

Research on the Utilization Mechanism of Student Curriculum Resources

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ABSTRACT

The most important thing of the new curriculum form is to obtain corresponding curriculum resources. Student curriculum resources are necessary conditions to realize the new curriculum reform. They include students' life, personal knowledge reserves, direct experience, growth background and other resources which are dynamic, active, generative and cooperative. This paper uses the method of literature analysis to get the conclusion: To break through the misunderstanding of curriculum resources, it is necessary to make full use of student curriculum resources by establishing situational mechanism, generative mechanism, cooperative mechanism and community mechanism, so as to promote the implementation of curriculum from textbook-based teaching and learning to resource-based teaching and learning.

Keywords: *student curriculum resources, misunderstanding of curriculum resources, utilization mechanism*

I. INTRODUCTION

Curriculum resources refer to the sources of factors composing curriculum and the necessary and direct conditions for the implementation of curriculum. However, in traditional teaching, the curriculum form centered on teachers, classrooms and textbooks, curriculum resource is the sum of courses and disciplines, and disciplines are all resources. Therefore, it is a narrow and static view of curriculum resources that ignores the research, development and utilization of curriculum resources and is limited to the curriculum itself and the compilation of textbooks. The new curriculum form is student-society and practice-centered. The learning mode of students is featured with independence, cooperation and inquiry, and the essence of learning is to realize "meaning construction". The most important thing of this new course form is to obtain corresponding course resources. The new curriculum resource view holds that curriculum is the organic integration of subject, student, student' life and society. Therefore, student curriculum resources, namely students' lives, personal knowledge reserves and direct experience, will become the basis of curriculum resources development. The development and utilization of student curriculum resources is one of the most important contents of the new curriculum reform and also a necessary condition to realize the new curriculum reform. The greatest significance and value of developing and utilizing new curriculum resources lies in guiding teachers and students to truly shift from textbook-based teaching and learning to resource-based teaching and learning. From the traditional fixed static

curriculum resources based on textbooks, to the exploration of dynamic curriculum resources with students as the main body, it fully reflects the value of "people" as the main body of the curriculum, which is a major breakthrough during the development process of curriculum resources, a testimony to the changes in students' learning styles, and an important sign of further advancement in curriculum development. However, in the exploration of developing and utilizing of student curriculum resources, there are still some misunderstandings. We should get rid of these misunderstandings, understand the essence of student curriculum resources, and better play the role of students' curriculum resource by creating specific mechanism.

II. MISUNDERSTANDING OF STUDENT CURRICULUM RESOURCES

A. *Students are not regarded as course resources*

The word "resource" has two meanings: on the one hand, it refers to the source of things; On the other hand, it means that one thing is indispensable to another, and satisfies the conditions necessary for other things. As a kind of resources, curriculum resources have been paid more attention by the curriculum circles since the beginning of the 20th century. Since then, some achievements have been made in the study of curriculum resources. In the Theoretical Conception of Curriculum Resources (2001), Wu Gangping pointed out that curriculum resources refer to everything that provides curriculum activities and meets the needs of

curriculum activities [1]. It includes the equipment and materials that constitute the course objective, the source of curriculum content and the guarantee of activities, namely the so-called "material course resources and conditional course resources". There is no mention of regarding students as a course resource. Xu Lingyan pointed out in *Research on Development of Chinese Curriculum Resources in Junior High School* (2018) that curriculum resources refer to all the resources related to specific curriculum teaching activities that can be applied by teachers [2]. The "total resources" here include teachers, parents, experts and material resources, etc., which do not reflect the role of student in curriculum resources. In his monograph "Education Dictionary" (1998), Gu Mingyuan held that curriculum resources refer to all kinds of available ways and methods for designing curriculum and making teaching plans, including target resources, teaching activity resources and resources for organizing teaching activities [3]. The role of students as a course resource is also not reflected here. Based on the above definitions of curriculum resources, it can be found that most scholars regard curriculum resources as a way to serve students and meet the needs of students' activities, but do not regard students as curriculum resources.

