

Research on the Spatial Model of the Integration of Positive Emotion into the Process of Innovation and Entrepreneurship Education

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Abstract: Based on the theory of “space production,” the space of traditional innovation and entrepreneurship education is a relatively closed classroom, presenting a one-way structure of teacher-podium-student seats, which is essentially the materialization of the one-way transmission relationship of educational power and the relationship between knowledge authority and passive recipient. The social relationship between teachers as the leaders of knowledge and resources and students as passive recipients solidifies the direction of knowledge transmission through spatial layout. According to the particularity of the innovation and entrepreneurship education process, spatial factors are regarded as the key variables of participating in positive emotions, which is conducive to restoring the significantly heterogeneous innovation and entrepreneurship education environment and clarifying the key factors that may affect the integration of positive emotions into innovation and entrepreneurship education. Based on the phased characteristics of innovation and entrepreneurship education, the spatial model with ideological and political knowledge and innovation and entrepreneurship education as the content is a supplement to the traditional point-line-surface positive emotion implantation model.

Keywords: Positive emotion; Innovation and entrepreneurship education; Spatial model

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1. Introduction

Integrating positive emotions into innovation and entrepreneurship education courses and cultivating high-quality innovative and entrepreneurial talents with feelings of family and country, innovative spirit, and sense of responsibility is one of the important goals of higher education. As an important starting point for deepening the reform of higher education, innovation and entrepreneurship education not only shoulders the task of cultivating innovative thinking and improving entrepreneurial capabilities, but also shoulders the mission of value-led education. The integration of positive emotions and innovation and entrepreneurship education achieves the

three-in-one education goal of “value shaping, ability cultivation, and knowledge transfer,” thereby improving the quality of human resources and promoting the all-round development of college students. By strengthening innovative research on “new liberal arts” talent training, we will build a new space system with innovative characteristics for innovation and entrepreneurship education, and feedback the development of innovation and entrepreneurship education.

2. Review of the theory of space and emotion in education

Lefebvre pointed out that space is filled with social relations ^[1]. The core logic of the theory of “production of space” is that space is not a neutral and objective physical container, but the product, carrier, and medium of social relations, which can be solidified, reproduced, and interact with each other through the production and construction of space. The study of educational space pays attention to the value orientation of education and emphasizes that while reconstructing itself, educational space “involves students in different situational events.” Durkheim pointed out that the performance of space is the initial coordination of sensory experience materials ^[2]. Space and time are also the structures of society. The division of space has social differences and reflects specific emotional values. Different social organizations project and reflect different spaces. For school education, in order to adapt to the change of students’ self-role, reconstructing the educational process, teaching contents, teaching subjects and teaching methods from the perspective of space will help to achieve the goal of knowledge acquisition.

Harvey pointed out that “every social formation constructs objective concepts of space and time and organizes material practice according to these concepts” ^[3]. Young argued that the primary function of school practice is to impart knowledge to students that they cannot acquire at home. Here, home and school imply different spatial meanings. Simmel believed that space becomes meaningful from emptiness in the process of social interaction, which is embodied in five basic attributes: exclusivity, segmentation, variability, spatial localization and proximity of interaction. It is difficult for the educational theory constructed with time dimension to make reasonable explanation for the spatial problem in the practice of modernity education. It is necessary to bring the concept of space into the framework of educational theory and examine education with spatial thinking, that is, the spatial turn of educational research.

The limitations of spatial research are mainly reflected in two aspects. First, the understanding of the connotation of the concept is biased and used narrowly, confusing “space” with “region” and “place.” “space” is regarded as a “container” or “carrier” for activities in the traditional sense. The existing research mainly focuses on the curriculum development and design of related topics such as ideological and political education, information education, innovation and entrepreneurship education, which is based on the linear thinking of “human-content-environment-perception” ^[4]. It does not really look at the spatiality. In the spatial model, the inherent knowledge structure of innovation and entrepreneurship education is the basic condition to achieve spatial effectiveness. Based on the analysis of spatial heterogeneity, this paper regards the ideological and political elements, knowledge points, subjectivity, object, process and environmental elements in innovation and entrepreneurship education as a whole, and constructs a spatial cognition that integrates the stages of education, the environment and the differences between subject and object. Based on the heterogeneous spatial cognition, perfecting the positive emotional integration strategy is of great practical significance to improve the teaching effect of innovation and entrepreneurship for college students ^[5].

