Research Article

Analysis of the Deep Development Mechanism of College Education under the Field Theory

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Nowadays, the development of online college education is in full swing, and various online college education platforms have also sprung up. The development of technology has made these online platforms more and more powerful, escorting the continuous development of online education. Colleges and universities, as the main front for the cultivation of high-quality talents in my country, have already introduced large-scale online courses into education and teaching, enriching the teaching content, and expanding the teaching form. In the face of new technical means and abundant online education resources, the teaching quality of online classrooms in colleges and universities is so low, which deserves our further reflection. For a long time, the effect of online classroom teaching in colleges and universities has been closely concerned by the academic community, but most of them start from external factors, ignoring the internal relationship of online classrooms. Clarifying the complex relationships in the online classroom field of colleges and universities and clarifying the rules of habitus and capital operation in the online classroom field of colleges and universities are the intrinsic motivation and important source to stimulate the vitality of the online classroom field of colleges and universities and improve the quality of teaching. By grasping the essence of classroom teaching and analyzing the inherent characteristics of the online classroom field, this research intends to clarify the proper state of the online classroom field, and to explore the reasons why the current online classroom field function has not been fully realized, so as to find the depth of college education.

1. Related Introduction

The development of information technology has revolutionized the way and influence of information dissemination time and time again, and subsequently caused changes in social organization, management methods, economy, and industrial structure. These changes have a subtle impact on all aspects of people’s lives. With the acceleration of the modernization of education, the application of online technology in the field of education has become more and more extensive. Colleges and universities are the main positions for talent training, and online classroom teaching has gradually become a new normal teaching method. However, many studies have shown that the teaching effect of online classrooms in colleges and universities is not satisfactory. There are still many problems. These series of problems are not only external factors but also internal factors that cannot be ignored. Therefore, using the field theory to analyze the problems existing in the online classroom field of colleges and universities from the perspective of internal relations is of great value to improve the teaching effect of online classrooms in colleges and universities and the quality of online education in colleges and universities.

As an existing form of classroom, online classroom is mainly characterized by breaking the time and space constraints of classroom teaching. The research and analysis of it has certain limitations. But in the sense of space, in the process of classroom teaching, teachers and students are in different positions of power due to the difference in the mastery of cultural knowledge between teachers and students, thus forming a complex relationship network, which...
is not in line with the field theory. In this relational network, there are specific logical rules that both teachers and students should abide by. This logical rule aims to promote the flow and reproduction of cultural capital between teachers and students, which is exactly what the online classroom should be.

Field is a relational theory that aims to study the relational workings between actors within the field. In the normalized classroom field, teachers and students are in the same physical field, and the connection in the field is very easy to construct. Teachers can control the power in the classroom by virtue of their own cultural capital. Students because of their culture, the relative weakness of capital can only agree with the rules within the classroom field. In the process of classroom teaching, teachers can timely and accurately observe students’ learning status, communicate and interact with students, and adjust teaching content and methods so as to attract students to “enter,” supervise their “presence,” and avoid students’ “absence.” At the same time, according to the view of situationism, learning activities cannot be separated from learning situations, and different learning situations will have different degrees of influence on the effect of teaching. In the normalized classroom field, students are in the same physical space, and their behaviors will definitely be influenced by other students around them and be driven into learning activities, so that most students can abide by the rules of the field and participate in cultural capital. The constraints of time and space are broken, teachers and students are in an abstract social space, and it is difficult for teachers to grasp the learning status of students in a timely and accurate manner. In the context of collective learning, it is also difficult to integrate into classroom learning; on the other hand, due to the abundance of online course resources, students have more power in the choice of knowledge, teachers’ power in the classroom is also weakened, and students have the ability to learn independently [1–10].

However, due to the fact that the relationship between teachers and students and their respective roles in the online classroom field of colleges and universities cannot be timely transformed from the normalized education field, the teaching methods of teachers and the learning methods of students still maintain the normalized classroom field habit in. The unclear relationship between teachers and students and the mismatch of habitus and other factors have caused various problems in the online classroom field of colleges and universities, and the field cannot function normally, resulting in low quality of online classroom teaching. How to clarify the internal relationship of the online classroom field of colleges and universities, form a healthy online classroom field of colleges and universities, and make the functions of the online classroom field of colleges and universities really play, is the main problem to be solved in this research.