B. Current understanding of students' curriculum resources is not uniform

With the development of research on curriculum resources, student curriculum resources gradually come into people's vision, but people's understanding of student curriculum resources is not uniform. In "On The Development and Utilization of Resources for Middle School Students in Classroom Teaching" (2011), Zhao Yimei believed that student curriculum resources refer to all the factors directly and indirectly manifested in the classroom teaching that are conducive to the realization of curriculum goals [4]. Students' curriculum resources are considered as factors to achieve curriculum goals. Tao Yuexian pointed out in *The Development and Utilization of Student Curriculum Resources* (2004) that students' curriculum resources refer to curriculum resources derived from students, including students' knowledge reserve, experience, feelings, creativity, problems, confusion, emotional attitudes and values [5]. The students' curriculum resources are regarded as the quality resources in the school curriculum. In *Student-Valuable Educational Resources that can be Exploited and Utilized* (2001), Zhang Huiqi believed that students' curriculum resources refer to students' potential, wisdom and personality strength that they show in the learning process [6]. Students' curriculum resources are understood here as students' potential, wisdom and personality strength. From the above definition of students' curriculum resources, it can be seen that the

current understanding of students' curriculum resources has not reached a consensus.

C. Student course resources utilization is fragmented

The so-called fragmentation includes knowledge fragmentation, time fragmentation, space fragmentation, relationship fragmentation, thinking fragmentation and experience fragmentation. In the process of using student curriculum resources, it is reflected in the fragmentation of time utilization, which shows that there is no unified standard for time utilization. Teachers can use student curriculum resources anytime and anywhere. The content of utilization is fragmented, which shows that teachers mostly pay attention to the utilization of students' interest resources and experience resources, but seldom involve the utilization of students' emotional resources, generative resources and other dynamic resources. The way of utilization is fragmented, which is reflected in the single passive use of student curriculum resources led by teachers, the subjectivity status of students is suppressed, and their initiative is not fully reflected. The fragmentation of results of utilization shows that the utilization of curriculum resources is mainly the use of preset curriculum resources by teachers, but less involves the use of dynamic and generative curriculum resources embodied by students themselves. From the above analysis, it can be seen that there is an obvious tendency of fragmentation in the utilization of student curriculum resources.

D. The utilization of students' curriculum resources is passive

In the process of using curriculum resources, most teachers regard curriculum resources as static curriculum resources, such as textbooks, and the learning process is a process in which teachers impart knowledge and experience to students. Therefore, teachers psychologically believe that students are not a curriculum resource, but an object that needs to be reformed. In terms of view, they only regarded students as the subject to accept new things, and there is no in-depth discussion on the characteristics of students' attitude, emotion and behavior. The teacher is only responsible for transferring the knowledge from the textbook to the students, so that the students can fully understand the textbook. And teachers pay less attention to students when they behave negatively, learn new knowledge passively, boycott learning and act improperly in their daily life. As a result, teachers cannot understand the nature of students' curriculum resources is a dynamic and active curriculum resources, so they perform negatively in control, operate and utilize students' curriculum resources.

III. THE ESSENCE OF STUDENT CURRICULUM RESOURCES

A concept is a form of thought that reflects the specific or essential attributes of a thing. With the help of the concept, people can distinguish the things they know from other things by revealing the unique properties of things, especially the essential properties, and gradually grasp the essence of the things [7]. It is also necessary to follow this rule to reveal the essence of student curriculum resources.

