

Chapter 2

Cultivation of Autonomous Learning Ability-Essential Requirement for College Students

Yunsheng Cao

Abstract Fostering autonomous learning is a topic of high relevance for current college educational policy. Most reasons imply that autonomous learning is important not only in college life but also throughout life for students. Autonomous learning means self-learning, active learning and independent learning. Under the guidance of teachers, autonomous learning of college students is the inevitable choice for students to become the masters of learning, personal development and self-improvement. Cultivating college students' autonomous learning ability presents a major challenge for teachers as well as for schools. Four aspects are summarized to enhance college students' self-learning ability. On a dominant position in teaching activities, teachers should reform teaching methods to fully embody the students' main position to promote their ability of autonomous learning.

Keywords Autonomous learning • College students • Creative thinking

2.1 Introduction

No doubt, it is important for college students to have such a knowledge structure: the unity of specialty and erudition, the combination of arts and science, with a substantial amount of cutting-edge information about the trend of contemporary science and technology, economy and social development. All above depend on the improvement of students' independent learning ability. However, for a long time, due to the impact of various factors, the university teaching work puts too much focus on the teachers' "teaching" and ignores the students' independent

Y. Cao (✉)

Department of Social Sciences Education, Shandong Jiaotong University,

Jinan, China

e-mail: caow_8@163.com

learning. Actually, the teaching activity simply becomes the teachers' teaching activity, and students are often in a passive state. In this way, not only the students' absorption of knowledge is affected, but also the development of their personality is hindered [1]. Under the guidance of teachers, the urgent affairs in current college teaching reform are to help students to form the autonomous learning ability of reflecting the subjective consciousness, actively exerting their subjective initiative and innovative spirit of the independent learning [2].

Autonomous learning is the study of fully reflecting the dominant position of college students [3]. Autonomous learning is an important way of learning and is based on the students' self-organization, self-evaluation and self-arrangement of learning content and learning activity. Under the guidance of teachers, autonomous learning of college students is the inevitable choice for students becoming the masters of learning, personal development and self-improvement. This kind of study focuses on the creation of a certain education situation, which can stimulate the inside drive of students' active learning and instruct students to learn how to study, and separately recognize the dominant and subjective status of teachers and students in the process of teaching, as well as turn to be a kind of beneficial complement for the inadequacies of current teaching. To sum up, it has the following characteristics.

2.1.1 Autonomous Learning is Mainly Based on Self-Learning

Autonomous learning is the foundation of students' self-study, and students are responsible for their learning. It is a new learning way which is different from the traditional model teaching to prompt learning. The learners must get knowledge, skills and attitudes through the interaction between themselves and information or environment. That is to say, the learning in the traditional education is through the optimized combination of various elements of the teaching process to transfer teaching information, while the autonomous learning is in an initiative way that the learner themselves to get knowledge or information through the education media, facilities and the instructions or help of teachers [4, 5].

2.1.2 Autonomous Learning is a Kind of Active Learning

The initiative is the basic quality of autonomous learning, which corresponds to the passiveness of passive learning, both of which in the student learning activity are as follows: I want to learn and I am required to learn. I want to learn is based on the internal need of students on learning, while I am required to learn is based on the external incentive and compelling force [6].

2.1.3 Autonomous Learning is a Kind of Independent Learning

The independence is the core quality of autonomous. If the initiative is I want to learn, then the independence is shown as I can learn. Except for special reasons, each student has a strong potential and significant independent learning ability. Not only that, each student also has an independent requirement and has a desire of performing their independent learning ability, and their whole learning process in school is also the process of striving for independence and increasingly to be independent, which is the basis foundation of independent learning and making a point. Underestimating or ignoring the students' independent learning ability, and ignoring or suppressing the students' independent requirements usually lead to the continued loss of students' independence, which is a shortcoming that traditional teaching needs to overcome [7, 8].

2.1.4 Autonomous Learning is a Kind of Innovative Learning

Autonomous learning is also the process of teachers' innovative teaching and students' innovative learning; especially the students are required to improve their comprehensive quality and ability innovatively in all the aspects of the process of teaching and learning.

2.2 The Significance of Fostering College Students' Self-study Ability

2.2.1 To Thoroughly Promote the Teaching Principles: Teaching as the Guide, Learning as the Main Purpose

From the current teaching practice of higher education in our country, many teachers still use the way of cramming teaching, and many students are used to blindly following the teacher's baton in learning, which lead students to the passive situation—taking notes in the class, reciting notes after class, examining notes and forgetting notes after examination [9].

Cultivating the college students' autonomous learning ability is not only conducive to actively manage their learning activities and to constantly stimulate subjective initiative and initiative spirit, but also be helpful for teachers to know the students' subject position in teaching, to guide the students to master the scientific learning method, to assist students to make a proper feedback and correction timely in the teaching, and so on. As a result of the enhancement of students' autonomous learning ability, teachers' authority will no longer be based on the students' passiveness and ignorance, and the role of teachers is no longer an encyclopedia or the database for students to use [10].

