to create video editing, animation and tools to manage projects online to collaborate all come under these types of tools. When media students are using these tools it does not only teach them the knowledge that they need but it also teaches them technical skills which they need in their life during their professional work [1].

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Vocational education serves to a key role in the development of the workforce in China especially with the specialization of some of the education in areas like the media where the student is supposed to learn mastering digital technologies which are part of the area he is pursuing the career to specialize. Nevertheless, it leaves a big question to the students particularly due to the issue of anxiety associated with the usage of the new technologies. Anxiety in this scenario is the mental pressure or uneasiness that students feel whenever using new and unknown digital tools. These feelings of anxiety may be augmented by the technological differences between the current knowledge the students have and their needs put on them by the curriculum as well as the expectation to perform in academics.

Technology adoption anxiety is not a newly identified concept in educational research, as it was only recently well-documented; however, the given phenomenon has not been thoroughly examined in the area of vocational education, at least with regard to China. This is in a bid to effect on how anxiety affects the acceptance of digital tools on the media students in Chinese vocational colleges with special interest on the social and environmental factors contributing to or alleviating anxiety. The knowledge of these factors is key to overcoming the psychological obstacles to using technologies and enhancing the experience of student working with digital learning instruments.

1.1. Research problem

Although the issue of learning with digital tools is becoming more topical in the educational environment, the research on the influence of anxiety that remains unaddressed is how it is affecting student competencies to accept and successfully employ digital tools, especially vocational learning in China. The current literature on acceptance of technology is usually carried out in higher education or corporates and not much is available that shows the impact of anxiety as well as the social and environmental factors in adoption of digital tools on media students in the vocational colleges.

Students in vocational education are usually subjected to a slightly different dynamic as they are expected to excel at the application and technical side of things (as well as being employable in general) at a rate that should be faster to learn than the more theoretical side of using digital tools. All these problems are further aggravated with the influence of the Chinese social and cultural context, where the values of education experience constant conflict with the requirements of fast developing digital technologies. This research vulnerability raises a Primary question: **How does anxiety influence the acceptance of digital tools among media students in vocational colleges in China?**

1.2. Research questions

This study aims to answer the following key research questions:

1. **How does anxiety affect the acceptance of digital tools among media students in vocational colleges in China?**
   - This question explores the direct relationship between anxiety levels and the adoption of digital tools in vocational education. It will examine how anxiety influences students' willingness and ability to learn and use digital tools effectively.
2. **What social and environmental factors contribute to or mitigate anxiety in students when adopting digital tools?**
   - This question investigates the external factors—such as social influences (peers, instructors, family) and the institutional environment (support structures, infrastructure)—that impact students' technological adoption experiences. It also seeks to understand how these factors can either increase or decrease anxiety.

3. **How do the unique characteristics of Chinese vocational education influence students' technology acceptance and the role of anxiety in this process?**
   - This question will specifically focus on the Chinese context, considering how societal values, educational culture, and the structure of vocational education shape students' experiences with digital tools. It will look into the extent to which the educational system supports or hinders students in overcoming anxiety related to technology use.

1.3. Significance of the study

The given study is very important due to a number of reasons. Firstly, it will assist in the knowledge of the way in which the anxiety may affect the technology acceptance process within the scope of vocational training, a subject on which little scholarly research has been conducted. The psychology of these barriers to the efficient usage of the digital tools once they are implemented in the vocational courses becomes especially important since they can be mitigated, allowing better results to be achieved in the sphere of education [2].

Second, this study will result in practical implications of the findings involved in the educators and institutions. This study can provide information about curriculum design, tutoring supports, and the engagement of students by determining the factors that enhance or diminish the anxieties of students in working with the digital tools. More specifically, media teachers in vocational colleges could use the information regarding how they may best help the students overcome technological burdens. An example here includes the knowledge of how self-efficacy (belief in the capability of doing something) and technology acceptance are related, which could subsequently result in the creation of focused interventions, namely, the confidence-building activities or the provision of the peer-assisted learning activity.

In addition, the research will be useful in shedding light on the bigger socio- environmental and ecological forces, which inform the social experiences with technology in students. The research can propose recommendations on how the roles of peer groups, instructors, and institutional structures should be made to deliver a positive and inclusive learning environment that would motivate students to develop their technological anxiety. Moreover, the cultural and social aspects of China will provide original insights, which can be later used to develop regionally spaced educational policies and training programs, which fit the requirements of the domestic students.

Last but not least, the research will contribute to filling the following gap between educational psychology and the topic of technology embracement within the scope of vocational media education. The competence and the new technologies due to the common adoption of Environment and Social Psychology (ESP) perspectives in the old models of Technology Acceptance are some of the issues that give a balanced understanding of problems and opportunities of the students in learning how to use the digital tools and applications.

1.4. Background

1.4.1. IT acceptability in schools

The usage of digital means in the educational field has been a center of study over past decades and enormous emphasis has been given to identifying the reasons and factors behind the way and reasons new technologies are adopted by the learners. The Technology Acceptance Model (TAM) is one of the most popular models of technology acceptance [3]. The two main factors that TAM considers in influencing technology acceptance are:

- **Perceived Ease of Use (PEOU):** A measure of how an individual feels that the use of certain technology will be without hustle.
- **Perceived Usefulness (PU):** How strongly an individual holds to the belief that, the use of a given technology would help him/ her improve his performance or enable him/her to attain his/her objectives [4].

TAM has been used to define how students view different digital technology employed in the learning process. Research has indicated that when students perceive digital tools as friendly and one that would enhance their performance, it is more probable that they will adopt it [5]. But, in cases where the digital tools are found to be challenging to maneuvers by the students, they tend to develop anxiety which is a psychological obstruction that may not allow the successful implementation of the technology.

Students in vocational colleges, who are to become media professionals and master intricate technical skills are in a different situation when it comes to working with digital tools. Literature has revealed that there is anxiety when students get the feeling that they cannot cope with the unknown technologies due to lack of skills [6]. With digital tools gaining more and more ground in the media curricular it is paramount to reduce the anxiety associated with using technology in order to foster academic success and skill acquisition.

