

Research on the Cultivation of Innovative Talents in the Blending Learning Mode of Universities in the Era of Internet Plus

Xiang-Ping WANG^{1,a}, Yan-Li FANG^{2,b,*}

¹ Department of Logistics Management and Engineering, Zhuhai College of Jilin University, Zhuhai, China

^a65039491@qq.com, ^bfangyanli_511@163.com

* Yan-Li FANG

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Abstract. Innovative talent cultivation is the core of a nation and national education. Accelerating knowledge innovation and innovative talent cultivation is a very urgent and important strategic task for promoting China's modernization and a decisive factor for national competitiveness. Cultivating innovative talents is the need of China's economic and social development and is a strategic choice to cope with international talent competition. The blending learning mode has the advantage of combining traditional learning methods with online learning. It can not only play the leading role of teachers in guiding, inspiring and monitoring the teaching process, but can also fully reflect the initiative, enthusiasm and creativity of students as the main body of the learning process, which is conducive to the cultivation of innovative talents.

1. Introduction

With its scale formed in China, Internet has been applied in diverse ways. It has been changing profoundly to change people's learning, work and lifestyle. Li Jingwen, an academician of the Chinese Academy of Engineering, said that Chinese education can be divided into four eras. Nowadays, with the continuous use and development of Internet, Chinese education has begun to enter the 4.0 era. It is the era of "Internet + education", which is truly student-centered. Compared with traditional education, "Internet + education" enables real individualized training, which is conducive to the realization of students' independent choice and personality development, and the cultivation of talents with innovative consciousness, entrepreneurial ability and challenge spirit. The blending learning mode, as a combination of online learning and face-to-face learning set in the "Internet" background, effectively combines the learning theories, learning resources, learning environment and learning methods together, this kind of blending learning mode is conducive to the cultivation of students' independent learning ability, innovative practice ability, and teamwork spirit.

2. Literature review

2.1 Research status of innovative talents training

Innovative talents mainly refer to talents with innovative consciousness, innovative ability and innovative personality. Innovative talents should have the consciousness and ability of creativity, individuality, self-learning, communication and cooperation skills.

As the foundation and leading force of an innovative nation, higher education institutions play an irreplaceable role in building innovative countries. Shi Jinfeng believes that the marketization and internationalization of higher education means that the domestic competition of higher education is internationalized and the international competition is domesticated [1]. This also puts forward new and higher requirements for the cultivation of innovative talents in colleges and universities, and points out that the construction of innovative countries requires innovative talents, and the application of innovative talent cultivation system is one of the important systems for cultivating innovative talents. Wang Zhi believes that the cultivation of talents in colleges and universities is not

only a test-oriented and academic education, but also a quality innovation education [2]. As far as the current educational situation in China is concerned, undergraduate innovation quality education has been popular for more than ten years, but many aspects are still not perfect and mature enough, and they still need to be continuously reformed and deepened. Therefore, the study of undergraduate innovation education in colleges and universities has a strong sense of the times. It can be seen that in the era of knowledge economy, cultivating and molding talents with innovative consciousness, thinking and ability has become the premise and key to the development of knowledge economy. It is the need to cultivate innovative talents for China's economic and social development and to respond to the competition of international talents.

At present, domestic researches on the cultivation of innovative talents have made some achievements. Many research scholars sum up the existing research results in China, point out the inadequacies of the research, and propose new research directions. For example, Wang Jinhua through the historical review of cultivating innovative talents in colleges and universities points out the main problems in the cultivation of innovative talents, and proposes that universities should strengthen the system of innovative education and the construction of operational mechanisms, the construction of innovative curriculum systems, and innovative teaching [3]. Measures to build a practical platform for the construction of teaching staff and accelerate the cultivation of innovative talents should be taken. Qiao Wanmin and Xing Liang believe that open education is a multi-disciplinary, democratic, free and innovative education. It is an effective way to cultivate innovative talents, a successful experience in cultivating innovative talents in western developed countries, a breakthrough and promotion of China's higher education reform and the entry point for the development of innovative talents [4]. Research shows that innovative talents have strong self-learning and exploration skills, a high level of professionalism, extensive and solid knowledge in a certain field or a certain aspect, and good moral cultivation and can cooperate and coexist with others. Therefore, how to cultivate innovative talents is worthy of our study.

2.2 Overview of blending learning

Early in China, the concept of blending learning was advocated by Professor He Kekang of Beijing Normal University. His view was: "The blending learning model combines the advantages of traditional teaching methods with the advantages of networked teaching. It not only plays the leading role of teachers in guidance, inspiration, and supervision, but also fully reflects the initiative, enthusiasm and creativity of students as the main body of the learning process [5]. Later, Director Li Fengqing of Shandong Normal University pointed out in the article of the theoretical basis and teaching design of hybrid teaching that attention should be paid to how to help students achieve optimal learning effects and distinguishing the two, proposing that blending learning means providing resources and activities appropriate to learning environment with the application of appropriate media technologies at appropriate time [6]. Thus, appropriate students can develop appropriate abilities to achieve a teaching perspective that optimizes teaching outcomes. Blending learning not only changes the cognitive style of students, but also changes the teaching mode, teaching strategies and roles of teachers.

3. Advantage analysis of blending learning mode

From the perspective of teaching form, the blending learning form breaks the traditional teaching mode based on a single teacher teaching, but is unrealistic to have a fully networked course without a teacher. The traditional teaching and flexible networking are complementary instead of replacing each other. Therefore, the blending learning form is a fusion of teaching advantages. The "big class classroom + online line" has changed the traditional course teaching form, which provides students with the conditions for self-learning time and space.

