

Analysis of the ‘BTR Mode’ in the Teaching of Human Geography

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To cite this article:

Shiqing Yan. Analysis of the ‘BTR Mode’ in the Teaching of Human Geography. *Higher Education Research*. Vol. 2, No. 3, 2017, pp. 93-97. doi: 10.11648/j.her.20170203.13

Received: March 20, 2017; **Accepted:** April 7, 2017; **Published:** May 18, 2017

Abstract: ‘BTR mode’ is a type of teaching mode, which refers to ‘Basic theory’, ‘Typical cases’ and ‘Real phenomenon’, and it is the product of the combination of the thought of ‘discovery learning’ and the Constructivist Learning Theory with the practice of Human Geography teaching, plays an important role in improving the quality of Human Geography teaching in university. This paper gives the comprehensive introduction and objective evaluation of the mode from the connotation of the mode, the conception of the mode construction, it’s value in teaching and the actual experience in the using, to help more people to know and use the mode and promote the improvement of it and make it provide better service for the teaching of Human Geography and other subjects.

Keywords: Human Geography, Inquiry Teaching, ‘BTR Mode’

1. Introduction

Bruner, a famous educationist, says teaching is the process of teachers to guide students to discover and we should pay attention to the students' thinking, self-exploration and self-discovery [1]. Such man thinks, teaching is to encourage students to doubt ‘why this happened’ according to which they collect, analyze data and think in a creative way, thus figuring out this question [2]. Human Geography is about the space differences and spatial organization of human activity, as well as a subject concerning the relationship between human and geographical environment, whose basic theory is derived from the generalization and summarization of the characteristics of human activity space [3, 4]. Obviously, the exploration of spatial characteristics and formation mechanism of human activities is not only an important premise of basic theory of Human Geography, but also an important ways and means of learning Human Geography. The ‘BTR mode’ in the theory teaching of Human Geography, whose core is students' inquiry activity, achieved good effect in teaching practice. This paper carries on the summary of ‘BTR mode’, in order to improve the teaching mode, to better serve teaching.

2. The Operating Procedures of ‘BTR’ Mode

Teaching model is composed of several operating procedures of teaching which have fixed order. The ‘BTR mode’ is composed of a number of specific teaching steps, and shows its own characteristics.

2.1. The Composition of ‘BTR Mode’ Operating Procedures

‘BTR mode’ operating procedure is divided into three teaching links and ten steps of fixed order. The ‘B’, ‘T’, ‘R’ in ‘BTR mode’ are the first letter of ‘Basic theory’, ‘Typical cases’ and ‘Real phenomenon’ which are three key words in students' inquiry activity. They are three teaching links of the teaching mode. The first teaching link is the inquiry-based learning of basic theory of Human Geography. Teachers give students the necessary data and information, and students figure out the space characteristics of cultural phenomenon, formation mechanism and the trend of change. The second teaching link is the exploration of typical case, and students sum up the space characteristics, formation mechanism and the changing trend of typical case utilizing the basic theory of Human Geography learned in previous teaching. The third teaching link is exploration for Human Geography

phenomenon in the reality. Under the guidance of the teacher, students can collect relevant information and data, and analyze the space characteristics, formation mechanism and evolution mechanism of Human Geography in the reality by themselves.

The three teaching links of 'BTR mode' is usually performed by ten teaching steps. Next, I introduce its operating procedure. The first step is to know data well for the first time. The second step is to clear teaching goals for the first time. The third step, the inquiry-based learning of basic theory of Human Geography, is the 'B' part of 'BTR mode'. The fourth step is to know data well for the second time. The fifth step is to clear teaching goals for the second time. The sixth step, the exploration of typical case, is the 'T' part. The seventh step is to understand the condition of the area. The eighth step is to clear teaching goals for the third time. The ninth step is data collection. The tenth step is exploration of the Human Geography phenomenon in reality, the 'R' part. Obviously, the ten teaching links of 'BTR mode' are related, and relatively independent. They are able to adapt to the multivariate teaching goals which are the theoretical study and practical application, and the characteristics that a particular theory teaching requires multiple of class time to complete.

2.2. The Characteristics of 'BTR Mode' Operating Procedures

The teaching link and operation steps of 'BTR mode' are of integration. Obviously, the three explore objects of the teaching mode which are three teaching links of 'BTR mode' at the same time, are centered on students' inquiry activity. The three links are not only the teaching step teachers organized, but also students' inquiry activities.

