Chapter

Effects of an Experimental Broadcasting and Hosting Class: A Triadic Reciprocal Determinism Perspective

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Abstract

Based on the triadic reciprocal determinism and the achievement goal theory, this study reconstructed two theories in the existing experimental curriculum—— "Practice knowledge experimental class" for broadcasting and hosting art majors in a college in Chongqing, China. The quasi-experimental method and purposive sampling were used in this study, and 14 undergraduates in the "Practice knowledge experimental class" were selected as subjects. During the first phase (from the first to the fourth week) of the course, a questionnaire was distributed to each student, and the time series analysis method was used to analyze the data with SPSS. During the second phase of the course, MAXQDA software was used to analyze the subject coding according to quantified outcomes. Quantitative and qualitative data were analyzed to explore the effect of the curriculum plan of the "Practice knowledge experimental class." The results showed that the curriculum can help students to improve their self-efficacy, interest, and value of learning, and had an impact on students' engagement and learning anxiety. At the same time, the study found that students' performance was related to the other factors emerging in the process of program implementation. The curriculum scheme of the "Practice knowledge experimental class" had succeeded where students' learning motivation and learning behaviors were aimed to stimulate through achievement goals.

Keywords: achievement goal theory, changing trend, curriculum plan, experimental class, triadic reciprocal determinism

1. Introduction

The Broadcasting and Hosting Arts program is a unique arts program in China with a history of more than 50 years since its creation. Nearly 600 colleges and universities in China offer Broadcasting and Hosting Arts programs [1]. The particularity of the program lies in the fact that the talents it cultivates aim to become radio and television broadcasters and presenters. The professional competence of these individuals has changed with the development of radio and television [2].

The cultivation of media talents in colleges and universities is the main channel to provide excellent professionals for the media sector, and is an important driving force for the development of the sector [3]. However, with the advent of the convergence media era, the media environment has changed dramatically, and the demand for broadcasting professionals has become relatively saturated [3]. Feedback from the media sector shows that the current professional education of broadcasting and hosting in colleges and universities cannot fully accommodate the competency requirements for broadcasting and hosting positions in the context of current media changes [4]. Colleges and universities need to strengthen their innovation in teaching, broadcasting, and hosting art, provide more practice opportunities for students, and continuously improve their comprehensive capacities. There is an increasingly urgent need for the reform and construction of the curriculum of broadcasting and hosting in higher education institutions. This need comes not only from the media sector and media users but also from the universities themselves and the student group [5]. Based on the above realistic background of the major development and demands of the media sector, how to improve the training mode and curriculum design for students majoring in broadcasting and hosting art in colleges and universities, and how to make in-depth curriculum reform for this major were important motivations for this study.

In summary, this study conducted a theoretical reset of the existing experimental curriculum of broadcasting and hosting arts majors in a college in Chongqing according to the theory of Triadic Reciprocal Determinism. The main purpose was to stimulate students' learning motivation and improve their learning effectiveness through achievement goals. The study explored the developmental status and trends of students' self-efficacy, learning interest, learning anxiety, and Learner's Perceived Value, which are closely related to achievement goals, during and after the implementation of the experimental curriculum. The study also examined students' changes in other areas and the reasons for them with the help of a qualitative study, so as to verify the effectiveness of the program.

2. Literature review

2.1 Achievement goal theory

Achievement goal theory is a learning motivation theory that builds on Achievement Motivation Theory and Attribution Theory, and was developed on the basis of Ability Theory [6, 7]. Achievement goal theory emerged as the main theoretical framework for achievement motivation in the 1990s and early 2000s, and has been widely applied, especially in educational contexts [8]. Dweck [6] interpreted achievement goals as the purpose of people's participation in achievement behaviors as demonstrated in achievement contexts, and distinguished achievement goals as self-goals and work goals based on differences in definitions of competency. Nicholls [9] identified achievement goals as the purpose of people's participation in achievement behaviors that aim to demonstrate or develop high competency. Zhou [10] argued that achievement goals are a set of goals that are associated with achievement activities. Wang and Yu [11] suggested that achievement goals include multiple beliefs or purposes, capacities, successes, competencies, efforts, mistakes, and standards. Chi [12] defined achievement goals as people's perceptions of competency-related behavior purposes, and emphasized that such perceptions exist in contexts involving competency.

In conclusion, this study considered achievement goals as people's perceptions of the purpose or reason for engaging in an achievement task, and people's evaluation of goal attainment. This study will contribute to the establishment and attainment of students' achievement goals through an experimental curriculum, thus stimulating their learning motivation and learning behavior.