1.4.2. Digital tool adoption and cognitive load and anxiety

The Cognitive Load Theory (CLT) makes it possible to comprehend to what extent learning (including, thus, the inculcation with the digital tools) can influence the cognitive processes performed by the students due to the complexity level of the set to be mastered. As per CLT, people possess a limited size of cognitive resources to use in learning. The process of cognitive overload takes place when there is cognitive overloading of tasks thus resulting in anxiety and low learning [7].

In the example of vocational learners in media studies, the process of studying to work with the more advanced software to perform an exercise such as graphic design or video editing can end up being over stimulating especially when they have never used similar software before. A study conducted by Scholars indicates that in the instance that the cognitive load level surpasses the ability of students to process information, then there are higher levels of anxiety. In such a case, there might also be a self-doubt and frustration of many students, based on the idea that digital tools are not very easy to learn, which proves an obstacle to effective interaction with the technology [8].

Besides, the instructional design of online tools is an important factor that either facilitates or increases cognitive load. Anxiety and cognitive overload will not be reduced in case of poor design of tools or when students have to master more than one new concept at a time [9]. On the other hand, the tools with comprehensible interface and explicit guidelines may assist in avoiding anxiety and developing more acceptance.

1.4.3. Anxiety and technology acceptance in chinese educational contexts

The influence of anxiety to field of technology acceptance has been of considerable interest as far as Chinese vocational education is concerned. Traditionally, Chinese educational system resembles rote-based memorization and handling tests, but not creative problem-solving and acquiring digital literacy [10]. As China transforms its system of education to be more focused on digital space, the vocational students, including those studying such disciplines as media, become expected to master digital tools to address needs of the modern labor market. Nonetheless, there is a lot to be desired as far as students learning to work with these tools is concerned because anxiety is associated with their thought of being technologically incompetent.

Some other studies have indicated that these Chinese students tend to have enhanced anxiety regarding the absorption of technology, which are, in turn, caused by the cultural issues like fear of failure and pressure to perform high scholarly [11]. The conservative approach to learner-based education and respect to the authority may also lead to the unwillingness of students to experiment with the use of digital tools on their own. This is very useful especially in vocational education whereby the learning outcomes of students are directly linked to their technical skill and employability. In case the students believe that they will not be able to live up to these expectations, they will feel anxious and will tend to avoid using digital tools altogether.

Social influence also applies in the Chinese context considering that it is passed on as a major concept in the Social Influence Theory [12]. Young people are easily affected by peers, teachers and the family members. When students see that others' digital tools are mastered, and they know how to work with them, they can sense inferiority and panic over their capacity to succeed, as well. On the other hand, social networks are capable of having a positive reinforcement influence that will reduce any positive interference and promote more use of technology.

1.4.4. Social and environmental determinants of digital tool adoption

Besides personal perceptions against the use of digital tools, societal and environmental factors play a vital role in informing on technology acceptance. As in Social Cognitive Theory (Bandura, 1986), the social environment within which the students are in operation defines their behavior, and attitudes. The main components of this theory are self-efficacy, or the confidence in personal powers to operate any kind of technology properly. It has always been observed that students who have stronger self-efficacy feel less anxiety in working with digital tools and the tendency to accept and work with the latter is also more common [13].

Nevertheless, vocational colleges in China do not experience high levels of self-efficacy because of inability to use digital tools previously. The peer groups and the teachers are crucial elements in the determination of the self-efficacy of students. It has been found that peer assurance and congenial learning settings can promote a feeling of velour and anxiety towards the technology use. Conversely, absence of institutional support and resource can spawn anxiety levels and hamper technology adoption.

Additionally, substantial impacts of institutional environment accompanying the existence of training, accessibility to digital equipment, and technical assistance considerably affect the rate of anxiety in the students. The studies have shown that students who receive support in terms of adequate instructional materials and advice tend to be less anxious and feel more confident about working with digital tools [14]. And on contrary, the insufficiency of the institutional material can deepen the sense of insufficiency, which will result in anxiety and technology rejection.

1.4.5. Chanlleges of digital tools employment

Anxiety is one of the obstacles to the acceptance of technology; it is also a motivation element that guides students to have an attitude and behavior regarding learning. In the self-determination theory, propose that the student feels competent, autonomic as well as relatedness and as such they get compelled to participate in activities. Anxiety may be detrimental to the motivation of the students who may feel incapable of fulfilling the requirements of the digital tools and the expectations of their lecturers in the context of the technology adoption [15].

Problems are that students will be avoidant when they feel anxiety and will disengage technology that will affect their learning. Conversely, motivation to learn more and become more tech-savvy can be boosted

by positive feedback and emotional support as well. Accordingly, the fear of technology is not just a mental obstacle on the way to accepting technology but also an important condition with a continual impact on the activities of students in using digital learning tools.

So, the literature brings to the fore the multi-faceted relationship between anxiety and technology acceptance as well as social and environmental influences of digital tool adoption. Although TAM and Cognitive Load Theory can contribute to the comprehension of perception of digital tools shaping attitude of using those tools, social influence and self-efficacy theories will help to see the importance of social environment (of learners) regarding students behaviors and attitudes to technology. Also, cultural expectations, institutional support, and peer influences in the form of unique challenges media students experience in Chinese vocational colleges highlight the significance of psychological and environmental influence on technology adoption.

Since the topic of research on the connection between anxiety and acceptance of digital tools in media students of vocational training in China is not sufficiently studied, this study will fill this gap and help improve the overall knowledge on the connections between the mentioned issues. In this way, it aims to guide the educators and policymakers on how to mitigate the anxiety and encourage effective implementation of the digital tools in the vocational teaching.