The teaching link and operation steps of 'BTR mode' are of integration. In 'BTR model', the three teaching links contact closely, and none is dispensable. The first teaching link is the beginning of the mode, and premise and basis of the whole teaching and inquiry activity. Without this link, students will lack theoretical guidance in the subsequent inquiry activity. The second teaching link serves as a link between past and future. On the one hand, students will use basic theory of Human Geography learned in the previous link in the practice, which deepen theoretical study. On the other hand, students accumulate experience for subsequent inquiry activity. It is difficult for students to explore Human Geography phenomenon in reality directly after mastering the Human Geography theory, thus the typical case study building a bridge and the link. The third teaching link is the sublimation of the former two teaching links. Without this link, it is difficult for students to improve the capacity of solving practical problems by Human Geography theory. Obviously, the three teaching links of 'BTR model' are interrelated organic whole.

Significant difference exists in the three teaching links of 'BTR model'. First of all, the starting points of the three teaching links are different. The first teaching link starts from the ideal state of information and data of a particular cultural phenomenon. The starting point of the second is the basic

theory of Human Geography students have mastered and information and data of the typical case teachers provided. The starting point of the third is the basic theory of Human Geography students have mastered and condition of specific areas teachers provided. Second, the goals of the three teaching links are different. The first requires students to get basic theory of Human Geography by inquiry the ideal state of a particular cultural phenomenon. The second requires students to have the capacity of analyzing typical cases of Humanistic Geography utilizing basic theory. The teaching goal of the third link is students' ability of collecting relevant data and solving actual problem by the basic theory. Besides, the status and role of the three teaching links are different. The first teaching link is the foundation of the whole teaching activity. The second is the extension of the first one and the bridge and the link to the third. The third teaching link is the end of the whole teaching activity. Associated with above three points, the main task and role of teachers and students in the three teaching links of 'BTR mode' are also different.

3. The Construction Concept of 'BTR Model'

'BTR mode' is constructed under the guidance of 'discovery learning' theory and constructivism learning theory. Now, according to the system elements of teaching mode [5], the construction concept of 'BTR model' is analyzed, from the theoretical basis, the teaching goal, the condition to realize and evaluation system and so on four aspects of the teaching mode construction.

3.1. The Theory Basis of 'BTR Mode'

'BTR mode' follows the general rules of human cognitive activities, 'from practice to knowledge, again practice, and again knowledge'. The first teaching link of 'BTR model' is students' exploration of the basic theory of Human Geography, which is the process from practice to knowledge. In the second link, students utilize the basic theory of Human Geography to guide practice, which is the process from knowledge to practice. The third link is students utilizing basic theory to guide practice and testing theory in practice. In this link, students is required to collect information themselves, the exploration objects are more complex and the breadth and depth of understanding is far more than the second link. Obviously, 'BTR model' cultivates students' capacity of accessing to knowledge, analyzing and solving problems through the process of practice - know - practice - know gradually.

'BTR mode' is the application of 'discovery learning' theory and constructivism learning theory in the teaching of Human Geography. 'BTR mode' is constructed under the guidance of the teaching of Human Geography is the basic theory mainly, but it not only demands students to master the basic theory of Human Geography, also cultivates students with the ability of solving actual problems using basic theory [6-8]. In view of the large span between the theoretical study

of Human Geography and solving practical problems, the intermediate links 'typical case study of Human Geography' is added to 'BTR mode', which result to the three links of the teaching mode. In the first teaching link, students explore the basic theory of Human Geography, which reflects the thought of 'discovery learning'. In the second and the third teaching link, student may put forward new viewpoints, new ideas different from the textbook ready-made conclusion in the inquiry activity and construct their own knowledge system, where constructivism learning theory apply. The whole teaching process is the organic combination of the thought of 'discovery learning' and constructivism learning theory. The basic theory of Human Geography obtained in 'discovery learning' is the premise and basis of the constructing their own knowledge system for students. Therefore, 'BTR mode' is an inquiry teaching mode, under the guidance of the thought of 'discovery learning' and constructivism learning theory, suited to the characteristics of the theory teaching of Human Geography.

3.2. The Teaching Goals of 'BTR Mode'

Teaching modes have their specific target position, all services for specific teaching goals. Some teaching modes focused on imparting knowledge, some modes laid particular stress on the cultivation of the students learning ability and some teaching modes pay attention to cultivation of students' emotion, attitude and values, etc. From the characteristics of each teaching link, each teaching link of 'BTR mode' to the students' is centered on students' inquiry activity whose breadth, depth and complexity of exploration are gradually increased. In the process of exploration, students not only need to think and explore according to the data, but also required to collect information, which motivates students' learning initiative and enthusiasm. In the teaching process, teachers mainly play the role of organizing, guiding, asking, tutoring, promoting, summarizing, and so on. Therefore, the core of 'BTR mode' teaching goal is to cultivate students' capacity of collecting information, independent learning, scientific inquiry, the geographic innovation and other aspects, also take the students' good study habits into account.