2.2 Triadic reciprocal determinism

Based on Lewin's model, Bandura [13] pointed out that "Behavior, People and Environment factors actually act as interconnected and interacting determinants" of Triadic reciprocal determinism. Later, Bandura [14] proposed Triadic Reciprocal Determinism to explain human psychological functioning, arguing that there is a triadic interaction among environment, people, and behavior. Environment refers to the sum of objective things that affect people's perceptions, bodies, etc. Behavior refers to the organismic response of people when they are affected by objective things. Individual variables are the psychological and perceptual variables of individuals. People's beliefs, expectations, intentions, self-concept, and other cognitive factors often strongly govern and guide their behavior. Regarding the relationship between environment and people, not only does the environment define people, but people shape the environment. There is also an interactive influencing relationship between behavior and environment, and behavior acts as a mediator between people and the environment [15]. In educational scenarios, both the learning environment and students' individual variables affect learning behavior. Moreover, students' individual variables are taken as the core of the argument, and the role of students' individual variables in modifying learning behavior is emphasized. The perception and judgment of learning environment through students' individual cognitive structure can interfere with students' learning behavior [16]. In this study, while theoretically resetting the existing experimental curriculum, we intervened in the hardware and software learning environment based on the Triadic Reciprocal Determinism model, reformed the teaching strategy and the operating mechanism of the experimental class, and observed and discussed the corresponding changes among environment, learner, and learning behavior and their causes.

2.3 Self-efficacy

Self-efficacy is people's judgment of their ability to organize and execute the course of action needed to achieve a specified type of performance [14]. Learning self-efficacy is the learner's self-evaluation and perception of his or her ability to complete academic tasks, achieve good academic performance, and avoid academic failure [17]. Xiong [18] demonstrated that there is a positive correlation between college students' achievement goals, attribution style, and learning self-efficacy, and there is also a reciprocal causal relationship among them. A study by Zhao and Chen [19] found a significant partial mediating effect of learning self-efficacy between positive academic mood and achievement goals orientation among college students. Therefore, this study used learning self-efficacy as an important variable in the assessment of course effectiveness, and explored students' self-judgment of their own learning beliefs and abilities after studying the course in the specific context of the Xingzhi Experimental Class. It was analyzed whether there were significant changes in the indicators during the 4 weeks of course study.

2.4 Learning interest

Interest is a phenomenon that arises from an individual's interaction with a specific object, and usually involves positive feelings and attention [20]. Interest is also a dynamic psychological state that changes over time [21] and can maintain a tendency to be engaged with particular objects, events, and ideas for a period of time [22]. It is believed that there is a strong relationship between interest and learning [23]. Learning interest is an intrinsic motivation to learn, and an inherent tendency to seek novelty and challenge, to develop and exercise one's ability, and to explore and learn [24]. Toli and Kallery [25] demonstrated a significant positive correlation between interest and academic achievement, and this study reaffirmed that increased interest leads to better learning outcomes. In our study, learning interest was considered as one of the variables of the curriculum effectiveness assessment, and the change in students' learning interest during the 4-week experimental curriculum was observed to explore the role of the curriculum in students' learning interest development.

2.5 Learning anxiety

Anxiety is an important emotional state that humans frequently develop and experience in their lives. Although there are numerous schools of thought on anxiety, anxiety is still described as an apprehensive emotion by a wide range of scholars and researchers. It is a vague fear which is a subjective feeling of the individual [26]. Vitasari et al. [27] argued that learning anxiety refers to the anxiety experienced by students during the learning process, and may be specifically caused by academic performance disturbances. In order to avoid the possible negative effects of learning anxiety, this study introduced a competitive mechanism in the experimental curriculum, and examined whether there was a significant trend of change in students' learning anxiety during the 4 weeks of the experimental curriculum.

2.6 Student engagement

Student engagement is also referred to as academic engagement, academic participation, and learning engagement. This concept originated from the research on the relationship between the schooling process and students' academic achievement [28]. According to Kuh et al. [29], student engagement refers to "the amount of time and energy that students devote to educationally targeted activities and the effort that goes into governing effective educational practices." They believed that when there is a high level of student engagement, individuals will gain more from their studies; on the contrary, when there is a low level of student engagement, individuals will have difficulty engaging in their studies and thus gain little from them. A recent study by Guo et al. [30] further confirmed quantitatively the reciprocal and bidirectional relationship among students' perceptions of the learning environment, student engagement, and learning outcomes in college learning. Based on this, this study considered student engagement as one of the variables in curriculum effectiveness assessment, and investigated and analyzed whether there was a trend of significant change in student engagement during the 4 weeks of the experimental curriculum.

2.7 Learner's perceived value

Perceived value refers to the learner's perception of the overall importance of the learning task [31]. Value theory suggests that people's perceived value is a human construct of the importance of things [32]. Sun [33] proposed that the Learner's Perceived Value is the overall value of the utility of learning after weighing the benefits of learning that students can perceive through learning against the costs that they pay to obtain the learning outcomes. This study examined students' understanding and perceptions of the overall value of the learning benefits and learning outcomes gained during the 4-week study of the experimental curriculum, and investigated whether there were any significant trends in their change throughout the curriculum implementation.