A. The definition of student curriculum resources

There are many differences in definition of student curriculum resources, which affect people's understanding, and further development and utilization of student curriculum resources. In order to unify the understanding of student curriculum resources, the representative definition is selected as the basis of analysis. Zhao Yimei believed that student curriculum resources refer to all kinds of factors that directly and indirectly contribute to the realization of curriculum goals in classroom teaching [4]. Tao Yuexian believed that student curriculum resources refer to curriculum resources derived from students, including students' knowledge, experience, feelings, creativity, problems, confusion, emotional attitudes and values [5]. Zhang Huiqi believed that student curriculum resources refer to students' potential and their wisdom and personality strength shown in the learning process [6]. The common point of these three definitions is that the student is the source of student curriculum resources. And they described the contents of student curriculum resources, including "various factors", "knowledge, experience, feelings, creativity, problems, confusion, emotional attitudes and values", "wisdom and personality strength". The difference is that the first definition is not specific, but it stated that the nature of student curriculum resources is conducive to the realization of curriculum objectives, and the manifestation method is "direct and indirect", and the specific teaching place is classroom. The second definition set out the content of a resource, but not its nature or manner. The third definition described the potential and manifestation of students' course resources.

From the above analysis of the three definitions, it can be concluded that the meaning of student curriculum resources includes the following factors: source, occasion, nature, manifestation and content. According to these factors, student curriculum resources can be defined in a new way. Student curriculum resources refer to the characteristics of each student that are conducive to the realization of curriculum goals in the course of curriculum activities. These characteristics are usually manifested in direct, indirect, potential and manifest forms, including

knowledge, experience, intelligence, resume, personality, emotion, attitude, will, values, gender and physical characteristics, etc., as well as experiences that reflect the learning situation, family background, peer relationship and community culture.

The meaning develops on the basis of absorbing reasonable ingredients of the original meaning which includes three points: Firstly, on the factor "situation", "course" to replace "classroom teaching", which not only refers to the "classroom teaching", also referred to "classroom teaching", in line with the new curriculum pattern implementation process no classroom space requirements. Secondly, in terms of "content", the contents of "learning environment, family background, peer relationship and community culture" are added. During the growth of students, these contents are bound to be reflected in students' minds and become an important source of curriculum resources for students. Thirdly, gender and physical characteristics are also explicitly used as curriculum resources, because different roles and activities can be played in curriculum activities.

B. The nature of student curriculum resources

The contents of student curriculum resources include knowledge, experience, intelligence, curriculum history, personality, emotion, attitude, will, values, gender and physical characteristics, as well as curriculum experience that reflects the learning environment, family background, student community and community culture. Where knowledge, experience, intelligence and wisdom belong to human cognitive psychology; Emotion and feelings belong to people's emotional psychology; Will of overcoming difficulties belong to people's volitional psychology; Attitudes and values belong to personalized psychology; Resume experience contains complex and comprehensive psychological content; As for gender and physical characteristics, they are not the outer shell of gender labels and physical characteristics, but the rich inner world they represent. Although these contents come from the outside world, they are all reflected in the psychological activities of students, indicating the state of students' psychological development. Therefore, student curriculum resources are subjective resources, whose essence is students' psychological development state. It is of great significance to reveal the nature of student curriculum resources. It tells people that the development of student curriculum resources should not only be based on the theory of curriculum resources, but also follow the laws of students' psychological activities

C. The classification of student curriculum resources

Student curriculum resources belong to the subject resources of curriculum resources, which are very rich and can be classified from different perspectives.

According to the meaning and essential definition of student curriculum resources, they can be divided into six types: cognitive student curriculum resources, personality student curriculum resources, emotional student curriculum resources, volitional student curriculum resources, behavioral student curriculum resources and resume student curriculum resources.

1) *Cognitive student curriculum resources*: Cognitive student curriculum resources refer to the students' cognitive state of some or some kinds of things in real learning or life scenes. The course resources of cognitive students mainly include students' knowledge, experience, perception, memory, imagination and thinking mode. For example, students' ability to learn new knowledge, and to understand, analyze, apply and evaluate these new knowledge. According to different cognitive status of students, there will be different forms of expression: students' point of view, questions, and debate as well as discussion among students, students' ability to comprehensively use knowledge and so on.