2. Related Work

In today’s increasingly popular online teaching, due to the change of teaching mode, the teaching behavior of teachers in online teaching has undergone great changes compared with traditional teaching. On the basis of comparative analysis of teachers’ teaching behavior in traditional teaching and teachers’ teaching behavior in network teaching, Liu Fanhua found that traditional classroom teaching is teacher-centered, and teachers’ teaching is the main way for students to acquire knowledge. In the process of classroom teaching, teachers control the rhythm of the entire classroom, and teachers supervise students’ learning behaviors to ensure that students carry out learning activities under the guidance of teachers; however, in online teaching, due to the openness of online platforms and learning resources, students can choose the content of learning by themselves, build knowledge in advance through the addition of interest, become the protagonist in the classroom, and the teacher becomes the facilitator in the classroom, which is more in line with the current student-based education and quality education requirements. Francescucci conducted an experimental study on two modes of online video teaching and class teaching in 2013 and 2018, respectively. In the 2013 experiment, because students did not understand the online video teaching mode, one-third of the students said they were unwilling to do so. Learning is carried out online, but in the 2018 experiment, it was found that the effect of online video teaching and class teaching was equivalent, and there was no significant difference between students’ participation and final grades. Faulconer set up four modes in one course for experimentation, which are class teaching, online asynchronous, online synchronous, and remote video. The test results show that the teaching effect is not much different, but the dropout rate of asynchronous online classroom is slightly higher than that of the other three forms. Skylar explored the teaching effect and student satisfaction of online teaching and face-to-face teaching, and found that students’ grades in face-to-face teaching were slightly higher than online teaching, and nearly four-thirds of students also expressed a preference for face-to-face teaching [11–14].

Most of the existing studies take the field as the theoretical perspective and use the field habitus to analyze the specific problems in the online classroom, such as the interaction between teachers and students in the field of online teaching in colleges and universities, and the learning field of management flipped classroom. By sorting out related research studies in the field of online education, this study found that the above research mainly takes the specific form of online classroom as the research object. By grasping the essence of classroom teaching and analyzing the inherent characteristics of the online classroom field, this research intends to clarify the proper state of the online classroom field, and to explore the reasons why the current online classroom field function has not been fully realized so as to find an optimization path.
3. Behavioral Scenarios of Online Classrooms and Analysis of College Students’ Demand Behaviors

3.1. Behavioral Scene Construction of Online Classroom. As well as the theory of embodied cognition based on Merleau-Ponty’s embodied phenomenology, the theoretical sources of these two aspects become the theoretical support for the research on the online classroom user behavior model in this study. Through “scenario construction” to restore the user’s real use scene or simulate the user’s mentality, then in the field construction, it is to connect the original realm of the experience and the user’s present, and finally make the immersive experience and meaning happen.

The realm of the online classroom is to build a private space of one’s own, in which class tasks and thinking activities can be effectively completed. The inspiration of this study from Heidegger’s field theory is to return to the original classroom environment, allowing users to complete the construction of experience and meaning in a focused situation, under the synthesis of their own apperception or body schema. Therefore, the first step of construction is to help him move towards the realm and connect the immersive scene. The second step is to help him focus on the task flow of the target interface through sensory design. Figure 1 shows the framework of the classroom behavioral scene model research.

3.2. Construction of Fielded Embodied Behavior Model in Online Classroom. On the one hand, the fielding theory puts forward the hypothesis of the learning experience model of “formal display-practice-comprehension.” On the other hand, learning experience is both a learning cycle process and an experience cycle process. Users recognize and learn from experience. According to the observation and interview of classroom learning, and derived from the theory of embodiment, the process model of the fielded embodied behavior in the online classroom is finally determined, which are physical participation, experience meaning, reflection (self-examination) [1], situational motivation (motivation) [2], physical participation [3], experience meaning [4], reflection (self-examination) [5], and cooperation [16].