3. Research method

3.1 Teaching tools

In this study, the curriculum of the Xingzhi Experimental Class was implemented in September 2020. After two semesters of operation, the curriculum team observed changes in students' learning motivation and competition outcomes. Therefore, the teaching group organized by the teaching and research office of the Broadcasting and Hosting Arts department of the college had theorized and optimized the operation plan and lecture content of the Xingzhi Experimental Class according to the Triadic Reciprocal Determinism framework. It aimed to stimulate students' learning motivation through achievement goals and achieve better teaching effects for enhancing students' professional practice ability. The specific operating mechanism and content of the curriculum program are described below.

3.1.1 Operating mechanism

Selection phase: Participants were recruited through three channels: existing students in the Xingzhi Experimental Class; one to two participants from each class recommended by the head teacher of the class of the major; and open recruitment from all undergraduate students in the School of Arts. The tryouts were both a selection of personnel for the next course cycle and a screening of existing members in this phase. The tryouts were based on creating a positive learning atmosphere and an open and competitive external environment. The intent was to guide students continuing the experimental curriculum to maintain or change their achievement goals orientation, and to promote the involvement of new students in achieving their goals. The recruitment was expanded to include all undergraduate students in the School of Arts to encourage participation by more students, expand the influence of the external environment, and stimulate students' learning motivation.

The tryouts were conducted in two rounds, with the first round being a ranking round for all contestants. Teachers served as judges and students on site as viewers cast their votes and they were ranked according to the total number of votes. The top 1–7 ranked contestants advanced directly, while the 8–23 ranked contestants went into the second round of the challenge. In this challenge round, the contestants ranked 16–23 challenged the contestants ranked 8–15 one-on-one, and those who succeeded in the challenge qualified for the Xingzhi Experimental Class. After

two rounds of competition, 15 participants were selected to attend the Xingzhi Experimental Class for a study period of 4 weeks.

Teaching phase: Teachers taught from 12:30 to 14:30 on Wednesdays and Thursdays, with 4 weeks as a teaching cycle. The instructional mechanism and course schedule focused on the interaction of the instructor, students, environment, and behavior. Participant screening was conducted at the end of the 4-week course. Students ranked in the top 6 of the screening were recommended to participate in off-campus competitions on a priority basis, and could receive two credits if they won a prize in a professional competition at the municipal level or above. Students who maintained a top 6 ranking in each screening and renewal for more than three terms would get priority recommendations for internship.

3.1.2 Curriculum content

According to the key points of the Broadcasting and Hosting Arts program, the basic course content was determined as impromptu commentary, mock hosting, and news-casting. The curriculum team theoretically optimized the curriculum content and teaching tools based on Triadic Reciprocal Determinism and achievement goal theory. The curriculum spotlighted the interaction among people, environment, and behavior, and emphasized the role of students as individual variables in determining behavior. Teachers reinforced the shaping of the classroom environment and atmosphere, and focused on the overall development of knowledge, ability, and quality. Experts' suggestions to modify the monolithic teacher review into a combination of one-on-one precise review, public teacher review, and student–student review were adopted to stimulate students' interest and discernment [34]. Teachers and students worked together to create an open and more interactive classroom environment.

The curriculum was designed with students' self-efficacy development in mind. Bandura [13] suggested that individuals acquire self-efficacy information in four ways: past successes and failures, vicarious experiences, persuasion by others, and physiological arousal. In addition to the modeling and guiding role played by teachers, similarity is one of the most important variables in determining whether the inspiration from role models is effective. Based on this, the curriculum introduced vicarious experiences of peers to a greater extent, and played the role of inspiration by role models. A number of observation and learning sessions were also set up, including outstanding broadcast and hosting productions and experience sharing by media practitioners. Individual goals varied [18], and the curriculum was designed to meet overall needs while increasing individualized guidance to progressively push students to reach their goals. The curriculum was designed to improve students' professional competence and self-efficacy by creating a healthy learning environment of cooperation and competition, contributing to the establishment of proper mastery goals, and stimulating learning motivation.

3.2 Research steps

A single-group quasi-experimental design was chosen for this study. The curriculum of the Xingzhi Experimental Class was theorized and optimized. A complete curriculum cycle was administered, and a questionnaire was distributed to the 14 participants of the Experimental Class at the end of each week from the first to the fourth week of the experimental curriculum using purposive sampling. At the end of the curriculum, a semi-structured interview outline was developed based on time

series data analysis after the collection of the questionnaires, and in-depth interviews as well as a thematic analysis of the interview content were conducted. To effectively control irrelevant variables and ensure the scientific validity of the quasi-experiment [35], some incidental and uncontrollable irrelevant variables were statistically controlled for at the end of the experiment.