From the perspective of teaching purposes, the large class classroom teaching provides summaries and arrangements, allows students to know what to learn, what to do, what problems to solve, and what kind of knowledge to be used to solve these problems, and finally summarizes the learning

situation. The process of online learning + small class discussion aims at stimulating students' ability of self-learning and developing problems, and cultivates students' ability to learn independently, discover problems, analyze problems and solve problems.

From the perspective of the major participants, the main tasks of teachers and students in the form of blending learning are as follows:

Table 1. Main tasks of teachers and students in a blending learning format

	Teacher	Student
Classroom	Knowledge point explanation, reinforcement	Problem discussion
	Answering guidance	Participate in practice
	Problem discussion	Point of view demonstration
	Listen to the report	Summary induction
	Teaching evaluation	
Online	Summary feedback	
	Publishing teaching tasks	Accepting teaching tasks
	Provide teaching resources	Self-learning
	Q & A and guidance	Ask a question
		Finish homework

It can be seen that the task of the teacher is no longer just a simple knowledge transfer. The students are no longer just passive knowledge acceptance. The full participation of the students mobilizes the enthusiasm of the students. The students really participate in the classroom teaching and play an important role in it. In the process of reporting and demonstrating, they can even play the role of teacher. The "learning pyramid" theory proves that teaching others can make the knowledge retention rate of 90%. This full participation, knowledge expression, and role exchange have truly realized the "student-oriented" classroom, which is the embodiment of students' true understanding of knowledge.

4. The impact of blending learning on the cultivation of innovative talents

4.1 Conducive to the cultivation of students' independent learning ability

In the transformation of classroom teaching from traditional teaching to blending learning in the era of "Internet +", the role of participants and the way of knowledge transfer and channels are changing, which can realize the transition from "teacher-centered" to "student-centered". The teacher-led classroom shifts to the classrooms explored by students, which enables students to form a critical thinking ability in the process of independent learning, rather than passive cramming. The ability to think critically is the first or most basic characteristics of innovative talents. The cultivation of students' self-learning ability makes students good at discovering the main problems and their crux in the current situation and actively seeks for reliable and reasonable improvement measures.

4.2 Conducive to promoting the depth and breadth of students' learning.

In the blending learning, through the integration of different learning methods, the optimization design of various media resources and the use of various teaching strategies to create rich situations, students' positive emotional experience is stimulated, students' knowledge construction is promoted, and students' advanced thinking and cognition is aroused. The understanding and migration of knowledge is formed, which can enable students to solve practical problems and achieve deep learning. It guides students to be good at synthesis and combining the many courses they have learnt and the knowledge of multiple categories to solve a practical problem. The use of comprehensive knowledge enables students to make breakthroughs, consciously move beyond predecessors, break through the limitation of books and their own teachers. Cultivating the depth of knowledge in a certain field and having the ability to observe the relevance of different disciplines, cultures, and ideas is the ability of innovative talents and the goal of cultivating innovative talents.

4.3 Conducive to the cultivation of students' teamwork spirit

The cooperative learning mode of teamwork has become an important aspect of students' participation in teaching. Whether it is online or offline, discussion and communication have become convenient and feasible. Joint research has become an important form of students' innovative learning. The "group" cooperative learning method changes the limitations of individual student's learning. Teamwork not only increases the communication between students, but also transfers knowledge imperceptibly and can bring about common growth. At the same time, being good at communication and coordination is also an essential element for a person to succeed. It is a basic feature of innovative talents. A person who is good at adapting to the environment and can quickly adjust his or her own state, and is characterized by being good at sharing his own opinions with others and actively listening to others' opinions and suggestions and making others understand their own purposes and intentions. Thus, they can gain understanding, support and respect from others, creating a soft environment for implementing innovative plans. This is often the key to a person's success.

5. Conclusion

Constructing an innovative country is the need of the country's economic and social development. Building innovative national science and technology is the key. From the perspective of teaching purposes, the blending learning mode broadens students' horizons, deepens students' professional knowledge, and effectively enhances students' independent learning ability and the ability to explore and solve problems. From the perspective of participants, this model breaks the limitations of traditional classrooms and makes "student-centered" autonomous learning a reality.

References

- [1] Shi Jinfeng. Strategic Thinking on Constructing Applied Innovative Talents Training System, *Coal Higher Education*, vol.04, pp. 29-31, 2008.
- [2] Wang Zhi. Analysis of the Status Quo of the Cultivation of Innovative Talents in Colleges and Universities , *Market Forum*, vol.01, pp. 98-99, 2014.
- [3] Wang Jinhua. Research on Accelerating the Cultivation of Innovative Talents in Colleges and Universities in the New Period, *Journal of Hubei Adult Education College*, vol.23(02) , pp. 1-5, 2017.
- [4] Qiao Wanmin, Xing Liang. Open Education: A New Perspective on the Cultivation of Innovative Talents, *Educational Research*, vol.31(10) , pp.86-90+106, 2010.
- [5] He Kekang, Looking at the New Development of Educational Technology Theory from Blending Learning , *Journal of National Academy of Educational Administration*, vol. 09, pp.37-48+79, 2005.
- [6] Li Fengqing, Theoretical Foundation and Teaching Design of Mixed Teaching , *Modern Educational Technology*, vol. 26(09), pp.18-24, 2016.
- [7] MIRANDAMARTEL M J, MIHIRAMIREZ A, ARTEAGAORTIZ J. How the level of economic growth and the constituent elements of innovation attract international talent? , *Engineering Economics*, vol. 28 (2), pp.187-197, 2017.