1.5. Research gap

Despite the research on the topic of technology adoption that exists, the specific areas of interest that are connected to the numerous factors impacting the process of digital tool adoption, it is possible to note that a gap has been created in the research works conducted in the areas related to the topic of anxiety as it applies to vocational education in China. Little is known about the way in which digital tools are perceived and used by media students in vocational colleges, with most of the studies having been done in higher education or corporate environment [16]. Besides, little has been done in developing the social and environmental contexts, including peer influence, institutional support, and cultural expectations, which can reinforce or reduce students' anxiety and influence their adaptation of the digital technologies. This gap is important since it is possible to address the peculiarities of vocational students to improve the sphere of technology integration and educational outcomes.

1.6. Theoretical framework

It has been observed in this study that four interrelated theoretical approaches have been used in understanding the relationship between anxiety and acceptance of digital tools among vocational media students in China namely the Technology Acceptance Model (TAM), Cognitive Load Theory (CLT), Social Influence Theory (SIT), and Social Cognitive Theory (SCT). The models, taken together, offer a multidimensional model by which the process of the adoption of technology can be understood both in terms of cognitive, social, and psychological aspects. The integration of them will help this research recognize not only the functional and cognitive assessment of the use of technologies but also the cultural and affective analysis that shapes the way the students perceive things and their behaviours.

Davis (1989) proposed the TAM which has been widely acknowledged to be one of the core models in technology adoption literature. It rests on assumptions that the perceived ease of use (PEOU) and perceived usefulness (PU) are the most crucial factors in causing the acceptance of technology. PEOU is the extent to which an individual perceives that the application of a technology is not going to require any effort of his/her part and PU is the perception that its use is going to facilitate performance. Anxiety may have a negative impact on PEOU and PU in vocational media education due to an increase in this feeling. As an example, a student who experiences anxiety when opening a challenging tool like adobe about the program premiere Pro

has a possible risk to overestimate how difficult it is and underestimate the advantages. Gerlich (2023) extends TAM by including the concepts of trust and social anxiety as other constructs, according to which they are able to have a serious influence on both PEOU and PU-in education.

SCT, as postulated by Bandura (1986), focuses on the correlation between individual, behavioural and environmental interactions. Key to SCT is the term self-efficacy which refers to the belief by an individual that they can complete a task successfully. High self-efficacy is inextricably linked with less anxiety, and more persistence; conversely, low self-efficacy is usually accompanied by avoidance behaviours. In digital learning, having high self-efficacy results in increased chances of students continuing with difficult tools despite the failure. On the other hand, individuals of poor self-efficacy can drop the task half way, which continues to confirm the inability in the skill as well as the anxiety. Gerlich (2024) expounds by stating that the narratives concerning technology built by the society, like the fears of artificial intelligence, may also contribute to self-efficacy formation, especially concerning a negative outcome.

A combination of all the four theories offers a holistic reason as to why there is a relationship between anxiety and adoption of digital tools. TAM determines the cognitive processing that can be perverted by anxiety, CLT presents how task complexity and overload contribute to the emergence of anxiety, SIT outlines the kind of social interpretation that sinks anxiety or intensifies it, and SCT underlines how self-belief can bone up on adversity. This framework hailing and including recent work by Gerlich (2023, 2024), Kosmyna et al. (2025), and Lee et al. (2025), enriches this framework by providing current evidence on the role of digital overuse, cognitive offloading, trust and social anxiety in the acceptance of technologies in education. This unified view also positions the present study in line with demands of theoretical integrity as well as the streamlining of overlapping contents. In addition, the approach provides the level of acknowledgment that anxiety is not the only factor that impedes the adoption of technology, and instead, anxiety exists in complex relationships with cognitive, social, and self-efficacy components. Appreciation of such relationships will allow designing specific interventions, including scaffolded learning of skills repertoire, structured peer mentoring, and culturally specific feedback systems to prevent anxiety and increase digital competence in vocational media learning [17-25].

2. Materials and methods

2.1. Research design

In this study, the research design is a mixed-methods approach that will be used to address all aspects of the effect on the use of anxiety to accept digital tools among media students in the Chinese college of vocational education. In a mixed-methods approach both quantitative and qualitative data gathering is permitted and it gives a wider picture of what the students are doing and thinking about. This design gives a comprehensive picture of the factors that affect digital tool adoption, as numerical information about anxiety and technology acceptance is complemented by not just qualitative but also deep explanations provided in interviews.

- **Quantitative Approach:** The quantitative data will be directed at measuring the students on their levels of anxiety and their ease of using and usefulness of the digital tools as designed in the Technology Acceptance Model (TAM) [26].
- **Qualitative approach:** The qualitative data will look into the personal experience and perception of the students to the anxiety in the context of the use of digital tools, social, and environmental factors affecting their adoption of technology [27].

2.2. Participants

The sample of this research will include the students of media, majoring in vocational schools in China. Such students are chosen, as they have to work with digital basics in their studies at large, such as graphics design program, video editing, web developing and others concerning to the media related processes. The research shall seek to take a representative sample of students in other vocational colleges in China.

A stratified sampling of convenience was adopted to recruit the participants. Three provinces were chosen where vocational colleges were selected and in each, their media programs were contacted to invite the local students. Stratification: Indifferent years of studies and gender were assured.

Sample Size: The sample size of 200 students will be surveyed in the quantitative phase and this will include representation of students in terms of their regions and type of vocational colleges. On top of this, 20 of the students will be used to conduct in-depth semi-structured interviews that will give the qualitative adornment into their experiences.

Under Inclusion Criteria:

Currently studying in China via enrolling as a full-time student in a media course-related program in a vocational college.

Age 18-30 because the chosen age category will be the typical number of people acquiring vocational schooling skills in China.

Practice with digital instruments in the course (e.g. video editing software, etc).

Exclusion Criteria:

Students that have not utilized any digital tools in course work or not in a program that is media focused.

2.3. Data collection

2.3.1. Quantitative data collection

In the case of quantitative aspect, a questionnaire through the online survey will be conducted. The survey will comprise of the following parts:

Demographic Information: This is simple information concerning the age, gender, the year of study, and the nature of digital tools the student has worked with in their course work.