3.3 Research subjects

The subjects of this study were a total of 14 undergraduate students (5 male, 9 female) in grades 1 ~ 4 in the field of broadcasting and hosting arts in a college in Chongqing, China. They were selected through the selection mechanism of the Xingzhi Experimental Class. Both the quantitative study in the first phase and the qualitative interview in the second phase were conducted with these 14 participants. A total of 56 valid questionnaires and a corpus of 14 interviews were collected for this study.

3.4 Questionnaire

The quantitative part of this study was a validation study, and a total of 37 questions were formed by using a modified classical scale based on the study of previous theories. A quantitative study of the curriculum effectiveness was conducted based on the achievement goal theory and Triadic Reciprocal Determinism, according to five dimensions: self-efficacy, learning interest, learning anxiety, student engagement, and Learner's Perceived Value. The questionnaire was measured on a 5-point Likert scale.

3.4.1 Self-efficacy

This study adopted the self-efficacy scale of Nguyen et al. [36], with six questions selected to measure the participants' self-efficacy. An example question is: I am confident in the selection contest for the Xingzhi Experimental Class.

3.4.2 Learning interest

This study adopted the learning interest scale of Hong et al. [37], with nine questions selected to measure the participants' learning interest perceptions of the plan of the Experimental Class. An example question is: I like the operation mechanism of the Xingzhi Experimental Class very much.

3.4.3 Learning anxiety

This study chose to adopt the learning anxiety scale of Hong et al. [38], with 10 questions selected from this scale to measure the participants' learning anxiety perceptions of the plan of the Experimental Class. An example question is: Even though I am well-prepared, I am still worried that I will fail the Xingzhi Experimental Class.

3.4.4 Student engagement

This study adopted the UWES-S scale of Fang et al. [39], with nine questions selected to measure the participants' student engagement. An example question is: I usually arrive at the classroom on time when I take the Xingzhi Experimental Class.

3.4.5 Learner's Perceived Value

This study adopted the Learner's Perceived Value scale of Liaw [40], with five questions selected to measure the participants' perceived value of the plan of the Experimental Class. An example question is: I think the Xingzhi Experimental Class can improve my broadcasting skills.

3.5 Interview tools

We further conducted semi-structured interviews based on the analysis of data from the collected questionnaires. Ten questions were set, with no specific time limit. An example question is: What are the specific goals you have set for your study in the Xingzhi Experimental Class? What do you expect to gain from taking this class?

4. Research tools

4.1 Quantitative research

4.1.1 Reliability analysis

In terms of reliability testing, the scale modified in this study adopted Cronbach's α to confirm the internal consistency of the scale. According to Sharma [41], Cronbach's α suggests that the construct has good reliability criteria if it is greater than .7. The Cronbach's α values for each construct of the modified scale in this study are shown in **Table 1**. The α values of self-efficacy, learning interest, learning anxiety, Learner's Perceived Value, and student engagement were all in the range of .8–.95, which meets the recommended criteria. Therefore, the measuring tools in this study had good internal consistency.

4.1.2 Validity analysis

The questionnaires in this study were adapted from previous research tools, and the original questionnaires had good reliability and validity. Data were collected through a questionnaire, and a round of content validity review was conducted by three experts with relevant expertise and research experience in related fields to confirm the completeness of the questionnaire content and the comprehensibility of the text. The questionnaire was scored on a 5-point Likert scale.

Dimension	M	SD	Cronbach's α
Self-efficacy	3.628	0.462	.877
Learning interest	3.976	0.632	.948
Learning anxiety	3.411	0.714	.912
Learner's Perceived Value	4.318	0.592	.968
Student engagement	3.905	0.464	.886

Table 1.
Summary of reliability analysis.

4.2 Qualitative research

Whether the research is "data-driven" or "theory-driven" determines the coding process. Data-driven coding requires coding of as many potential themes as possible in order to more fully explore the meaningful themes in the data. Theory-driven coding, on the other hand, depends more on the research question of interest, and only codes the relevant data content in detail and in-depth [42]. The data for this study were coded in a theory-driven manner. After coding, 15 sub-themes of three themes were produced. The thematic analysis coding for this study is shown in **Table 2**.