3. The spatial logic of positive emotion cultivation in the education process

Education is carried out in space and is the product of space, and education is also producing space. Compared with spontaneous learning, differentiated spatial experience has higher efficiency by stimulating differentiated emotions. Positive emotion in education refers to the sum of emotional experience and emotional state triggered by cognitive experience, emotional resonance, and value identification in the process of educational teaching activities and teacher-student interaction, which can positively drive learners' learning behavior, psychological development, and social growth, and promote educators' teaching effectiveness^[6].

The premise of positive emotion implantation is emotion generation. According to Randall Collins' interactive ritual chain theory, the core driving force of human social behavior is the "emotional energy" generated through ritualized interaction. The generation of this energy depends on four elements: the time and space focus of common presence, the production of symbols of common concern, the cycle strengthening of emotional synchronization, and the long-term precipitation of moral symbols. The soft constraint feature of positive emotion coincides with this theoretical logic, that is, abandoning the mandatory logic of hard indoctrination, letting teachers and students form emotional synchronization in the interaction of value symbols of common concern, and finally transforming abstract values into stable moral identity. On the other hand, the characteristics of emphasizing interaction directly correspond to the core requirements of interactive rituals. Only through continuous teacher-student dialogue, student-student cooperation, and other forms of interaction can value symbols be given emotional value in collective interpretation, so that soft constraints from "external requirements" to "internal identity"^[7].

Educational space is the result of the combined operation of educational activities and material foundations. It is a superimposed spatial structure that integrates educational subjects, objects, environmental factors, etc. Its essence is the manifestation of spatial influence in different regions and different groups. Drawing on Bourdieu's space concept, educational space can be seen as a superposition of individual spaces in addition to public space, with the educated as the center, forming family education space, school education space, and social education space. The spatial model of ideological and political implantation in innovation and entrepreneurship education includes three spatial dimensions: vertical, horizontal, and vertical interlacing. These three dimensions have differentiated subjects, objects, environments, and connection methods, and thus have an emotional catalytic effect. As illustrated in **Figure 1**, the following black-and-white flowchart presents a simplified mechanism of this dynamic relationship.

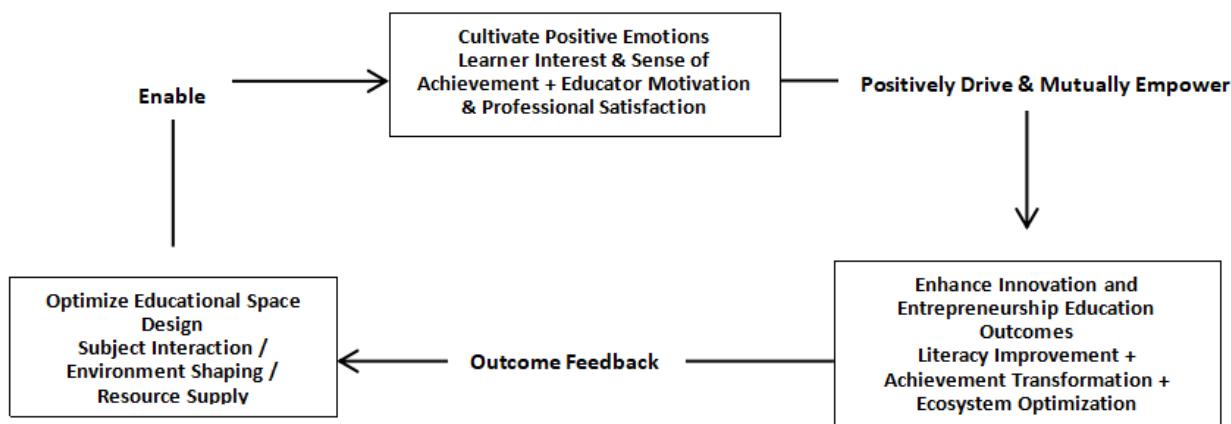


Figure 1. Simplified mechanism of educational space, positive emotions, and innovation and entrepreneurship education outcomes

In the educational space, the effect of this interactive ritual is directly affected by the spatial form: the closed one-way layout of the classroom can easily destroy the equality of the interactive ritual, leading to insufficient generation of emotional energy; while the open collaboration space of the entrepreneurial park provides time and space guarantees for multi-subject interactive rituals, making the value infiltration effect of soft constraints more significant^[8].