3.3. The “SHDD” Positioning of Online Classroom Experience Based on the Phenomenological Perspective

3.3.1. Establishment of “SHDD” Positioning for Online Classroom Experience. “Outer experience” and “inner experience” together constitute “one experience.” Dewey believed that “an experience” has no “dead center,” that is, the “outer experience” and “inner experience” will not be suddenly interrupted. The user’s combination of “external experience” and “internal experience” determines the quality of “one experience.” This study proposes to use the ratio (qualitative) of “inner experience” to “outer experience” to locate a student’s experience. Internal experience: external experience ≥ 1, indicating that the final experience is beyond expectations (full expectations); internal experience: external experience < 1, indicating that the final experience is lower than expected (vacant expectations). On this basis, this study further proposes an experiential “SHDD” orientation. The two poles of the ordinate are “inner experience: outer experience ≥ 1” and “inner experience: outer experience < 1.” The abscissa is examined from the dimension of frequency, and the two poles are “Occasionally” and “Frequently,” respectively. This results in four quadrants. When the user’s internal experience: external experience ≥ 1 occurs for the first time, it brings a sense of surprise to the students and gains a trustworthy group of students. When the user’s internal experience: external experience ≥ 1 often occurs, it brings students a sense of happiness and gains a loyal student group. When the user’s internal experience: external experience < 1 occurs for the first time, it will bring students a sense of disappointment and gain a tired student group. When the user’s internal experience: external experience < 1 often occurs, it brings students a sense of deception and gains a disgusting group of students. Trusting and loyal student groups will further lead to good teacher reviews, while bored and disgusting student groups may lead to bad teacher reviews, specifically as shown in Figure 2 [17].

3.3.2. Experience Containers in the Classroom. The simple process of predetermining a purpose-achieving a purpose does differentiate an “experience” from a piecemeal experience, but it is not a sufficient measure of the quality of purpose-completion, i.e., how good or bad it is. Taking “classing” as an example, the preset purpose of “classing” did not include key factors such as course content, whether to procrastinate in class, teacher attitude, etc., which led to the fact that although students completed the purpose of “classing,” they felt this “one experience” is in short supply. In other words, there is no system for describing how good or bad “an experience” is. After all, the expected construction is multilayered, so it is necessary to re-examine “an experience” from the perspective of body metaphor. As “an experience” experience, like “substance” “event” “behavior” and “state” become the object of physical metaphor. Therefore, this study proposes to take experience as the object of body metaphor and construct a conceptual container with inner-outer orientation from the genetic level. This is an experience “container” with the behavior of entering the classroom as the turning point. The experience before entering the classroom is the experience outside the container, which is called the “external experience”; the experience after entering the classroom is the experience in the container, which is called the “internal experience” [18]. The “EEI model” divides the process of experience into three stages: expectation, event, and impact. It is essentially a time model that explores how the experience occurs in the time dimension and its follow-up. But all time models have their limitations. On the one hand, from the physical dimension, the time model cannot show the obscurity of the product or service to the user’s final experience; on the other hand, from
According to the situation description swimlane diagram, the situation space of online classroom users is drawn, as shown in Figure 4.

4.2. Building a User Journey Map. The process of the traditional offline classroom is as follows: check the time and place of the class-on the way to the classroom-check in (or have)-find a seat-open textbooks, handouts and other school supplies-listen to the class-take notes-discuss with classmates between classes (or)-be called to answer questions (or yes)-record coursework-leave class-pack school supplies-leave the classroom. Among them, the classroom acts as a space medium that brings together teachers and students. For students and teachers, it is a temporary residence, and the bell of the get out of class will always ring. [20,21].

The class process of the existing online classroom products is as follows: the teacher notifies the class in the class group when the class will take place. When the time comes, the teacher will drop a Tencent conference meeting number or link to the group, or invite the whole class to join the live broadcast on the corporate WeChat. After the teacher entered the meeting, he shared his screen to explain the PPT for lesson preparation, and the student took notes while listening to the class. After the course is over, everyone will leave the conference live room. The students then communicate and collaborate with the classmates in the group on WeChat or other communication tools to complete the homework. This process is inconvenient. Everyone is distributed in different parts of the country. A collaborative tool group with online classrooms as the carrier becomes very necessary.

In the traditional service blueprint, the direct interface between products and services and users is called the operation interface. The interface not only refers to the human-computer interaction interface of the mobile phone screen or computer window in the narrow sense, but actually covers the direct or indirect contact between products and services and users. Mr. Dai Fupping proposed generalized interface and full-contact design thinking based on Husserl’s spatial intuition. That is to say, the contact is not only performed on the specified contacts, but also contacts outside the specified contacts. Non-contacts also become contacts through
contact, so they are actually full contacts. This is actually because Mr. Dai Fuping took human freedom into consideration in the design at the philosophical level. The subjective initiative of human freedom cannot be ignored. Do not regard the user as a number or symbol in an equation, but consider that he is a person with essential intuitive ability. Therefore, in the apperception of this essential intuitive ability, non-contact points may also become contact points, as shown in Figure 5.

