



Study on Innovation Capability of College Students Based on Extenics and Theory of Creativity

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ABSTRACT

Individual innovation ability is an essential element for enterprise-independent innovation and building a new nation. College students are the main force behind future innovation. But there is no practical means or method for promotion Student ability to innovate. This post discusses the features and benefits of creativity theory and extensions We analyzed and compared the major existing innovation methods from the perspective of capacity building. next, Presenting a combined training model to promote innovative abilities of students, taking advantage of creativity Research and Extenics are integrated and mutually supportive. The effectiveness of our model is proven by our educational practices Case. This dissertation also provides reference material as a guide to improving the innovative abilities of graduate students.

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1. INTRODUCTION

Along with the trend of economic globalization in the information age, all countries are gradually strengthening their protection and utilization of intellectual property rights.

The value of intangible assets such as invention patent, software copyright and brand, is prior to that of tangible assets such as equipment and workshop. Therefore, the innovation capability has increasingly become the vital part of a nation's comprehensive strength and the core competence of the corporations [1]. The key factor for a country or region to maintain long term economic growth is that the corporations can enhance their core competence independently.

Continuous rapid economic growth relies on a transfer from the extensive growth merely based on factor inputs, to the intensive growth based on factor combinations with improved efficiency [2]. The efficiency can only be achieved on basis of continuous rapid enhancement of the corporations' independent innovation capability. When the corporations no longer lack of motivation to innovate, the lack of methodology will become the new bottleneck that impedes the enhancement of innovation capability [3].

The independent innovation capability of the nation and corporations rely on individuals. While the corporations are increasing investments on research and development, the ranking of China's innovation capability is constantly falling. Creativity research and Extenics are major methods to promote the innovation capability of undergraduates, but both have some shortcomings [4]. To solve the "Qian's question" on lack of innovation in college education, enhance the independent innovation capability of corporations and build an innovative country, there is dramatic theoretical and practical significance in comparatively studying Extenics and creativity research, investigating their mechanism and functions in enhancing the innovation capability of undergraduates, and building a training system with Chinese characteristics for innovation capability [5].

The purpose of this paper is to propose a combined method for college students to improve their innovation capability [6]. By analyzing the shortages and advantages of Extenics and Theory of Creativity, and sharing knowledge from teaching practice, we put forward a combined innovation training model that will benefit the students to improve their ability of solving the problem and apply for patents [7]. The rest of the paper is organized as follows: in Section 2 we introduce the theories and methods of creativity and Extenics for preparing our solution [8]. Section 3 describes a combined model for enhancement of innovation capability of college students. Section 4 presents a case study to show the practice results. Section 5 concludes the paper with future research directions [9].

2. LITERATURE REVIEW

2.1. Theory of Creativity

Generally, creativity is defined as the creation of novel and useful ideas or solutions (There are two indispensable keywords in the definition: novel and useful. Plsek regarded creativity as a combination and rearrangement of knowledge - in the head of people who allow flexible thinking - to create novel ideas which are surprising but useful. Heap explained that creativity is to integrate new ideas and concepts through fundamental reconstruction and re-imagination of existing objects [10]. He considered innovation as implementation of creativity [11].

Amabile broke down creativity into three parts: professional knowledge, innovative thinking skills and motivation. Individual creativity is influenced by personality factors, cognitive style and capability[12], skills of disciplines related to the task, motivation and impacts from social contexts and thus cannot be promoted rapidly in a short period of time. The researches on creativity techniques can just be adopted to enhance individual creativity to some extent [13].

Summarizing the findings of Chinese researchers, creativity research is a new comprehensive crossdiscipline built on the most up-to-date research findings from disciplines such as philosophy, psychology, brain science, futurology, sociology and science of personnel.