2) *Personalized student curriculum resources*: The Personalized student curriculum resources refer to various unique states that students show in real learning or experience. Such as personality tendency, including students' interest, motivation and needs; Personality characteristics, including the student's character, temperament and ability; Self-awareness includes students' self-cognition, self-experience and self-evaluation.

3) *Emotional student curriculum resources*: It refers to various emotional experience states of students in real learning or life situations, such as happiness, anger, sorrow, joy, love, evil, desire, fear, etc. According to the physiological, biological and social characteristics, it can be divided into emotional and sentimental categories. The emotional category includes students' state of mind, emergency, passion and enthusiasm. The sentimental category includes students' social sense, moral sense and aesthetic sense.

4) *Volitional student curriculum resources*: The volitional student curriculum resources refer to the characteristics of students' mental activities in the process of learning, living and growing up, in which they consciously determine their goals, make plans, overcome difficulties and strive to achieve their goals. Such as consciousness, persistence, self-control, planning, courage, will of overcoming difficulties and other positive factors. Of course, there are also negative factors, such as cowardice, stubbornness, indecision, self-willed, and so on. During teaching process, positive factors can be used to cultivate students' good will

quality, and those bad factors can be used for reference to overcome the bad will quality.

5) *Behavioral student curriculum resources*: The behavioral student curriculum resources refer to all kinds of behaviors displayed by students in real situations or experiences, such as student's habit, attitude, student's certain behavior and student's action skill, etc. The course resources of behavioral students are closely related to the course resources of cognitive, personality and emotional students, and they make corresponding behaviors according to specific scenes. There are various forms of expression: abundant body language in students' description, communication and dialogue between students, proficiency of students in certain action skills, operation learning of students' experimental courses, etc.

6) *Resuming student curriculum resources*: Students' personal growth and development are all carried out and completed in a certain learning context, family background, peer relationship and community culture. The content and nature of the environment of these experiences must be reflected in the brain of students, and become a part of their psychology, knowledge, experience and insight. All these course resources can be used to help students understand theories from textbook, enrich knowledge form classroom, and increase the value of course teaching activities.

D. Characteristics of student curriculum resources

1) *Dynamic characteristic*: The dynamic characteristic of student curriculum resources means that students themselves are regarded as a kind of dynamic curriculum resources. Dynamic characteristics include dynamics in students' psychology, learning and behavior. Student curriculum resource is a kind of subjective resource. Student is an individual with life activities, and the surrounding environment of him or her is constantly changing. Therefore, students are constantly developing, growing and changing, which makes student curriculum resources have dynamic characteristics.

2) *Potential characteristic*: The potential characteristic of student curriculum resources is that student curriculum resources are hidden in individual students or groups and are stimulated or naturally manifested through specific circumstances. Such as students' special experience, students' emotional experience, students' psychological motivation and students' potential behavior, etc. The development and utilization process of student curriculum resources is to transform such hidden curriculum resources into practical curriculum resources for development and

utilization, so as to present their potential value and play a better role in students.

3) *Generative characteristic:* The generative characteristic of student curriculum resources refers to the curriculum resources generated by students themselves in the process of teaching or practice [8]. The course content for students is brand new knowledge, but it is necessary to make full use of student curriculum resources with the help of existing knowledge and experience, so that the interaction between the old and the new knowledge can generate new ideas and viewpoints. Different student curriculum resources contain different viewpoints, experiences, and so on. The exchange, collision and effect of each other may lead to different ideas in teaching, thus forming the situation of creation and generating new knowledge, ideas and methods.

4) *Cooperative characteristic:* The cooperative characteristic of student curriculum resources refers to the mutual coordination and cooperation of curriculum resources among individual students or student groups. For example, the cooperation between cognitive and emotional curriculum resources, personalized and volitional curriculum resources, and the division of labor and cooperation between behavioral and resume curriculum resources of students. All kinds of curriculum resources from students complement and cooperate with each other, and work together in the whole concept of student curriculum resources.