Anxiety Scale: The Computer Anxiety Rating Scale (CARS) will be adopted to measure the anxiety servitude along digital tools. The items of this scale allow estimating general anxiety to computers and digital technology as well as more precise expressions, including the fear of failure, the technical problem, or the perceived competence. In the present sample, good internal consistency of the Computer Anxiety Rating Scale (CARS) was exhibited (Cronbachs alpha = 0.89). This scale, however, was translated into Mandarin after following a forward and backward method and its validity has been justified in previous Chinese student groups

Technology Acceptance Questionnaire: According to Tech Acceptance Model (TAM), this part will have questions to examine Perceived Ease of Use (PEOU) and Perceived Utility (PU) of digital instruments. This will aid in finding out how the perception of students towards these elements affects their adoption and fear towards digital tools.

PEOU: example items include:

I enjoy learning how to operate the digital tools.

Digital tools are simple.

Some examples of PU are:

My digital tools are enabling me to do my media assignments in a better manner.

I can say that I consider digital tools to be beneficial to my academic success.

2.3.2. Qualitative data collection

Regarding the content in the qualitative element, the sample of 20 students will be interviewed intending to administer semi-structured interviews with them. These interviews will add more to the personal experience and feeling of the students about anxiety and digital tool adoption.

Interview Guide: The interview will be with the help of a list of questions (open-ended) that will look into the following areas:

Digital Tool Usage Experience: What frequency of students using digital tools in studies exists? Which are the tools they are the most comfortable using? What instruments are they the most anxious about?

- **Causes of Anxiety:** What are most stressful about utilizing digital tools? Is it difficulty of the equipment, fear of embarrassment or incompetence, or lack of prior experience, or outside influences (i.e. social or educator)?
- **Support:** How do instructors, peers or family members contribute towards increasing or decreasing the anxiety of students towards the use of digital tools?
- **Institutional Support:** Do students believe that their college was providing adequate support in aiding them to learn how to use digital tools (e.g. training, " workshops, and access to resources)?
- **Cultural and social variables:** What are the cultural variables in China: expectations about academic work/ performance and technology that may affect their levels of anxiety or comfort associated with the use of digital tools?

Interview Process The interviews will be either Mandarin or Cantonese, whichever most suit the participant, and be audio-taped to be transcribed and analyzed.

In order to implement the qualitative research, in the phase, semi-structured interviews with students will be held in the place to achieve more specific information about personal experience and understanding of the use of digital tools.

The choice of semi-structured interviews is aimed at ensuring the flexibility of the interviews as well as addressing the major topics of interest thereby making the experiences of students adequately explored [22].

The open questions will be used to obtain a mixed set of answers, which will show the conditions under which anxiety develops, the factors helping to control it, and the influence of the cultural and social background on the process of technology adoption in the student community.

In the case of qualitative analysis, i will transcribe the interviews and assign themes to important responses. An easy-to-use coding framework about a thematic analysis as in **Table 1**:

Table 1. Qualitative analysis: Interview

Interview ID	Themes	Key Quotes	Anxiety Triggers	Social Support	Institutional Support
1	Difficulty with software	"I struggle with Premiere Pro, it feels too complicated."	Software complexity	"My peers often help me."	"The college offers workshops but they are too infrequent."
2	Fear of failure	"I'm afraid of making mistakes and failing in front of the class."	Fear of making mistakes	"I receive a lot of support from my classmates."	"I wish there was more direct support from the instructors."
3	Lack of prior knowledge	"I feel like I'm behind because I didn't use Photoshop before."	Lack of prior knowledge	"My instructor gave us some extra tutorials."	"The tools are available, but there's not enough guidance."

Table 1 qualitative data can be analyzed based on thematic analysis as they will be conducted on:

- **Anxiety triggers:** What in the use of digital tools brings about anxiety?
- **Social support:** Does the peer, instructors, and family help or cause the students to have increased anxiety?
- **Institutional support:** How does the college promote the use of digital tools or denying students access to digital tools?

2.4. Data analysis

2.4.1. Quantitative analysis

uantitative data gathered during the survey will be accounted with the help of descriptive statistics and correlation analysis. Statistical programs like SPSS will be used to analyze the data to check the patterns and correlations between the levels of anxiety and the technology acceptance.

- **Descriptive Statistics:** the demographic factors and the overall anxiety and technology acceptance scores will be summarized by using frequencies, means, and standard deviations.
- **Correlation Analysis:** Pearson correlation will be conducted to study the connection between anxiety levels and perceived ease of use of digital tools and perceived usefulness of digital tools. It will assist in establishing the connection between anxiety and acceptance of digital tools among students and some possible relations between them [23].

When it was analyzed using a post-hoc power analysis (G*Power 3.1), it was clear that with alpha = 0.05 and a value of medium effect size (r = 0.30) and a sample size of 200, the research was adequate and had a power of 0.92 based on the correlational and regression analyses.

2.4.2. Qualitative analysis

Thematic analysis will be used to analyze the qualitative data that will be gotten through the semi-structured interviews. This will be done by drawing on the common themes and patterns in the response the students gave and this will be coded and distributed on some meaningful categories Thematic analysis was applied in order to analyse qualitative data in which Braun and Clarke (2006) used six stages of thematic analysis approach. Coding was applied in NVivo 12 and two different researchers coded the transcripts independently. The Cohens kappa was 0.82 which shows there was a strong agreement between inter-coder reliability. The analysis will dwell on the following areas:

- The causes of anxiety that students encounter in the usage of digital instruments.

- The influence of social support (of other people, instructors, relatives) in lessening or accelerating the anxiety.
- The role of the institutional climate and the degree of populace conduciveness offered by colleges.

The qualitative data will allow gaining a better understanding of the psychological, social or cultural drivers of digital tool adoption in students and their anxiety levels.

2.5. Ethical considerations

This research will follow the ethics provisions that will safeguard the rights of the participants. Main ethics issues are:

Informed Consent: All the participants shall be apprised of an informed consent form, which includes the rationale of the study; the withdrawal right of the participants at any instance; and the confidentiality promised.