4. Insufficiencies in cultivating positive emotions in innovation and entrepreneurship education and the practice of space reconstruction

4.1. The cultivation of positive emotions in innovation and entrepreneurship education

This topic surveyed 756 students and collected 680 valid questionnaires. When asked whether they were interested in independent innovation and entrepreneurship, the majority of students chose average, accounting for 48.28%, followed by relatively interested, accounting for 31.03%; very interested students accounted for only 13.79%, and students who were not very interested or not interested accounted for only 3.45%. However, the current innovation and entrepreneurship education for college students generally ignores students' individual needs and professional characteristics, and is insufficiently targeted^[9]. Preliminary research found that students' expectations for innovation and entrepreneurship education are mostly centered on the characteristics of the major. They hope that through innovation and entrepreneurship education, they can effectively utilize what they have learned in the major, maximize the value of professional knowledge, and achieve the goal of applying what they have learned through entrepreneurial practice. With clear targeted learning strategies at the high school level, China's liberal arts sub-discipline education makes liberal arts students lack the thinking tendency to use new technologies to solve social problems, which obviously limits the scope of traditional liberal arts innovation and entrepreneurship education and limits the imagination, initiative, and passion of liberal arts students to solve problems^[10].

4.2. Spatial reconstruction of positive emotional

According to the analysis framework of "scene characteristics-integration way-education effect-correlation logic," from the dimension of scene characteristics, integration mode, education effect, and correlation mechanism, this paper analyzes how the difference of scene characteristics affects the way of ideological and political implantation, and then leads to the inherent logic of difference of education effect.

4.2.1. Differences in characteristics of scenes

As the core scene of innovation and entrepreneurship education, the classroom and entrepreneurship park base have significant differences in function orientation, physical space, resource allocation, interaction mode, cultural atmosphere, and so on. These differences provide different basic conditions for the integration of positive emotion, and also determine the differentiation of integration mode and effect. The core characteristics of traditional classroom space include functional orientation, that is, taking theoretical knowledge teaching as the core, focusing on the systematic explanation of basic theories, policies and regulations, and thinking methods of innovation and entrepreneurship, with the goal of helping students establish a complete knowledge system of innovation and entrepreneurship and cultivating innovative thinking and entrepreneurship consciousness. The physical space, that is, relatively closed and fixed, is mostly standardized classrooms. The spatial layout is dominated by the one-way transmission mode of "teacher podium + student seat." The students' activity range is limited and the interactive space is relatively narrow. In terms of resource allocation, teaching

resources are the main ones, including teaching materials, courseware, multimedia equipment, etc. The type of resources is relatively limited, lacking the support of practical resources and industrial resources. Teachers are the main providers of resources, while students passively accept the input of resources. In terms of interaction mode, one-way interaction between teachers and students is the main mode. Teachers transmit knowledge and value ideas by teaching and asking questions. Students mainly participate passively in listening, recording, and answering questions. Students interact less and mostly in shallow interaction such as classroom discussions. The core characteristics of the space of entrepreneurship park include functional orientation, that is, focusing on practical training of innovative entrepreneurship projects, team cooperation, and project incubation. The goal is to improve students' entrepreneurial actual combat ability and cultivate team cooperation spirit and responsibility consciousness. In terms of physical space, it tends to be open and diversified, including open office area, project seminar room, laboratory, roadshow hall, and other functional areas. In terms of resource allocation, the resource types are rich and diversified, covering practical resources, industrial resources, policy resources, etc. Resources are mainly supplied by multi-subject coordination, and students can actively obtain and integrate resources. In terms of interaction mode, multi-directional collaborative interaction is the main mode, including student-student interaction, team cooperation, school-enterprise interaction, etc. The interactive content focuses on solving the actual combat problems of the project, and the depth and frequency of interaction are much higher than those of traditional classroom spaces. In terms of cultural atmosphere, the atmosphere of innovation and practice is the main one, emphasizing "trial and error tolerance" and "collaborative innovation," encouraging students to actively explore and practice boldly, paying attention to the cultivation of actual combat ability and responsibility consciousness, and educating people in a relatively open and free atmosphere.