The research object of creativity research includes human's creative activities, process, thinking, psychological qualities and environments, etc. Its major goal is to stimulate people's potential and cultivate creativity. Creativity research consists of the following three parts:

1. Theory of creativity: it is based on Marxist creative philosophy and summarizes the creative psychology, thinking and techniques of people, especially the famous scientists and inventors, during the process of invention. It is human-oriented theory on development of creativity [14].
2. Creativity development science: it is created to provide creative education, psychology, thinking, environment, techniques and assessment of creative findings for human's projects of invention.
3. Creativity engineering: it is an engineering science providing creative design, decision consulting, planning program, tracking analysis, operating process and methods, and assessment standards for discoveries, inventions, creations and creative findings.

2.2. Extension Theory — Extenics

Extenics is constituted of Element theory, extension methodology and extension engineering. It is a new discipline for dealing with contradictory problems with formulizing model and produces novel ideas [15]. A matter has many characteristics. Each matter has four extensibilities: the divergent nature, the conjugate nature, the correlative nature and the implicative nature. As to the conjugate [16].

nature, there are four pairs of conjugate parts including the real part (the entity of a matter's existence, such as a pen) and the imaginary part (the sprit of the element, such as brand of the pen), the soft part (relation structure between parts of a system) and the hard part (each part in a system), the latent part (unnoticeable element or forthcoming change) and the apparent part (noticeable element), and the negative part (the part creating positive value to the goal) and the positive part (the part creating negative value to the goal). A matter can be expressed as an ordered triad.

$$R = (N, c, v) \tag{1}$$

R is the matter-element, N represents the matter, c is the characteristics, and v is the N 's measure about the characteristics c . Moreover, Extenics establishes matter-element $R = (N, c, v)$, affair-element $I = (d, b, u)$ and relation-element $Q = (s, a, w)$ (each has attributes/characteristics and their measure) to describe matter, affair and relation [17]. Matter-element, affair-element and relation-element are collectively called basic elements. A matter with many characteristic elements can be described by n -dimensional matter-elements [18].

$$M = \begin{bmatrix} N_m & c_{m1} & v_{m1} \\ & c_{m2} & v_{m2} \\ & \vdots & \vdots \\ & c_{mn} & v_{mn} \end{bmatrix} = (N_m, C_m, V_m) \tag{2}$$

Extenics also presented transformation methods. By certain transformation, one thing that doesn't have property P can be turned into another thing that has the property P . Extension set can describe this kind of transformation quantitatively. So the extension field can be recognized as a set of things that doesn't have the property P but can be changed into those with

the property P. Up to now a series of particular extension methods have been developed and applied in many fields.

2.3. Comparing on Extenics and Theory of Creativity

Creativity research studies people's creativity. It promotes the creativity of creation subject (i.e. individuals) mainly through studies on creation itself. Amabile broke down creativity into three parts: professional knowledge, innovative thinking skills and motives. Individual creativity is influenced by personality factors, cognitive style and capability, skills of disciplines related to the task, motives and impacts from social contexts and thus cannot be promoted rapidly in a short period of time.

The researches on creativity techniques can just be adopted to enhance individual creativity to some extent. Many techniques such as brainstorming and the Delphi technique are known to all. Krohe summarized 22 creativity techniques, such as bug listing, goal/wish, manipulative verbs, nominal group technique, wildest idea, wishful thinking, etc. Zhou and George indicated that leaders may influence the creativity of staff directly or indirectly through environment or culture. There are five means to arouse the members' creativity: identifying the problems and opportunities, gathering information and resources, creating ideas, assessing, modifying, and exchanging ideas. Amabile listed five stages for innovation: problem or task presentation, preparation, response generation, response validation and outcome. Based on her theory, Chen et al partitioned the corporation's occasional innovative procedure into five related stages: occurrence and capture of an occasional phenomenon, observer's interest generation, continuous individual investigation, internal development inside the corporation and product marketing. They described the different responsibilities and behavioral characteristics displayed by individuals and the corporations during the whole process from the occurrence of an occasional phenomenon to the implementation of achievement.

Techniques such as trial-and-error, brainstorming and six thinking hats, rely more on personal psychological factors and intelligence. However, the individual intelligence has large randomness and contingency, and cannot fundamentally solve the comprehensive problems of divergent thinking. For this reason, the effectiveness of innovation cannot be guaranteed.