Theme	Subtopic	Excerpts from interviews
Environment	Teacher influence	The ways my teacher taught me would ease my distress and he would always encourage me, so I felt much better. (S14)
	Peer influence	The example of my senior schoolmate is an inspiration to me and encourages me to continue. (S5)
	Competition	You will find that many classmates are talented and if you do not work hard, you will lose your position in the Xingzhi Experimental Class. Then you will have a sense of crisis and conscientiously work hard at your studies. (S8)
	Support from others	Although I would be nervous when I went into phase, worrying about what they would say next, I would like them to point out my problems to me. Yes, because I would feel that it would be something that I might not be able to find out myself, it would be better for me. (S11)
	Learning atmosphere	I think this atmosphere is very good because everyone is very sincere, and I can hear different opinions. I was so nervous about whether there was something I should not say. No, I think people were stating the facts as they saw them from their hearts. (S9)
People	Attribution of success or failure	The expectation may not be completely achieved. It is because of some objective factors or maybe because of some lack of my own learning ability or whatever, I did not reach the goal I set. (S1)
	Achievement goal orientation	My specific goal, I would say, is to find a good job for myself. (S5)
	Willingness to continue learning	I really want to continue the Xingzhi Experimental Class. (S14)
	Learner's Perceived Value	What I think more than that is, that I feel I have learned a lot during the short period of study in the Xingzhi Experimental Class, for example, some technical things. (S5)
	Learning expectations	And then what I hope more than anything is that, by taking the Xingzhi Experimental Class, I can correct these problems. (S14)
	Academic emotion	This positive emotion is actually there. I actually feel a little bit more self-confident when I can still get some affirmation from the teacher in an area that I do not feel very good at. I will feel very happy. (S4)
	Self-efficacy	The first reason I wanted to continue was because I thought I had the ability to be in that class, and I worked hard, and then I thought there were things I wanted to obtain in the class, like some opportunities. (S10)
	Learning interest	I like the session of reviewing the course in public. If the critique is on a problem that I do not have, I will be glad. And yes, if it's my problem, it will be easier to find and correct it. (S6)

Theme	Subtopic	Excerpts from interviews
Behavior	Learned helplessness	For example, if the assignment was an impromptu commentary or a mock hosting session, I would go back to the dorm and record it. Every time I record, if I do not get it right, I get very angry. When I record a commentary or a mock host, I may record it up to 70 times and never get it right. (S7)
	Student engagement	More morning exercises. Every day when I do the morning exercise, I would correct my voice or something. Then try not to have that broadcasting station every time I return to do my assignments in the future. (S14)

Table 2.
Theme analysis and coding.

5. Research results

5.1 Results of the quantitative study

A time series is a chronological sequence of numbers [43], and time series analysis can be used to describe, explain, predict, and control the temporal changes of selected variables [44]. Therefore, this study employed time series analysis to examine the trends of changes in students' self-efficacy, learning interest, learning anxiety, Learner's Perceived Value, and student engagement performance in the first, second, third, and fourth weeks. In this study, the changes in students' performance of self-efficacy, learning interest, learning anxiety, Learner's Perceived Value, and student engagement in the first, second, third, and fourth weeks are shown in **Figure 1** and **Table 3**. The values of each construct had a tendency to increase gradually from week to week. In other words, students' self-efficacy, learning interest, learning anxiety, Learner's Perceived Value, and student engagement improved constantly over time.

The data showed that the implementation of the curriculum of the Xingzhi Experimental Class had a continuous impact on the self-efficacy, learning interest, Learner's Perceived Value, and student engagement of individual learners, and the impact effect exhibited an exponential and continuous growing trend. It indicated that learning individuals had positive development and improvement in their self-efficacy, learning interest, Learner's Perceived Value, and student engagement. The learning anxiety index also showed a gradually increasing trend, but the value remained below the low level of 4. This implied that the learning subject's learning

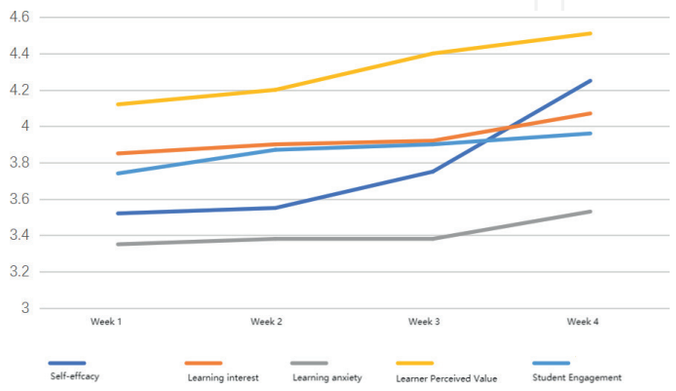

Figure 1.
Time series analysis.

Week	Self-efficacy	Learning interest	Learning anxiety	Learner's Perceived Value	Student engagement
1st	3.52	3.85	3.35	4.12	3.74
2nd	3.55	3.9	3.38	4.20	3.87
3rd	3.75	3.92	3.38	4.40	3.90
4th	4.25	4.07	3.53	4.51	3.96

Table 3.
Time series analysis.

anxiety was in a controllable state from the first to the fourth week. However, its rising trend should be noted.