2.2.2 Conducive to the Improvement of College Students' Comprehensive Qualities and the Cultivation of Creative Ability

The university period should be not only a period during which people's potential could be developed continually, but also a key period for a person to become a high quality professional. And from the process of knowing, it is also the best period of innovation. On the one hand, college students have been equipped with relatively mature abstract thinking and image thinking ability; on the other hand, their self-awareness will be developed rapidly and gradually become mature at the university stage. Through self-awareness, they can evaluate their own whole psychological characteristics, analyze the advantages and disadvantages of their own interest, motivation, personality and so on, and strive to make it to be perfect. Self-learning has the characteristic of independence, active, innovation, harmony and so on, which happen to coincide with the college student current learning trait and personality development.

2.2.3 Conducive to Cultivate the Thought of Lifelong Learning for College Students

In today's learning society, accompanied by the gradually expanding of total knowledge and accelerating of the knowledge renewal speed ceaselessly, each member is required to be in the continuous learning. However, people cannot master all the knowledge, which requires the fostering of lifelong learning thought. As the backbone of future society, contemporary college students' further need to foster the lifelong learning thought. In order to cultivate this thinking, firstly they must have a certain ability of autonomous learning, because the lifelong learning contains the ability of problem finding, knowledge selection, knowledge comprehension, knowledge innovation and so on.

2.3 The Approach of Cultivating College Students' Autonomous Learning Ability

2.3.1 To Shape Good Personality

The so-called personality refers to other subjective factors except knowledge and ability of learners. The countless facts of human creation ability indicate that developing good personality quality has become the key to bring up the creative person. However, in the long term, with examination-oriented education

background, we emphasize on one-side intelligence factor, seriously neglect the cultivating of students' personality quality, which is the important reason for causing the shortage of the creative talent in China. All forms of education at all levels, especially the higher education, should base on the following aspects to raise the student good personality.

2.3.1.1 To Stimulate College Students' Learning Motivation

One can learn something only when he or she is willing to learn, and the prerequisite for the formation of learning ability is the learning motivation. Therefore, first of all, it is required to stimulate students' need. Teachers should pay more attention to the things that can stir students to learn some knowledge, then they can impart knowledge to students; or they can make a decision about the teaching activities according to the needs of students. Secondly, let the students set specific goals. It is one of teachers' tasks to make students expect and arouse their desire by helping students to make an encouraging and practicable goal that the students will spare no efforts to achieve their goals. Moreover, the effect of teaching can be enhanced by motivating the talents and promoting the backwards.

2.3.1.2 To Toughen College Students' Learning Will

Just as Einstein said "the excellent personality and an iron will are more important than wisdom and knowledge", it shows that strong will and inflexible spirit play a significant role in the success of a person's creation activity. Good will mainly contains conscientiousness, decisiveness, persistence and self-control in learning activity.

2.3.1.3 To Develop Creative Thinking

All human creative activities are inseparable from the creative thinking. So, the cultivation of students' creative thinking ability is the cultivation of creative talents as an important link in teaching and an important task in the work.

Cultivating students' creative thinking should be infiltrated into every aspect of teaching. Teachers should impart creative thinking methods to students during the period of knowledge teaching. When a teacher imparts students the basic knowledge, concept and law, he should consciously analyze how the problems were proposed, analyzed and solved by predecessors. He should let the students experience the hardships of exploration and grasp the thinking and new ideas to create new concepts and new things. The teachers should be good at exposing the contradictions, addressing good questions and consciously inspiring students to think independently.

2.3.2 To Reform Teaching Method

On a dominant position in teaching activities, teachers should reform teaching methods to fully embody the students' main position in the course of teaching, so as to promote their ability of autonomous learning. The following teaching method should be paid more attention to:

“Discovery” Type Teaching Method In the conventional teaching, teachers often tell the answer of the question to students firstly, and then get the students to remember, and help them understand after that. In “discovery” teaching, teachers' role is to inspire the enthusiasm of the students, to guide the students to think, to explore, to discover and to obtain new knowledge from interior attributes, changing laws of existing things Peter Klein said in “everyday genius”: “The children could learn best when they find primitive rules by themselves under help”. What worth mentioning is that in the process of finding, since the target is often not clear and what to find and what likely to be found are uncertain, some of findings that the students make will be unexpected for teachers. Teachers should be careful and pay more attention to the unexpected discoveries so as not to smother students' finding and stifle students' initiative. Teachers should bear in mind “the mind is not a vessel to be filled, but a fire to be ignited.”