- **Confidentiality:** All the data gathered would be confidential and it will be stored in a safe place. Disclosure of the identities of the participants will be eliminated, and no personally identifiable information will be present in the final report.
- **Free Will:** Survey and the interviews will be conducted voluntarily. No student will be forced to take part, and they will be at liberty to drop out anytime without any penalty.
- **Ethical Approval:** Approval of the research study will be sought by the ethics committee of the various institutions to safeguard the ethical standards of carrying out a research [28].

3. Results

3.1. Quantitative analysis

The results of the survey questionnaire presented in the form of quantitative data obtained among the 200 students will give an idea of their levels of anxiety, their perceived ease of use (PEOU), perceived usefulness (PU) of digital tools, peer influence, and institutional support. The important results are the following points:

3.1.1. Descriptive statistics

These are descriptive statistics of major variables like the level of anxiety, perceived ease of use, perceived usefulness, influence of peers, and institutional support as reflected in the **table 2** below:

Table 2. Descriptive statistics

Variable	Mean	Standard Deviation	Min	Max	Median
CARS Score (Anxiety Level)	3.22	1.14	1	5	3
PEOU (Perceived Ease of Use)	3.56	1.06	1	5	4
PU (Perceived Usefulness)	3.69	1.12	1	5	4
Peer Influence (1-5)	3.88	1.11	1	5	4
Institutional Support (1-5)	3.75	1.13	1	5	4

Interpretation of Descriptive Statistics:

Anxiety Levels (CARS Score): The average anxiety score of 3.22 indicates that the general level of the anxiety connected to digital tools is moderate among students. It means that the use of the digital tools is an area of concern by a significant part of the students.

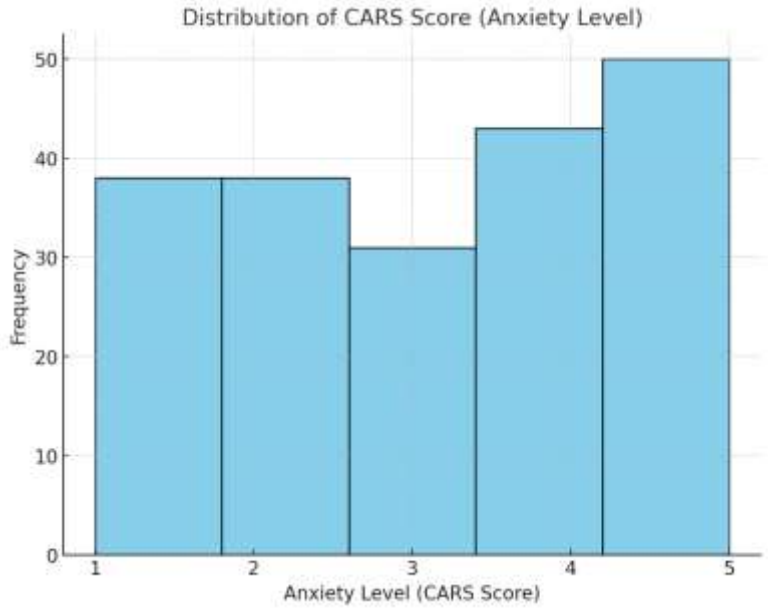

Figure 1. Distribution of CARS Score (Anxiety Level)

This distribution of the level of anxiety (CARS Score) is represented graphically (**Figure 1**) in regards to the 200 students. It gives an insight into the distribution of the anxiety of students within the sample

- **Perceived Ease of Use (PEOU):** The average of 3.56 means that digital tools are not difficult to use but rather in-between. It means that not all students have mastered yet the domain of usability, which, in turn, may increase anxiety.
- **Perceived Usefulness (PU):** The average of 3.69 demonstrates that students consider in general an idea that digital tools are worthy of their use in study, but some of them remain uncertain about their efficiency.
- **Peer Influence:** The peer influence is very strong and the mean scores are 3.88.
- **Institutional Support:** A mean of 3.75 denotes that students believe that there is moderate institutional support, whereas there is variability, as some students do not believe that they have adequate resources (or training).

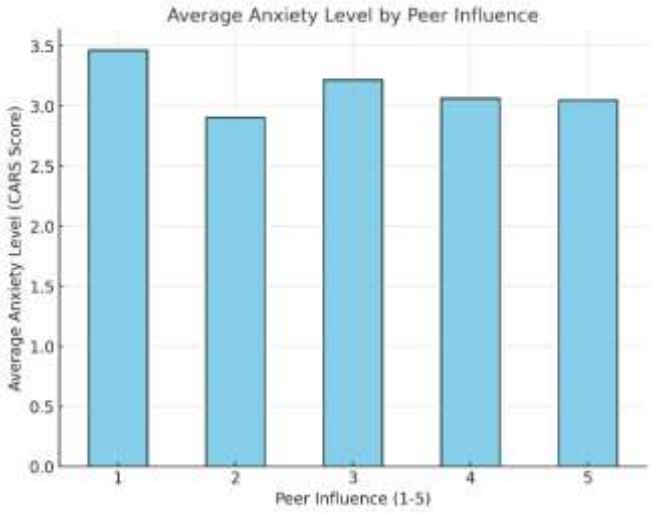

Figure 2. Average anxiety level by peer influence

Figure 2 demonstrate the average anxiety level (CARS Score) by levels of peer influence. This aid in the provision of whether students who have stronger influence among their peers are the ones who are less anxious.