Restored to the specific online classroom scene, the apperception of this essential intuitive ability of people is reflected in the specific scene. The generalized interface includes not only the software interaction interface of the class but also the interface background or background interface formed by the desks and chairs in the space where it is located. Not only that, the head-mounted hardware in this design is in contact with the user’s scalp to form a body interface, and the touch panel is adjusted to form an interactive interface with fingers. These interfaces will be composed of a series of experience touch points, such as the elasticity of the head beam, the texture, and agility of touch.

4.3. Building an All-Touch User-Other Interface. Turning to the other (derAndere), that is, the subject of the full-contact and generalized interface with other people in this space is
replaced, such as the user’s parents, friends, and even pets. What potential touchpoints will they have with the product or target user in this common field? These things that traditional designers choose to ignore can actually be taken into account, because we cannot design a person completely separated from his real-life scenes and characters. If the touch points of the people around the user can be taken into consideration, it will eventually bring about changes in the way people communicate with each other. The product as a carrier becomes a dual interface, which is the interface of “Möbius strip.” Different people’s interfaces can produce a meeting point, instead of connecting users with other people’s space or resources through a product. Taken apart, this is an “onion” interface, as shown in Figure 6. The dual interface proposed in this study is to use the product as the medium to bring people in this space into the category of experience design. This is different from the previous contact points above, which are not only the contacts of a certain person, but the full-user, full-contact, or full-consciousness contact in the true sense. Improvements in the way people interact with each other in the spatial field can be achieved through this dual interface.

Under the guidance of the design thinking of all-consciousness and all-contact, this research integrates the potential interaction interface of family members and the target interaction interface of students into a system and at the same time as the object of experience design, forming a “student user as the main body of operation.” “Online operation interface,” “offline operation interface,” and “other interface” with family members as the main body. In order to enable target users to obtain an immersive online and offline operating experience without being disturbed by others, it is necessary to study the behavioral scenarios of others and design the interface of others so that others can operate in this field. Get the feedback they should have, and then guide them to make the right behavior, as shown in Figure 7.

By establishing different behavioral scene models, the interface systems of different roles are not mechanically integrated so that the target users have an immersive class experience. According to the different types of touchpoints, this study divides the touchpoints into the following types: visual touchpoints, physical touchpoints, and interactive touchpoints. And incorporate different types of touchpoints into the appropriate interface.

4.4. Main Product Modules and Experience Service System

4.4.1. Class Module. The class module includes three scenarios: before class, during class, and after class. Before class, students can learn the specific information of this course by entering the course details page, including course name, instructor, course label, course outline, teaching objectives, homework and discussion, and related training plans, and can also recommend this course to your classmates. During class, after students enter the class, the system automatically turns off the students’ microphones and cameras. Students can manually turn on the microphone and camera, and can share the class ID to add classmates. In terms of hardware, students can enter the immersive classroom atmosphere by wearing professional online classroom headsets. The hardware has microvibration energy, and by taking a pat on the avatar, a private interaction is formed between students without affecting the classroom environment. There are class notes, drawing boards, and schedules in the classroom recording tool. You can cancel the acceptance of classmates’ pats, and enable or disable the beauty function. One of the most distinctive designs on the student side is the curriculum. Clicking a course on the curriculum will jump to the course details page. If you are in class, you will directly jump to the class live page. The traditional curriculum only provides viewing; the curriculum designed in this study provides classroom entrance. Friends can view each other’s class schedule and learn about each other’s class time and common courses. After class,
system will automatically generate class time for users, and a more detailed statistics will be formed every week, such as "You have completed 290 minutes of course study this week and participated in three courses, which is great!" which will push some short sentences about learning methods. The biggest difference between the class module on the teacher side and the student side is that the teacher can edit and design the course content, and has more authority to operate the classroom. For example, the “Take a pat” function can only allow the teacher to take pictures of the students, and the students cannot take pictures of the teacher.