To sum up, there are still the following three limitations to the research on enhancing the creativity of undergraduates. Firstly, most studies investigated individual creativity from one aspect, and thus we lack systematically integrated studies. Secondly, we are short of studies using information techniques to enhance innovation capability [19].

3. METHOD

Investigating methods and tools for creativity enhancement will provide theoretical references for the relevant departments of the state to make policies, and guiding the corporations and organizations to improve innovation capability, and then provide theoretical and practical guidance to build an innovative college. The combined model is presented as following.

3.1. Stimulation by Theory of Creativity

Trainings in creativity curriculums can enable students to update their mind, waken their attention to things' defects and their sensitivity to problems, and stimulate their sense of innovation [20]. It can shift their minds and destroy their thinking paradigm; so that they can develop creative thinking, and provide novel and special trains of thought for problem solving. Through trainings they master the rules, principles, techniques and methods of creativity, and improve the efficiency in solving problems creatively. The scientific training in creativity can

stimulate students' abilities in imagining, understanding, organizing, converting, self-criticizing and self-inspection.

Common people used to think that only the scientists, inventors, and artists can make the inventions. Now application of creativity makes it no longer mysterious, and effectively helps inventors work actively, clearly, and precisely; rather than passively, blindly, and vaguely. Therefore, creativity science is referred to as an "invisible guide". Its function grants it the scientific value in promoting innovation of knowledge.

On the elements of innovation capability, however different scholars have different statements, the basic spirit is consistent. Creative ability mainly consists of the three parts: related professional knowledge and skills, corresponding creative things and creative personality trends. From the point of promoting individual innovation capability, we integrate the achievements of Creativity Study, and get the formula: innovation capability = $K \times (\text{creative personality} + \text{creative thinking} + \text{creative techniques}) \times \text{knowledge \& skills}$.

In the formula, K refers to human's creative potentiality which is a recessive creative ability. It is a nature every human brain has. It is naturally formed with brain evolution in the long human evolution progress, which is inborn. According to the theory of Creativity, we design some topics to train students on personality, process, psychological preparation, confidence, motivation, risk-taking, willpower and creative spirit.

3.2. Optimization of Creative Environment

Creativity research revealed the rules behind creative activities, and indicated the principles and directions that creative activities should follow. Creativity research not only revealed the rules of creativity theoretically, but also indicated the practical methods and techniques stimulating re-invention. Though we can create things without learning creativity, the efficiency and quality are usually not satisfactory.

Intentionally using creativity theories and methods in creativity training, can fully stimulate the creative intelligence hidden deeply in the brain, inspire people, accelerate thinking, and approach the goal of invention or innovation more rapidly. Hence creativity research can "stimulate intelligence" in application. This function brings about educational value in promoting people's mentally and physically development. Creativity research did specific studies on creative environment, revealed the relationships among creative subject, object and environment, and offered advice in principle on how to optimize creative environment.

3.3. Enhancing Innovative Practical Ability by Extenics

Innovation in essence is a solving process of the contradictory problems, which the condition is unable to meet the goal. For this field, Extension methods provide a basic matter-element model that combines qualitative presentation and quantitative analysis to solve contradictory problems of innovation, rhombus thinking way to explore innovative propositions and a transformation tool to get available innovation blueprints based on the inherent extensibility of elements. Therefore, the innovation methods based on Extension Theory would take advance of specific extension methods to generating new innovative ideas or solutions for the problem solving. According to the framework of Extension theory based innovation methods (Zhou and Li, 2010).

3.4. Solutions for Implementation

Creative capability is a dominant creativity, a kind of human social nature, and is formed through kinds of postnatal educations and trainings, and is closely related with human's knowledge and experiences, that is postnatal training. Innovation capability refers to the ability that a person (innovation subject) is able to get novel achievements through some activities in an ideal environment. The so-called ideal environment is a kind of imaginary "a path strewn with roses" on which "everything goes well" and there isn't any negative effect for the innovative subject. The

purpose of making such an assumption is to limit those uncertain changeable quantities, so as to easily get close to the essence of innovation capability. But actually, a person's ability to comply with or transform environment should also be included in innovation capability. It is in the adversity that perseverance and willpower are necessary and meaningful.