3.3. The Operating Conditions of 'BTR Mode'

Teaching modes operate effectively with specific conditions, and different teaching modes efficient operating conditions is different. 'BTR mode', has its own characteristics, requires the following efficient operation conditions. From the teaching strategies, 'BTR mode' requires teachers to change the traditional teaching strategy based on instruction. Instead, teaching strategies are based on students' inquiry activity. On the aspect of handling of teaching content, teachers need to make well-preparation before class, provide students with adequate data and information of the inquiry-based learning, or aid students to collect data. In terms of organization form, the arrangement of teaching time is not only confined to the classroom, but also extended to after class. As for space setting, the indoor location of student in the classroom cannot

be fixed; sometimes students may need to change location in order to inquiry activity. Teaching activity cannot constrained by classroom, sometimes requires to be extended to outside the classroom, even outside the campus. In addition, 'BTR model' needs specific external guarantee conditions, such as the transportation, accommodations of field investigation, and the close cooperation of investigation target population.

3.4. The Evaluation Systems of 'BTR Mode'

Complete teaching modes must have evaluation systems of teaching activity. Different teaching modes have different evaluation systems, because of their different components. 'BTR mode', centered on students' inquiry activity, requires the teaching evaluation principle, standard and evaluation method of operation to adapt to itself. With students' inquiry activity as the core, 'BTR mode' mainly pays attention to the promotion of students' learning ability and the cultivation of the correct learning methods and good study habits. In the process of exploration, students' subject status and individual differences should be respected. Evaluating principle, therefore, should be fully embodies the principle of subjectivity and diversification, evaluation criterion should highlight the subject status of the formative evaluation and process evaluation, operation methods should be based on students' self and mutual assessment.

4. Value of 'BTR Mode'

From the connotation and construction idea, 'BTR model' has its specific value in the theory teaching of Human Geography, mainly manifested in the following respects.

4.1. Promoting the Change of Teaching Idea

Usually, the students' academic achievement is seen as an important index to measure teachers' teaching performance, making people mistakenly believe that knowledge and experience gained by the students in the school are all teachers taught. In fact, the knowledge teachers teach students is only limited to the declarative knowledge, and more knowledge, skills and experience are not taught, such as logical knowledge requires students to explore and reasoning, technical knowledge requires students to think for themselves and training, emotions, attitudes and values development requires them to experience and internalize. Using 'BTR mode' in Human Geography teaching, the students acquire knowledge, cultivate ability, change the passive, external, and dependent learning to active, internal and autonomous learning through independent inquiry, which is the teaching practice in class of the concept of 'subjectivity'. Students' individual differences emerge in inquiry activity, making 'stratification teaching' and 'differentiation' teaching ideas into practice and reflecting the principle of individualized teaching fully. Through many links of inquiry activity, students master the correct method of study, develop good study habits gradually, with the teaching idea 'formative education', 'teach in order not to teach' carried through. In addition, students use the after-school time to

make field investigation, promoting 'classroom teaching to extra-curricular activities'. These changes of traditional teaching idea have a promoting effect.

4.2. Promoting the Relationship Between Teachers and Students

The new education idea request us reject 'on the filial piety', the enlightenment and the receiving of the traditional relationship between teachers and students, formed over a long period of time in China, and establish a democratic equal relationship between teachers and students. The students' inquiry activity is as the core of each teaching link of 'BTR mode', which highlights the dominant position of students and equal cooperation relationship between teachers and students in teaching. At the same time of promoting the relationship changes between teachers and students of changing, 'BTR mode' reflects the relationship changes of 'teaching' and 'learning'. In 'BTR mode', the students' 'learning' characterized by inquiry activity serves as the core of teaching activity; the teachers' 'teaching', to provide information, organize, guide, ask, induce and summarize, serves the students' 'learning'. The application of the mode in teaching can promote a fundamental change of the traditional relationship between teachers and students and the status of 'teaching' and 'learning'.

4.3. Increasing the Efficiency of the Classroom Teaching

Increasing the efficiency of the classroom teaching is the unremitting pursuit of each education workers. The application of 'BTR mode' can effectively improve the efficiency of classroom teaching. First of all, 'BTR mode' is the combination of discovery and construction exploration. In the process of exploration, students discover the basic theory of Human Geography, construct their own knowledge system, master the scientific learning method and develop good study habits, which can double the classroom teaching efficiency [5]. Second, 'BTR mode', each teaching link of students' inquiry activity as the core, can put students more into learning, improve the students' classroom participation, and improve the efficiency of classroom teaching. Besides, with the application of 'BTR mode', students can decide the study progress, learning content and methods according to their actual conditions, and build a knowledge system in conformity with their own conditions. This mode use self and mutual evaluation of students, with the principle of subjectivity and diversified evaluation, to reflect the students' individual differences. In addition, the reasonable use of 'BTR mode' can greatly reduce the task of teachers in the classroom teaching and put more time and energy on guiding and urging students, which improves classroom teaching efficiency. Finally, each teaching link of 'BTR mode' and steps are relatively independent, making the classroom teaching extended to the extra-curricular activities effectively, such as students can take advantage of extracurricular time to collect data, explore, having a positive impact on increasing the efficiency of the classroom teaching.