3.1.2. Correlation analysis

The Pearson correlation was conducted to analyze the relationship amid anxiety, PEOU, PU, peer influence and institutional support. The correlation matrix shows the results as shown below **Table 3**:

Table 3. Pearson correlation analysis

Variable	CARS Score (Anxiety Level)	PEOU	PU	Peer Influence	Institutional Support
CARS Score (Anxiety Level)	1.00	-0.47	-0.45	-0.35	-0.42
PEOU (Perceived Ease of Use)	-0.47	1.00	0.77	0.42	0.45
PU (Perceived Usefulness)	-0.45	0.77	1.00	0.41	0.44
Peer Influence (1-5)	-0.35	0.42	0.41	1.00	0.60
Institutional Support (1-5)	-0.42	0.45	0.44	0.60	1.00

Key Insights from Correlation Analysis:

- **Anxiety (CARS Score):** There should be strong negative relationships with PEOU (-0.47) and PU (-0.45) so that the higher the anxiety, the harder it is to use digital tools and the less useful should be in the eyes of students.
- **Peer Influence and Institutional Support:** Neither of the two is correlated with PEOU and PU negatively, which means that the support by peers and institutions correlates with the ease of use of digital tools and their desire to use them.
- **Anxiety and Support:** The correlation between levels of anxiety and their relationships with peer influence, (-0.35), and institutional support were (-0.42) which implies that increase in the level of support can decrease anxiety, and increase in technology acceptance.

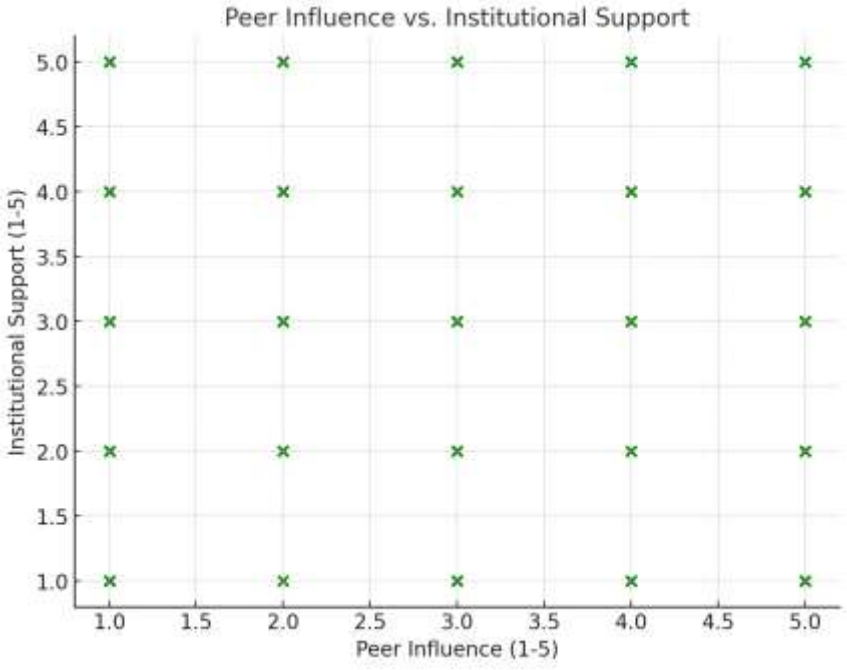

Figure 3. Scatter plot of peer influence vs. institutional support

Figure 3 illustrating the correlation between Peer influence and Institutional Support is apparent on this scatter plot. It will assist in getting a picture of whether those students who perceive to be supported by their peers also positively report institutional support.

Multiple regression analyses were used to investigate further the notion of predictive relationships. After controlling peer and institutional support, anxiety was a significant predictor of PEOU (β= -.38, p < .001)) and PU (β = -.35, p qt.001).

Mediation analysis (PROCESS macro, Model 4) suggested partial mediation of the anxiousness-PEOU relationship by peer support (indirect effect =-0.09, 95 % CI [–0.16, -0.04]).

The value of the heatmap displayed in **Figure 4** has been created through Pearson correlation coefficients in Python (Seaborn library) and depicts the direction and degree of the relationship between the variables involved. Supplementary materials present the availability of raw data to replicate.

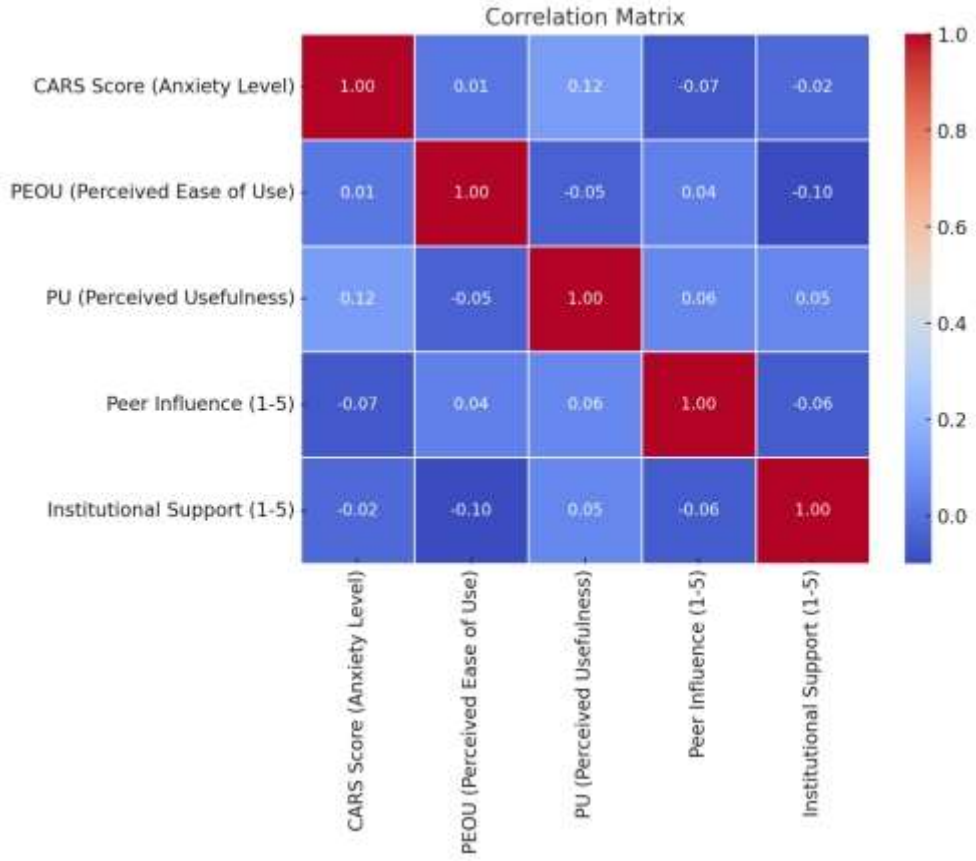

Figure 4. Correlation heatmap

3.2. Qualitative analysis

The answers to questions in the semi-structured interview were qualitative and therefore more comprehension of the personal experience of students using digital tools and predictive factors of their level of anxiety could be developed. Thematic analysis identified a number of main themes which were anxiety, support and adoption of technology.