“Task Driving” Teaching Method “Task driving” teaching method is a kind of students' autonomous learning method with teachers to guide. It breaks the traditional teaching method which pays attention to step by step learning and the accumulation of knowledge. This method aims to complete a task as a drive to carry out teaching activity, not in accordance with the order from easy to difficult according to teaching contents. Upon completion of the mission in the process, it helps to develop the students' self-study ability, creative spirit and cooperative consciousness.

2.3.3 To Reform the Examination System

The test is a powerful tool in education evaluation which is generally considered more equitable measuring means. It can play a strong guiding role on educational activity. The scientific and rational examinations which encourage innovation can ensure the quality of education and promote students' autonomous learning ability. The current university examination system has many problems, such as ignorance of individual differences, unfocused examination content, single examination form and method, more restrictions on proposition and scoring. All above hinder the cultivation of students' autonomous learning ability. So, test reform must be undertaken.

Firstly, to stipulate the examination content and key points according to the aim of education and training requirements. Facing the information age, college students need to acquire new knowledge constantly to satisfy the requirement of the

cultivation of students' innovative abilities, broaden their knowledge and explore actively. Students need to have more autonomy and free time. This requires concise and practical examination content with outstanding key points.

Secondly, to adopt a flexible form of examination and examination method. It is required to adopt adaptive and diversified examination form and method. For example, in the humanities examination, it is practical to adopt the combination of written and oral examinations, close examination and open-book examination method.

Thirdly, to play a guiding role of proposition and grading on cultivation of students' creative thinking. For proposition, in order to reduce the students' burden of memory and promote the cultivation of innovation ability, it should be in accordance with the specified test content and be focused on the scope of proposition. Memory test should be few but good.

2.3.4 To Cultivate Self-learning Ability

Self-learning ability refers to a kind of ability of independent learning with which learners could study without the help of a teacher. Russian literary critic Sarov said "who cherishes the life with thoughts, who can clearly understand that only independent learning is a real learning.....". With the development of modern science and technology, what we do not know will be more and more. Even if a student graduated from the University, the knowledge he owns is only one-tenth of all needed in his lifetime. Other knowledge need to be learned independently. Therefore, every college student must strengthen self-learning ability and form self-study habit. School students to cultivate self-learning ability could try to do the following:

To Set up the Independent Learning View. The initiative is the basic quality of self-study. Students must learn by themselves. If they are lack of learning consciousness of their own, self-study also cannot be sustained.

To Draw up a Self-study Plan. Without the learning plan, study is vulnerable to the interference of external factors and easy to be affected, and there is no plan to lack of motivation for learning. Therefore, a clear learning objective and scientific study plan must be made according to their ability level. Study on time every day, and ensure it unshakable that a self-study habit will be formed.

To Ensure Self-study Time. Students should make full use of spare time. The preview can be arranged before class. If students find some problems puzzled in self-study, they can listen to the teacher in class with a destination or address initiative questions. Thereby the class efficiency could be greatly improved.

References

1. Liwei M, Xiaohua Y (2011) Concepts of constructing college English autonomous learning network system. *Energy Procedia* 13:10264–10268
2. Stuart JR (1991) Prior knowledge and autonomous learning. *Robot Auton Syst* 8:145–159

3. Sanneke B (2003) Towards process-oriented teaching for self-directed lifelong learning: a multidimensional perspective. *Learn Instr* 3:327–347
4. John WL, Jacob JL, Soo-Hee P, Lucy WG, Ryan S (2009) An investigation of the construct validity of the personality trait of self-directed learning. *Learn Individ Differ* 19:411–418
5. Silvia WL, Chin-Chung T (2011) Students' perceptions of collaboration, self-regulated learning, and information seeking in the context of internet-based learning and traditional learning. *Comput Hum Behav* 27:905–914
6. Svjetlana K, Barbara R, Igor B (2008) Motivational components of self-regulated learning and reading strategy use in university students: the role of goal orientation patterns. *Learn Individ Differ* 18:108–113
7. Monique B (1997) Self-regulated learning: a new concept embraced by researchers, policy makers, educators, teachers, and students. *Learn Instr* 7:161–186
8. Melek D, Yelkin DC (2010) A study on the assessment of undergraduate students' learning preference. *Procedia: Soc Behav Sci* 2:4429–4435
9. Mien S, Rob M, Piet VDB (2008) Understanding how a case-based assessment instrument influences student teachers' learning approaches. *Teach Teach Educ* 24:1751–1764
10. Aikaterini A, Fotini P (2010) Enhancing self-regulated learning skills through the implementation of an e-portfolio tool. *Procedia: Soc Behav Sci* 2:3048–3054



<http://www.springer.com/978-1-4471-4849-4>

Proceedings of the International Conference on
Information Engineering and Applications (IEA) 2012

Volume 2

Zhong, Z. (Ed.)

2013, XXIV, 868 p. 274 illus., 83 illus. in color.,

Hardcover

ISBN: 978-1-4471-4849-4