5. Notes of 'BTR Mode'

'BTR mode' has been applied for many years in theory teaching of Human Geography. Attention should be paid on some potential problems found in the process of teaching practice.

5.1. The Implementation Conditions of 'BTR Mode'

Each teaching mode has its applicable scope, only suitable for the specific conditions of teaching. It is difficult for any teaching mode to obtain due effect, if implementation conditions are not satisfied, or beyond the scope. Before applying 'BTR mode', the implementation conditions and applicable scope should be analyzed carefully, and the teaching mode is chosen according to the practical conditions. It is blind to absolute teaching mode, not to consider the teaching content and the teaching environment and apply it to all Human Geography teaching. When using 'BTR mode', teachers should provide all the necessary conditions for the students' inquiry activity, not only providing necessary data and information, but also helping students to solve problems of traffic, accommodation, security, and the communication and contact with related department and survey object of field survey.

5.2. Teacher Deep Involvement in Class

When applying 'BTR mode', teachers' teaching task is mitigated, which is easy to cause teachers dissociate from the classroom teaching. It is not the teacher's body leaves the classroom, but the spirit of teachers dissociate from it, which is the lack of substantial inquiry-based learning intervention or short of depth when organizing, guiding, supporting and facilitating students. Therefore, applying 'BTR mode', the teachers should be very familiar with the whole class and individual students, predict scenario accurately in the class and make well-preparation. In addition, teachers should improve constantly the teaching skill; strengthen the strain capacity, and response to emergency efficiently in the process of exploration, to improve their 'class involvement'.

5.3. Making Full Use of the Existing Teaching Material

When applying 'BTR mode' to teach theory of Human Geography, it is must to write a certain teaching text, for providing students with information and data, regional situation, teaching requirements and steps, and so on. This may result in more attention paid to the teaching text, and neglect of the teaching materials, to some extent. However, the existing teaching materials are the result of hard work, the crystallization of collective wisdom of many famous experts. It is a tremendous waste to despise teaching materials, which has certain negative influence on students' learning. Therefore, when using 'BTR mode', it is meaningful to make full use of the existing teaching material, make the knowledge of teaching material as an organic part of the teaching text, make teaching material and teaching text together and bring out the best in each other.

5.4. Making Summary Seriously and Timely

Different from instruction teaching, it is possible that unexpected situation appears before class in the inquiry activity. On the one hand, students may encounter difficulties in the process of exploration, or find problems in the teaching text and teaching steps. The difficulties or problems students have encountered are important teaching resources, which is of great significance to add information and data, perfect teaching text and optimize processes. On the other hand, because of the complexity of reality, students often make conclusions that differ from the existing in textbook when building their own knowledge system in the inquiry activity [9-11]. For the conclusion different from the ready-made, teachers could not adopt blindly, nor deny easily. These conclusions may involve scientific problems. It is the goal of the inquiry teaching mode to cultivate students' innovation ability, which requires teachers and students to summarize with scientific attitude seriously and timely, in order to review relevant scientific problems, stimulate students' learning enthusiasm, cultivate the habit of the questioning and geographical innovation ability.

6. Conclusions

'BTR mode', in theory teaching of Human Geography, is under the guidance of 'discovery teaching' ideas and constructivism learning theory, in order to let students discover the basic theory of Human Geography in inquiry activity. On this basis, students can construct their own knowledge system and cultivate the correct learning method, the ability to solve practical problems with the basic theory of Human Geography and geographical innovation ability. 'BTR mode' was put forward in the teaching practice of agricultural location theory, the supplement gradually extended to basic theory teaching, such as industrial location theory, business location theory and transportation location theory, and then extended to other branches of Economic Geography and Human Geography teaching. As for the development process of application scope, 'BTR mode' can also be applied in other disciplines basic theory teaching. With the enlargement of the application scope, 'BTR mode' is constantly improving in the test of teaching practice and playing a due role in the basic theory teaching.

Acknowledgements

This paper is partly fund by the Yancheng Teachers College curriculum reform project -- human geography topic selection course construction and teaching method research (No. 13YCTCKG027) and Yancheng Teachers College teaching research project key project -- based on knowledge and skills transfer of teacher world geography teaching method reform research (No. 14YCTCJY015).

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