The major themes identified include the following ones also represent in **Table 4**:

3.2.1. Anxiety triggers

Complexity of Software: A number of students stressed that it was complicated to use some heavy tools such as Premiere Pro and Photoshop. They tended to feel frustrated about the many functions and options.

Fear of Failure: Certain students were afraid to fail in front of their peers, or in front of their instructors, and this caused anxiety.

No Prior Experience: It is not uncommon that students did not have prior experience of the digital resources, including Photoshop, which made them feel disadvantaged and scared to be left behind.

3.2.2. Social support

Peer Support: The role of peer support was also great, and students used to pay to use the assistance of their peers and get supported.

Instructor Support: Some students had access to instructors but others thought that they need more personal instructor's support that is more hands-on and can help reduce anxiety.

3.2.3. Institutional support

Workshops and Resources: Some students admitted that their colleges provided both workshops and resources they could have used but that they were too seldom or too insufficient in scope to be of use.

Continuous Support: The students claimed additional tutorials, easy-to-read resources, and individual assists as the factors that would make them feel more confident about using the digital tools.

Table 4. Sample quotes from interviews

Interview ID	Themes	Key Quotes	Anxiety Triggers	Social Support	Institutional Support
1	Difficulty with Software	"I struggle with Premiere Pro, it feels too complicated."	Software complexity	"My peers often help me."	"The college offers workshops but they are too infrequent."
2	Fear of Failure	"I'm afraid of making mistakes and failing in front of the class."	Fear of making mistakes	"I receive a lot of support from my classmates."	"I wish there was more direct support from the instructors."
3	Lack of Prior Knowledge	"I feel like I'm behind because I didn't use Photoshop before."	Lack of prior knowledge	"My instructor gave us some extra tutorials."	"The tools are available, but there's not enough guidance."

Both quantitative and qualitative analysis results show that anxiety is a major factor to the acceptance of digital tools. The importance of peer support and institutional support lie in reducing anxiety and enhancing the level of ease of use and usefulness of digital tools. Anxiety can be minimized by increasing workshop frequency, tutorials and supportive peer group.

4. Discussion

Findings of the study can be used as an in-depth study of the effects of anxiety in digital acceptance by the students attending media schools in Chinese vocational schools. With the help of combining qualitative and quantitative data, we will have a clear concept of psychological, social and institutional issues which influence the perception and the usage of digital tools by students. The results also give desirable guides that can be used to lessen anxiety and lead to proper adoption of technology in schools.

4.1. Anxiety and acceptance of technology

The moderate level of the anxiety among the students due to the use of digital tools can be considered one of the key findings of this study as the average CARS value is 3.22 out of 10. The descriptive statistics

revealed that the average score of usefulness of digital tools was 3.69 that demonstrated the moderate efficiency as well as the average score of the ease of use that demonstrated the moderate efficiency of digital tools, and the anxiety was a powerful deterrence of the full involvement in the usage of these tools. A negative correlation was observed between the anxiety and perceived ease of use (PEOU) and the perceived usefulness (PU), which would indicate that individuals with an increased level of anxiety would more strongly believe that digital tools are challenging to use and less effective in helping them pursue their academic objectives.

Our results also demonstrate the need to separate trait anxiety as a stable predisposition and situational anxiety evoked by special technological demands. High power distance and focusing more on upright academic achievement can increase the levels of situational anxiety especially when students are afraid of being embarrassed or losing face, in the Chinese cultural context.

Support shown by teachers and peers proved to be very important with respect to self-efficacy as per SCT. These supports should not be left to the informal networks, but they should be formalised by institutions.

This result matches earlier researches on technology adoption frameworks especially Technology Acceptance Model (TAM), proposes that the ease of technology adoption and perceived gains are imperative in the adoption of the technology [29]. In our research design, we add on to this model in that the anxiety of the student is a factor as those who are more anxious will less accept the technology and exposed to more barriers to use the technology. This can also be related to the Cognitive Load Theory which posits that a high level of cognitive load brought in by complex and new technology and other entities causes high levels of anxiety and is difficult to process information.

4.2. Influence of peers role

A conclusion also in relation to the work of peers in digital tool experiences of students should not be overlooked. The 3.88 indicator of the paper influence shows that students are very much affected by the peers in their concentration to use new technology. The results provided by the correlation analysis demonstrates that there is a moderate positive correlation of peer influence with PEOU and PU that indicates that students who have a feeling that they are supported by their peers are more likely to perceive that digital tools are less cumbersome to use whereas they are more helpful to their academic achievements.

This observation makes the establishment of a supportive peer setting very crucial. Social Cognitive Theory postulates that people are more likely to perform the behaviors that they observe being performed by other people (other children most of all). Through these peer groups, students will receive not only practical assistance (e.g. one student will assist another student discover how to tackle a piece of software) but also the emotional benefits of feeling less anxious and less doubtful of themselves. The findings show that an increased need to create collaborative learning approaches and promote peer-led workshops or study groups may help reduce anxiety and raise the level of digital tools acceptance.

4.3. Support by institutions and its effects

The level of moderation associated with the institutional benefit dose perceived by students (mean = 3.75) is also mentioned in the study. This result correlates with the findings of other studies that denote that institutional support plays a central role in the use of technology, since it gives students the resources, training as well as access to tools [30]. But the inconsistency in the type of responses implies that not all members of the sample feel supported in the same way and some students are better supported than others.