4. RESULT AND DISCUSSION

Based on sufficient surveys and arguments, Hebei Chemical & Pharmaceutical College started the teaching and experimental research program, in which the college offered training courses to cultivate students' innovation capability. The program goes through two stages: Creativity Study Theory mainly used; and "Creativity Study + Extenics" theory comprehensively used.

The teaching actual effects proved that offering foundation courses of Creativity Study complied with students' individual development. Through learning foundation courses, students' concepts were updated. Their awareness on matters' shortcomings and their sensitivity to problems aroused, and their creative consciousness inspired. Changing thinking patterns, breaking with the thinking set and developing creative thinking provides a novel train of thought to solving problems. Creative rules, principles, techniques, methods are mastered by students, which consequently promote the efficiency of creatively solving problems. However, we found that some ability trainings need to be further improved, such as the ability of comprehensive divergent thinking, association, solving problems, and network resource integration. Therefore, we started the second stage.

Our practical results prove that comprehensively using "Extenics plus Creativity Study" can more efficiently train students' comprehensive divergent thinking, associative ability, problem solving ability and the ability to use and integrate network-based information resources, which will be helpful to comprehensively promote college students' innovation capability as well as their learning ability.

4.1 Pay same interest to each concept and exercise: best concept school room coaching and improve exercise school room construction

The production of innovation and entrepreneurship curriculum ought to be dealt with well: first, the mixing dating among innovation and entrepreneurship. In order to interrupt the questioning sample of "emphasizing entrepreneurship, neglecting innovation" in Colleges and universities, we ought to run innovation training via the complete system of Education [6]. At the same time, it will pay interest in integrating the innovation strategies of extenics, which might be the important thing home authentic disciplines, and the mainstream global TRIZ innovation strategies into entrepreneurship training. The 2d is the linkage among the principle lecture room and exercise lecture room. We ought to resolve the hassle of "emphasizing principle however neglecting exercise" withinside the production of innovation and entrepreneurship curriculum. The survey effects display that the delight of university college students is better than that of undergraduate college students.[10]

On the only hand, it additionally displays that undergraduate schools ought to reinforce the development of innovation and entrepreneurship training exercise curriculum. Colleges and universities ought to reinforce the development and coaching of realistic publications through counting on such structures as innovation and entrepreneurship, middle of university school students, bodily shops on campus, innovation workshops.[11]

4.2. Coupling and linkage: balancing the "skins" of innovation and entrepreneurship schooling and expert schooling

Innovation and entrepreneurship instructors do now no longer apprehend the major, and the scholars who are knowledgeable are frequently greater engaged in non expert innovation and entrepreneurship activities; expert instructors do now no longer apprehend innovation, and cannot successfully sell university college students to perform green innovation and entrepreneurship on the premise of the major.[12]

The "skins" phenomenon of innovation and entrepreneurship schooling and expert schooling is obvious. Innovation and entrepreneurship schooling and expert schooling have an inherent energy of relevance and excessive fit. They exist withinside the identical time and space, and feature not unusual place sources that want to be mined urgently. How to comprehend the total interplay and coupling improvement of them is a sensible subject matter worthy of similar study. Therefore, we must absolutely discover the coupling and coordination courting among the 2 in phases of team, environment, carrier, sources, etc. to achieve: first, expert schooling enables innovation and entrepreneurship schooling. Second, *innovation and entrepreneurship*. [13]

4.3.Integration and Embeddedness: innovation and entrepreneurship are incorporated into Ideological and political schooling to recognise the transformation from "minority" to "mass"