5.2 Results of the qualitative study

5.2.1 Environment

The theme of the environment in this study was mainly expressed in the atmosphere formed in the process of implementing the experimental curriculum. It is the learning environment formed by people, things, and objects other than individual factors such as teachers and peers. There were five sub-themes, namely: teacher influence, others' vicarious experience, competition, support from others, and learning atmosphere.

According to the interview results, teachers are an important part of the learning environment and have a broad and deep impact on students' perceptions and behavior. Teachers assume a variety of roles in teaching and learning, functioning as mentors, leaders, and models. Teachers' personal charisma and professional competence have a crucial influence on the elements of learning motivation, learning interest, student engagement, and Learner's Perceived Value. This is the same as the findings of Sun and Tian [45]. Teacher influence may also be a key reason for whether or not college students' learning motivation declines [46]. It was also found that regardless of strengthening or weakening of learning motivation, students are eager to be affirmed and encouraged by teachers, and teachers' emotional engagement has a great impact on students' learning motivation. For example:

> *The ways my teacher taught me would ease my distress and he would always encourage me, so I felt much better. (S14)*

Classmates, roommates, and seniors, as important members of the learning process, are also key components of the learning environment. Bandura [13] believed that vicarious experiences of role models can serve as an inspiration in the information pathway to self-efficacy. The study found that the positive effect of inspiration from classmates or senior role models was more pronounced and contributed to both learning motivation and learning interest. This coincides with Wu and Fan's [47] view that the closer the students' ages are to that of their role models, the greater the role models' influence. It was also observed that vicarious experiences through others may not all be positive. As Bandura described, self-efficacy may also decline because of vicarious experiences. For example:

> *I also want to attend the Experimental Class, because my classmates around me have gotten a lot of opportunities in the Experimental Class. I also feel that they get what they want, like internships and so on. (S2)*

A competition mechanism was introduced as appropriate in this experimental curriculum. Previous studies have shown that those with a mastery-approach goal orientation are prone to develop a benign competitive attitude, and when a person recognizes that he or she has the ability to compete, he or she will be active and strive for success [48]. When one believes that one is not competitive, one's self-esteem is threatened and thus one is more likely to avoid competitive situations. For example:

> *Also, if I suddenly get notified that I will soon have to participate in the screening competition again, I will feel very nervous and feel that I will be eliminated soon, and then feel quite scared. (S13)*

Teachers should create a moderately competitive atmosphere for students in the classroom. An overly competitive environment can inhibit or weaken students' learning motivation and creativity, which fits with the view of Cai et al. [49]. In addition to the competition factor, support from significant others also has a great impact on students' learning motivation [50]. For example:

> *The enjoyable part is that I think it's nice to have friends I know in the class who can help each other out. (S5)*

The learning environment directly affects students' learning engagement. Not only does the physical spatial environment enhance students' learning ability and learning engagement, but the learning atmosphere is closely related to college students' academic performance. Bakker et al. [51] found that the learning atmosphere as an implicit environment also affects student engagement. An active learning atmosphere where teacher-student interaction is more positive is more conducive to students' self-actualization, and students are able to work harder and be more proactive in their learning [52]. For example:

> *I think this atmosphere is very good because everyone is very sincere and I can hear different opinions. (S3)*

The study showed that during the implementation of the experimental curriculum in the Xingzhi class, teachers, supports from others, vicarious experiences of others, and competition jointly constructed the learning context and atmosphere of the class. The environment influenced both students' cognition and behavior, while students' new cognition produced new behavior. Behavior is embedded in the environment and influences the changes in the environment, realizing the role of Triadic Reciprocal Determinism.

5.2.2 People

As learning subjects, students are also the people in Triadic Reciprocal Determinism. In this study, the people theme had eight sub-themes: learning expectations, achievement goal orientation, learning interest, self-efficacy, attribution of success or failure, academic emotion, Learner's Perceived Value, and willingness to continue learning.

Learning expectation is closely related to learning goals, but it is not the same. It is the reaction to learning goals in the mind [53]. This study found that students' learning expectations changed before, during, and after the implementation of the experimental curriculum. Students have expectations about the content and learning style of the course, and most of the subjects described their expectations first when describing their goals, such as "I hope I ..." and "I expect to ... ... during learning." This is in line with the aforementioned view that learning expectations are easier to describe than specific goals, and express learners' anticipation about their learning strategies and learning outcomes. Researchers can learn more about students' learning goals and learning motivation through learning expectations. For instance:

> *I look forward to more practice opportunities in the Xingzhi Experimental Class. (S9)*

It was found that participants generally demonstrated a stronger willingness to learn when narrating questions about achievement goal orientation, showing a mastery-approach goal. A few participants also showed a goal-avoidance orientation during the interviews. The study observed that participants' achievement goal orientations were not necessarily singular or set in stone. During the learning process, individual achievement goal orientations may shift due to influences such as environment and changes in self-competence, or they may have both mastery and achievement goal orientations. This is consistent with Hulleman's et al. [54] finding that multiple goal orientations are beneficial to improving student academic achievement.