The results of our study have shown that institutional support is positively interconnected with PEOU and PU, which implies that the closer students feel that their establishment offers an adequate amount of training and resources, the easier digital tools are to use and the more useful they feel them to be. Conversely, institutional support exhibited a negative correlation with anxiety which means that improved institutional support and guidance can suppress anxiety levels concerning digital tools [31].

Specifically, negative influencers cited by students include the absence and quality of institutional support in the form of workshops and tutorials with regard to the effective adoption of tools. They stated they required more frequent tutorials and practical-session so that they possess the skills and know-how of utilizing the tools. This result concurs with earlier studies which show that constant and one on one correspondence is fundamental in curtailing anxiety and spelling effective adoption.

4.4. Qualitative thematic data analysis

The qualitative interviews gave detailed in-depth answers to the personal experience that students had with the digital tools. Complexity of software and the fear of failing to use it and lack of knowledge prior to it seem to be major points causing anxiety and, as a result, unwillingness among students to use the tools. The complexity of such tools as Premiere Pro and Photoshop came off as an overwhelming factor to students and most of them felt out of tune with others in their classes and lagging since they did not have prior experience with these tools.

It was also determined using the qualitative data that peer support was important in minimizing anxiety. A great number of students noticed that they were frequently assisted by their classmates who informed them about the tools in a better way and were the source of emotional comfort. This result demonstrates the need to develop peer-assisted learning conditions, in which students will be free to share knowledge and offer moral support to one another.

As far as the institutional support is concerned, the students were satisfied with the given workshops and resources but said that they want more and deeper training in a more or less regular basis. Other students complained that even though the tools had been provided, they were not well instructed on the use of the tools. This observation indicates that institutions are not only supposed to make digital tools available, but also make sure that sufficient training programs and technical assistance are available in order to make students get through the anxiety generated by working with strange technology [32].

4.5. Practical institutional framework

The multi-pronged quantitative and qualitative results have led to the support framework in 3 tiers that encourages institutions to help in reducing student anxiety and increase the use of the digital resource by vocational media programs. This model acknowledges the fact that peer support, faculty involvement and institutional infrastructure have to operate in a symbiotic way to be useful.

The campuses can assign trained student leaders that are capable of supporting other students on demand, in addition to organizing skill-sharing sessions, and expressing positive attitudes towards technology. The peer mentors will help fill the gap that exists between structured teaching and learning and develop a more relaxed, non-judgmental approach to learning, decreasing the anxiety levels.

Faculty members are expected to add consistent, step-by-step courses to coursework, and content that can become more difficult over time. This progressive exposure limits on cognitive load (mentioned in the Cognitive Load Theory) as well as advances student confidence, step by step. Such interventions must consist of practical exercises, instantaneous feedback, and how to overcome the worst common hurdles in technical issues.

Administrative Coordination Institutions need to have a Digital Learning Support Unit that would oversee students learning process, coordinate activities in peer mentoring and make the facilities to be available to every student. This department needs to closely collaborate with the faculty and explore student leaders to spot the at-risk students, offer the appropriate interventions and keep current digital resources and training materials [33].

The adoption of such a planned framework allows educational settings to stop being guided by ad hoc measures and rather incorporate long-term provision systems within the institution. Such a strategy does not only focus on dealing with anxiety but helps to establish self-efficacy, turn-taking and eventual technological competence among the vocational media students.

4.6. Implications for Practice

Resting on these results, a number of practical conclusions may be provided:

The conclusions of this paper have a direct implication on how an intervention as vocational college may design with the aim of mitigating the feeling of anxiety towards a digital tool use and to encourage sustained usage in college students. Anxiety is not merely a personal characteristic, but an answer to cognitive, social and institutional influences. That is why solutions need to be layered and integrated in the institutional framework instead of leaving them to individual efforts.

To begin with, the proposed Peer Mentorship model may be considered as an affordable and convenient way of getting rid of anxiety. Those students who have overcome such difficulties in their own ways will be able to offer practical help, wisdom, and emotional support as they are more relatable to the struggling students. Notably, this mentorship is supposed to be institutionalised in the support structures of the institution, and it is on the mentors that technical skills need to be integrated to communication and empathy [34].

Second, Faculty-Led Interventions should be not one-time workshops. Systematically constructed competence can be achieved in the form of, progressive, scaffolded training modules interspersed in coursework, and not incurring cognitive overload. The needs of faculty should be provided with the profession development activities to get informed about new digital tools and the methods of teaching to overcome cognitive load as aided by Cognitive Load Theory and Social Cognitive Theory.

Third, there must be Administrative Coordination in terms of sustainability. The creation of a Digital Learning Support Unit will make sure that the concept of peer mentorship and faculty interventions can be coordinated, monitored further, and perpetually enhanced. Feedback, attendance records, and performance records should be done in this unit to acknowledge the students who are at the risk of dropping out [35].

Besides, the right approach, which the institutions should employ to meet this promise, is adopting a feedback loop model whereby student feedback informs the training processes with regard to content, timing, and context of delivery. Collaboration with technology providers can also be considered to provide customized training material and access to software which will further reduce the adoption threshold.

Finally, these implications can be correlated with a need to shift to the proactive organized support system instead of ad hoc (reactive) measures. Institutionalizations of such practices allows vocational colleges to establish an anxiety-free learning atmosphere with an emphasis on digital competence, along with giving students the power to succeed in the media occupations that require vast amounts of technology.

7. Conclusion

This research paper brings helpful information about the topic of anxiety as one factor that an individual should consider when adapting digital tools as a media student in Chinese vocational college. It has been found that anxiety is a major setback in regard to technology acceptance and peer support and institutional support are the major functions in reducing this anxiety and enhancing tool usage. Educational facilities can assist in minimizing feelings of anxiety and increase the acceptance and implementation of digital tools by attention to peer networks and support programs offered by the facility in an ongoing manner.

Future studies may address possible interventions to decrease anxiety and teach self-efficacy in using technology you may imagine some training programs through which students are taught to become more confident to use digital tools. Also, cross cultural research standpoints may focus on determining whether the results are incorporated in other educational environments beyond China.

Conflict of Interest

The authors declare no conflict of interest.

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