To create an upgraded model of innovation and entrepreneurship schooling calls for the transformation of schooling gadgets from "minority" to "mass" [13]. The integration of innovation and entrepreneurship schooling into Ideological and political schooling can make certain the popularization of innovation and entrepreneurship schooling. The creator applies extenics, an unique difficulty in China, to the coaching of Ideological and political courses: to assemble the coaching machine of Ideological and Political Courses Based on "fundamental theory"; to apply "extenics" to version coaching materials, play with notes, examine historic figures, etc.; to apply "actuation technology" to behavior the complete method of experiential small elegance discussion; to apply "extenics" to remedy the contradictions in reality; to apply "extenics" to innovate Methods "to extend students` curriculum achievements into: eight medical and technological papers, eight college medical studies and innovation awards; 2 provincial Challenge Cup students' extracurricular medical and technological instructional works opposition first and 2nd prizes; 2 provincial new Talents Program projects; 2 National College Students' innovation and entrepreneurship schooling projects; 1 superb medical studies and innovation group honor; students' curriculum achievements additionally gained Ningbo society of sociology, Ningbo The community middle of Jiangdong.[14]

4.4.Publicity and momentum building: greater efforts must be made in parallel to amplify the social have an impact on of innovation and Entrepreneurship Education

The survey found that there aren't many achievements withinside the innovation and entrepreneurship training of center college college students in undergraduate colleges, however the pride of college students is decreased than that of university college students. The essential purpose is that the exposure of innovation and entrepreneurship achievements of university college students isn't enough. The following measures must be taken: first, best while there are sports, can there be vitality, and vigorously perform innovation and entrepreneurship sports to stimulate college students` innovation and entrepreneurship vitality. The 2nd is "best while there's an instance where there is strength". Through putting in place progressive and entrepreneurial models, and instructing and guiding university college students, we are able to have an effect on college students with college students and allow lifestyles to infect lifestyles.[15]

5. CONCLUSION

In this article, we systematically analyze individual innovative abilities in terms of microfoundations, thinking, and innovation, and explore the characteristics of creativity

research and Extenics in promoting individual innovative abilities. We draw the following conclusions. Creativity research and expansion has the complementary benefits of. Creativity research has features such as "Invisible Guide", "Intellectual Excitement", and Environmental Design Optimization. On the other hand, Extenics has specialties such as information primitives, systems thinking, and routing innovation. With, the combination of Extenics and Creativity Study is simple and low cost, and is best suited to develop the innovative abilities of college students according to our practice.

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REFERENCE

- [1] A. Argani and W. Taraka, "Pemanfaatan Teknologi Blockchain Untuk Mengoptimalkan Keamanan Sertifikat Pada Perguruan Tinggi," *ADI Bisnis Digital Interdisiplin Jurnal*, vol. 1, no. 1, pp. 10–21, 2020.
- [2] L. Sunarya, K. Sari, D. Wahyu, and P. W. Sahara, "Perancangan Media Iklan sebagai Penunjang Informasi dan Promosi pada Hotel Sitamiang 2 Bogor," *Innovative Creative and Information Technology*, vol. 2, no. 1, pp. 15–28.
- [3] H. T. Sukmana, "Prototyping ITSDI Journal Center Menggunakan Tools Invision Untuk Mewujudkan Creative Innovation Soft Skill Di Era Industri 4.0," *ADI Bisnis Digital Interdisiplin Jurnal*, vol. 1, no. 1, pp. 56–69, 2020.
- [4] S. Hamdi and P. Prihandoko, "Analisis Algoritma Dijkstra dan Algoritma Bellman-Ford Sebagai Penentuan Jalur Terpendek Menuju Lokasi Kebakaran (Studi Kasus: Kecamatan Praya Kota)," *Energy-Jurnal Ilmiah Ilmu-Ilmu Teknik*, vol. 8, no. 1, pp. 26–32, 2018.
- [5] Z. Apriliani, U. Hasanah, and A. S. Anas, "Pembuatan Video Profil dengan Efek Vintage Kampung Wisata Adat Sengkoah sebagai Media Informasi," *JTIM: Jurnal Teknologi Informasi Dan Multimedia*, vol. 1, no. 1, pp. 57–65, 2019.
- [6] H. A. Almusawi, C. M. Durugbo, and A. M. Bugawa, "Innovation in physical education: Teachers' perspectives on readiness for wearable technology integration," *Comput Educ*, vol. 167, p. 104185, Jul. 2021, doi: 10.1016/j.compedu.2021.104185.
- [7] U. Rahardja, T. Nurhaeni, A. Khoirunisa, and R. D. I'zzaty, "LTAI BERBASIS TEKNOLOGI BLOCKCHAIN UNTUK MENINGKATKAN ALEXA RANK," in *SENSITIF: Seminar Nasional Sistem Informasi dan Teknologi Informasi*, 2019, pp. 373–380.
- [8] A. Himki, T. Ramadhan, Y. Durachman, and E. S. Pramono, "Digital Business Entrepreneurship Decisions: An E-Business Analysis (A Study Literature Review)," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, pp. 107–113, 2022.
- [9] S. Purnama, Q. Aini, U. Rahardja, N. P. L. Santoso, and S. Millah, "Design of Educational Learning Management Cloud Process with Blockchain 4.0 based E-Portfolio," *Journal of Education Technology*, vol. 5, no. 4, p. 628, Nov. 2021, doi: 10.23887/jet.v5i4.40557.
- [10] D. Immaniar, N. Cholisoh, F. J. E. Putra, P. S. Pangestu, and P. O. A. Sunarya, "Sistem Kartu Ujian Online Menggunakan Framework Yii Pada Universitas Raharja," *Technomedia Journal*, vol. 6, no. 2 Februari, pp. 163–175, 2022.
- [11] R. J. Sipahutar, A. N. Hidayanto, U. Rahardja, and K. Phusavat, "Drivers and Barriers to IT Service Management Adoption in Indonesian Start-up Based on the Diffusion of Innovation Theory," in *2020 Fifth International Conference on Informatics and Computing (ICIC)*, 2020, pp. 1–8.
- [12] Y. Shino, C. Lukita, K. B. Rii, and E. A. Nabila, "The Emergence of Fintech in Higher Education Curriculum," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, 2022.