4.4.2. Collaboration-Shared Modules. Compared with the traditional student work alone, the current student work advocates division of labor and cooperation. In this study, an online group module is designed on the student side of the online classroom, which is used for students to collaborate and discuss learning. The truth is always clearer and clearer, and the practice is always the best standard to verify the theory. This process is an effective supplement to the classroom time. Taking the design school where this institute is located as an example, all courses require teamwork to be completed, and design activities pay attention to team awareness and do not advocate fighting alone. In the existing online classroom products, there is a lack of collaborative design for college students. Interaction and vision overlapped for a period of time. At this time, visual students will first formulate visual specifications and components, and product students will also join the discussion. Group members can manage their own personal plans. Everyone’s personal plan can be synchronized to the online end in real time and shared with team members. Each individual plan involves other team members, forming a positive cycle of mutual promotion. The relationship between classmates is not only a collaborative relationship but also a relationship of friends. In order to avoid strong work attributes, this study added some interesting designs to the online group, such as today’s Whisper. This is an anonymous truth-talking area that can add a little fun to busy work and add some lubricant to task-driven and sometimes tense relationships, as shown in Figure 8.

4.4.3. Lesson Preparation and Preview Linkage Lesson Preparation Module. Existing mainstream online classroom products such as DingTalk, Enterprise WeChat, and Tencent Meetings do not have modules for teachers to prepare lessons. Their office attributes and tool attributes are relatively strong, and they attach importance to timely meeting capabilities in product design. In the design of online classes for college students, the teacher’s lesson preparation is very important, which is related to the quality of the class. This is also designed under the guidance of all-touch design thinking. In the previous investigation, this study found that most of the online classes during the COVID-19 epidemic did not have syllabuses and had a strong temporary nature. This results in students not knowing what to expect before class, and therefore not knowing how to prepare. Some difficult and systematic courses, such as advanced mathematics and physics, lack of preclass preparation is very unfriendly to students. In traditional classrooms, teachers have difficulty in grasping the basic situation of students during lesson preparation, and often fall into misunderstandings. The online classroom lesson preparation module designed in this research solves this problem well. Taking advantage of the timeliness of online and online sharing, while teachers are preparing lessons, they can be shared with class groups in a timely manner to form positive interactions with students and get feedback on lesson preparation. Teachers can do questionnaires, voting, and other activities in the group, and design courses in a "personalized" style, realizing “personalized courses” that cannot be achieved in traditional classrooms.

4.4.4. Software and Hardware Interaction Module. The software and hardware interaction module is based on the online classroom software and hardware parts. Why introduce hardware? Professional hardware is to create an immersive classroom space, to separate students and teachers from their environment, and devote themselves to classroom learning and teaching. In traditional classrooms, each course will be completed in an independent classroom. The function of the classroom is to isolate the classroom.
from other environments and form a closed and immersive teaching environment. First of all, as a specialized device, the hardware can only be used on the online classroom APP, specifically as shown in Figure 9. This research draws on several market-proven professional equipment, such as iFLYTEK's professional voice recorder and Bose's "Sleep Bean." The hardware extracts students from the home environment through noise reduction technology and then uses sound technology to simulate the immersion brought by the sound space of the offline classroom.

5. Conclusion

Under the process of education modernization, the development of online education has become an inevitable trend. As the main front of talent training and the key implementation object of education modernization development plans, the teaching effect of online classrooms in colleges and universities is a problem that is generally concerned by the current society. It is particularly necessary to improve the teaching effect of online classrooms in colleges and universities through investigation and research. Therefore, through Bourdieu's field theory, this study analyzes various relationships in the online classroom field of colleges and universities from a micro-perspective, aiming to clarify the ideal state of the online classroom field of colleges and universities so as to find an optimization path and improve colleges and universities. Combining the theoretical research of Heidegger and Merleau-Ponty, this study proposes a "field-based embodied behavior model"; through the research on the characteristics of cloud classroom experience and the investigation of actual needs, it proposes a "new positioning of cloud classroom learning experience." At the level of experience design strategy, combining the field-based embodied behavior model and the specific design practice form, the "experience design strategy under the embodied scFene" is proposed; based on the new positioning of cloud classroom learning experience, "experience design for experience unmasking" is proposed.

Data Availability

The dataset can be accessed upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