> *I found out that the students who were able to attend the Xingzhi Experimental Class were very talented and capable, and I was a little timid. Then I thought I would at least not fall behind and keep up with them. But after I was here, I wanted to be outstanding, and I didn't want to be looked down upon. (S2)*

Attribution plays an important role in people's development. It directly influences people's emotions, expectations, and behavior, which in turn affects their achievement motivation [55]. This study found that participants all generated inferences of attribution of success or failure about their ability to achieve the learning objectives during the course of the study. The causes fit well with the four factors proposed by Frieze and Weiner [56], Weiner [57] to explain the causes of success and failure. These factors are ability, effort, difficulty of the task, and luck. Ability and effort are intrinsic causes that describe personal characteristics, while difficulty of task and luck are extrinsic causes that indicate external circumstances. For example:

> *My thought was that if I improved my professional ability, I would be able to perform better when I compete. This was my goal. (S13)*

Quantitative data from the first phase showed an upward trend in the learning interest index of the students in the experimental class, but to a lesser extent. It was found that the mechanism and content of the curriculum stimulated learning interest to varying degrees. However, there was also a lack or waning of interest. The researchers found that, during the curriculum implementation, students showed more interest in the unknown and new content as well as that not available in books, whereas they exhibited a lack of interest or waning interest in exercises or tasks that required multiple repetitions, and tasks they were not good at. This is in line with the findings of Zheng et al. [58].

> *The Xingzhi Experimental Class will teach things that will not be taught in ordinary classrooms, and the content of the Experimental Class is biased toward hosting, which happens to be my weakness. So, for me, it was a new learning experience to be in the Experimental Class. (S10)*

The quantitative results of the first phase of this study revealed that students developed self-judgments about their own learning beliefs and competence levels after 4 weeks of context-specific learning in the experimental class. The self-efficacy index showed a continuous upward trend and the largest increase. The qualitative analysis revealed that people with a high sense of self-efficacy were confident in their abilities and the results of their activities. They were willing to take on challenges and were interested in them. Their self-evaluation and perceptions were not easily constrained by external factors such as others' evaluations and rewards [59]. On the contrary, people with a low sense of self-efficacy may tend to choose easy tasks. For example:

> *I think the biggest reason for being able to stay in the Experimental Class comes from the fact that I am very confident in performing on stage. (S8)*

Self-efficacy is an important factor influencing academic emotion [19]. This study expanded the focus on students' emotions from learning anxiety to academic emotion. The study found that the main sources of students' positive emotions during the experimental period were self-efficacy and teachers' evaluations. When negative emotions arose, the reasons articulated by participants were almost always directed to lower self-efficacy ratings. Researchers have found that negative emotions do not necessarily have a significant negative impact on student learning when they are followed by emotion control and regulation. Guiding students to have effective emotion regulation can be helpful for academic achievement.

> *This positive emotion is actually there. I actually feel a little bit more self-confident when I can still get some affirmation from the teacher in an area that I don't feel very good at. I will feel very happy. (S10)*

Positive high-arousal emotions such as happiness only occur when students are interested in the learning task, have high self-efficacy, and believe that what they are learning is valuable [60]. From emotional responses, we can know something about the Learner's Perceived Value. Throughout this study, students' Learner's Perceived Value index maintained a high level. The qualitative analysis revealed that students described the overall perceived value of learning utility after weighing the benefits of learning against the cost they paid in obtaining the learning outcomes [33]. They generally affirmed the value of the curriculum. For example:

> *I think it was definitely the right thing to take the Xingzhi Experimental Class, as I have learned a lot in the class. I think it will help me in my acting career. (S11)*

This study specifically set up mechanisms to encourage students to strive for continuation in the experimental class, and the researchers found in the interviews that the students' descriptions revealed their willingness to continue learning. Willingness to continue learning refers to the learners' willingness to continue with the current learning task on the one hand, and their willingness to move on to the next course on

the other [61]. As the study by Wang [62] showed, students' perceived value and student satisfaction have a significant effect on college students' willingness to continue learning. The higher the satisfaction with learning, the higher their willingness to continue learning. For example:

> *I would definitely want to continue the course. Even though I was eliminated, I think it's still very helpful to be able to take a course like this. (S11)*

5.2.3 Behavior

Learning behavior can be understood as the sum of activities that learners perform to obtain certain learning outcomes under certain motivational guidance [63]. According to Triadic Reciprocal Determinism, learning behavior should have a positive interaction with the learning individual and the learning environment, and they should be mutually reinforcing and developed in a harmonious way. Good learning behaviors have a positive effect on the learning individual. There are two sub-themes in the behavior theme in this study: Student Engagement and Learned Helplessness.