- [13] J. Leonard, D. Damanik, and O. Amirkhasanah, "Application of Information Session Information System as Media Submission of Final Results Comprehensive Session," *Journal on Recent Innovation (AJRI)*, vol. 1, no. 1, pp. 62–70, 2020.
- [14] M. Mastur, "Dampak Efektivitas Pelatihan Kompetensi Terhadap Kinerja Pegawai, Komitmen Pegawai Sebagai Variabel Intervening Pada Pondok Pesantren," *Technomedia Journal*, vol. 7, no. 1, pp. 19–27, 2022.
- [15] E. Purwanti, "Preparing the Implementation of Merdeka Belajar–Kampus Merdeka Policy in Higher Education Institutions," in *4th International Conference on Sustainable Innovation 2020–Social, Humanity, and Education (ICoSIHES 2020)*, 2021, pp. 384–391.
- [16] A. Febtriko, "Sistem Kontrol Perternakan Ikan Dengan Menggunakan Mikrokontroler Berbasis Android," *Rabit : Jurnal Teknologi dan Sistem Informasi Univrab*, vol. 2, no. 1, pp. 140–149, 2017, doi: 10.36341/rabit.v2i1.148.
- [17] U. Rahardja, E. P. Harahap, and D. D. Christianto, "PENGARUH TEKNOLOGI BLOCKCHAIN TERHADAP TINGKAT KEASLIAN IJAZAH," *Technomedia Journal*, vol. 4, no. 2, pp. 211–222, Oct. 2019, doi: 10.33050/tmj.v4i2.1107.
- [18] A. Winarno, "Desain E-Transkrip dengan Teknologi Blockchain," in *Prosiding Seminar Nasional Pakar*, 2019, pp. 1–37.
- [19] R. al Amin and R. Pancasasti, "Pengaruh Job Insecurity Terhadap Kinerja Karyawan Dengan Kepuasan Kerja Sebagai Variabel Intervening," *Technomedia Journal*, vol. 6, no. 2 Februari, pp. 176–187, 2022.
- [20] A. Mulyadi, "Upaya Meningkatkan Kinerja Karyawan Melalui Motivasi," *Technomedia Journal*, vol. 7, no. 1, pp. 1–10, 2022.

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