4.2.2. Differences between two sets of scene characteristics

The classroom space of positive emotional integration is mainly "theoretical infiltration" integration, and the value guidance is realized through curriculum content mining and case explanation, while the entrepreneurial park space is mainly "practice enabling" integration. Value practice is realized through project practice, mentor guidance, and other ways^[9]. Positive emotional integration takes theoretical teaching as the carrier, and realizes the cultivation of value cognition by organically combining ideological and political elements with the theoretical knowledge of innovation and entrepreneurship. As shown in **Table 1**, these two spatial models have distinct differences in multiple dimensions.

Table 1. Differences in spatial characteristics between classroom space and entrepreneurial park

Spatial characteristics	Classroom space	Entrepreneurship park space
Functional orientation	Impart theoretical knowledge, cultivate innovative thinking, and awareness.	Focus on practical incubation, improve entrepreneurial practical capabilities.
Physical space	Closed and fixed, with one-way transmission layout.	Open and diverse, with multi-functional collaborative layout.
Resource allocation	Single teaching resources, supplied mainly by teachers.	Diversified resource collaboration, actively acquired by students.
Interaction mode	One-way interaction between teachers and students, superficial peer interaction.	Multi-directional collaborative interaction, in-depth practical interaction.
Cultural atmosphere	Rigorous academic atmosphere, emphasizing knowledge logic.	Open and practical atmosphere, encouraging trial and innovation.

The distribution of teaching facilities such as school classrooms, playgrounds, and libraries, architectural landscape design and environmental layout, and the introduction of learning places such as botanical gardens and small workshops provide not only a situation for individuals to communicate, but also metaphors and symbols. constitute the geographical form of school education space. School building and the development of the degree of socialization of students, the allocation of places and the role orientation of individual groups, the arrangement and academic achievement of classroom space (seats), the architectural decoration and gender role stereotyping in classrooms, the density of students in school buildings and students' psychological development, etc., school space (geographical environment) is not only a place to impart knowledge, it itself has a variety of educational functions.

According to **Table 1**, from the perspective of knowledge teaching characteristics, the longitudinal dimension of knowledge transfer follows the “cognitive law,” that is, the gradual deepening from abstract theory to concrete application, from general knowledge to special skills. For example, the basic theories of innovation and entrepreneurship (such as business model canvas and lean entrepreneurial thinking) need to be systematically taught in the classroom space, while cutting-edge industry knowledge and entrepreneurial policy interpretation can be extended to the entrepreneurial base space, and deepened by corporate mentors based on real cases. This vertical extension breaks the physical boundaries of classroom space and effectively connects the knowledge acquisition process with practical scenarios.

5. Research conclusion

Positive emotional learning is the process of actively constructing knowledge and value cognition in the interaction between individuals and the environment, rather than simply passively accepting external indoctrination. The soft constraint of positive emotions is reflected in respect for students' subjective status—it does not pursue the one-way transmission of value concepts, but provides students with space for independent interpretation and active construction of value cognition by setting open topics and creating an inclusive discussion atmosphere. The single resource supply and one-way interaction of traditional classroom space limit the depth of students' active construction. The open and interactive space model, such as the multiple resources and multi-directional collaborative interaction of the entrepreneurial park, provides learners with richer construction materials and interactive scenarios, making value construction under soft constraints practical. The discipline characteristics of soft constraints on positive emotions and emphasis on interaction characteristics determine the direction of social relationship construction in space.

From the three-dimensional spatial mode of “vertical-horizontal-in-depth intersection,” it enriches the theoretical system of innovation and entrepreneurship education space, and clarifies the inherent relationship of “spatial dimension-carrier attribute-ideological and political element-educational goal.” By exploring the differentiated educational function and positive emotion integration path of the classroom and entrepreneurship-based space, it provides operable practical reference for the optimization of innovation and entrepreneurship education space layout and the reform of teaching mode. Based on the system design of three-dimensional space mode, explore the transformation of positive emotional elements from “additional embellishment” to “embedded integration,” from the step-by-step deepening path of “cognitive construction-value identification-value practice,” embed ideological and political elements such as family feelings, responsibility, integrity management into different educational stages and spatial scenes, so as to promote value shaping, knowledge transmission, and ability cultivation simultaneously, and effectively practice innovation and entrepreneurship

education. The trinity of “value shaping, ability cultivation, and knowledge imparting” provides strong support for cultivating innovative talents with social responsibility.

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Disclosure statement

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