Student engagement refers to the amount of time, effort, and ability that students put in during their participation in classroom and out-of-classroom learning activities, and the developmental resources they experience [64]. The data from the first phase of this study showed an upward trend in students' engagement index during the implementation of the experimental curriculum. The qualitative data also confirmed that those with mastery goal orientations were more likely to improve their student engagement in later learning, while those with achievement goal orientations may be relatively deficient in their student engagement [65]. For example:

> *The teacher was stricter with me when I did my recording in the experimental class. Then I also felt that I couldn't be as lazy or slack in my studies as usual. I had to be more diligent. (S6)*

In this study, descriptions of learned helplessness behavior were found during the coding process. Learned helplessness is a state of mind in which a person or an animal is powerless and at the mercy of fate due to successive setbacks [66]. Although occurring infrequently, researchers have concluded that because the sense of learned helplessness or actually learned helplessness is associated with depression, it is a noteworthy emotion and behavior issue. For example:

> *When I record a commentary or a mock hosting, I may record it many times and still feel unsatisfied. It's even more agitating when it happens that I can't even do it right after recording it 40 or 50 times. Once I recorded it 70 times and still didn't get it right. I became irritated and bored. (S7)*

6. Conclusion and suggestions

6.1 Conclusions

According to the results of the time series analysis, students' self-efficacy, learning interest, and student engagement indexes demonstrated a continuous upward trend during the implementation of the curriculum of the Xingzhi Experimental Class.

During this period, students' Learner's Perceived Value showed not only a gradual increase but also maintained at a high level throughout the period. The learning anxiety index exhibited a continuous upward trend from week to week. However, its mean value remained below 4 during the whole period, showing a continuous low-level state. This indicates that the implementation of the curriculum of the Xingzhi Experimental Class had a continuous impact on students' learning anxiety, but the anxiety index was within a manageable range.

Through thematic analysis of qualitative data, this study found that the factors that influenced students' learning motivation and learning behaviors during the implementation of the curriculum of the Xingzhi Experimental Class also included: teacher influence, peer influence, competition, supports from others, learning atmosphere, attribution of success or failure, achievement goal orientation, willingness to continue learning, learning expectation, and learned helplessness.

Teachers, others, and the learning atmosphere, as environmental factors, have a broad and profound impact on students' cognition and behavior. Learning expectations, achievement goal orientation, attribution of success or failure, and willingness to continue learning, as people factors, have a significant impact on students' learning motivation and learning behavior. In particular, learned helplessness, which was found in the analysis results, is strongly associated with the attribution of success or failure.

In conclusion, the curriculum of the Xingzhi Experimental Class in a college in Chongqing is significantly effective in terms of stimulating students' learning motivation through achievement goal theory.

6.2 Suggestions for future studies

Due to the limitations of external conditions and availability of resources as well as the researcher's own ability and experience, this study has some limitations that deserve noting. The following suggestions are made for subsequent researchers to consider.

In terms of the study subjects, due to the small sample size, the results of this study may not enable us to speculate on the impact of the curriculum program on the learning of all students majoring in broadcasting and hosting arts. With regard to this issue, qualitative findings were employed to complement and support the quantitative findings. However, it is inevitable that the limitation of sample size produces unavoidable errors in reliability and validity. Therefore, it is suggested that the scope of the study subjects in the future be expanded, so as to understand the differences among subjects and to achieve higher reliability, validity, and inferences of the study.

Furthermore, this study validates that theory-based curriculum and instructional design can effectively cultivate professionals. Therefore, it suggests focusing on teaching reform for courses with particularly high (vocational) professional attributes, and emphasizing literacy-oriented education models and student-centered education methods, such as project-based learning, inquiry-based learning, problem-based learning, cooperative learning, interdisciplinary learning, emerging technology-assisted learning, and artificial intelligence-assisted learning. In the meantime, the curriculum or teaching design should also conform more closely to the government's requirements for talent development. For instance, in China, there is an emphasis on cultivating individuals with virtues. Hence, integrating ideological and political elements into the curriculum, and comprehensive consideration and planning are necessary to complete high-quality talent training tasks. Additionally, in the research and planning of teaching reforms, apart from emphasizing professional and core

competencies, diverse methods of learning assessment are also required, which include pre-learning, in-learning, and post-learning (achievements) assessment. The entire process of students' learning can be comprehensively evaluated through questionnaires, tests, works, reports, participation, and feedback.

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