5) *Correlated characteristic:* Correlated characteristic student curriculum resources means that the cognitive student curriculum resources, personalized student curriculum resources, emotional student curriculum resources, volitional student curriculum resources, behavioral student curriculum resources and resume student curriculum resources connect are related with each other, with mutual penetration, mutual influence among them. The development process of student curriculum resources is characterized by multi-terminal, starting from the development of cognitive resources, then stimulating personalized resources and emotional resources, and finally externalizing them into students' behavioral activities. Different types of student curriculum resources are interrelated with each other, and there is a certain causal relationship.

IV. THE UTILIZATION MECHANISM OF STUDENT CURRICULUM RESOURCES

A. Creating a situational mechanism to utilize students' course resources

The creation of situation refers to the method of introducing or creating vivid and concrete scenes with certain emotional color and taking images as the main body in the process of utilization to cause students to utilize existing resources. The creation of such a good learning situation can help students get into the learning scene more quickly and achieve the effect of resonance. The elements of this situation development mechanism are teacher, student, situation and internal logic of situation. To operate the situation mechanism, teachers or parents need to design and provide the situation, so that students can participate in it. The situation should form a "field". The internal logic of the situation means that there is a connection between all elements of the "field", so that students can use their own life experience to start learn. The advantage of this mechanism is that it enables students to be in a real scene, feel the development environment in their own place, and fully improve their enthusiasm, stimulate their potential, and mobilize their enthusiasm in the process. The difficulty of situational class lies in its troublesome setting, which requires various materials required by the situation, the location setting of the situation, and more importantly, the support of time, space and various technologies, which is also the difficulty of situational class. For example, in an art class, the teacher asked the students to draw apples. In class, instead of drawing apples, the teacher brought a box of apples and gave them to everyone. The teacher asked students to observe the shape and color of the apple, touch the apple and feel its temperature and smell the apple. After setting up a series of scenarios such as sight, touch, smell and taste, the teacher asked the students give full play to their imagination, thus forming a "field" about apples. At this time, the teacher asked the students to draw the perfect apple in their mind. At the beginning, the apple were relatively new to the students. So the apples the students drew were monotonous and uniform. After a series of imagination, the potential resources of the students were fully stimulated. Some students drew green apples growing on an apple tree, some students drew a basket full of red apples, some students drew a beautiful apple packed in a gift box in a store, and some students drew colorful bright apples on the Christmas tree. These apples are of different shapes and features. Every apple has been given a new life situation. In this case, the teacher made full use of the students' life experience resources.

B. Creating a cooperative mechanism to utilize students' course resources

The creation of cooperation refers to the use of students' course resources in a collaborative and cooperative way by student groups or groups in the course of using students' course resources. In the cooperative mechanism of student curriculum resources, the team members cooperate with each other to accomplish specific teaching objectives together, so as to optimize the development of teaching effect. The constituent elements of this cooperative mechanism are student group members. The operation of cooperation mechanism requires students to play different roles and cooperate with each other to complete it. Student groups are generally composed of 4-6 people, and the group is heterogeneous, that is, the group members should have different characteristics; Group homogeneity means each group should have a similar structure, group activities need to assign roles, the next activity to change roles, which is conducive to the overall exercise of students. The advantage of this development method is that it can enhance the collective consciousness of people, save time and improve development efficiency. The difficulty lies in that it is not conducive to the development of students' personality and has certain influence on the development of students' innovation and creative ability. The cooperative development of student curriculum resources is mainly to complete the work of student curriculum resources through the cooperation, communication, expression and role exchange among students. Collaboration refers to the collaboration among students and the collaboration among different roles. Communication includes individual communication, intra-group communication of student groups, inter-group communication of different groups and so on. Expression includes student's speech, discussion in group, representative conclusions among groups, etc. Role reversal means that students change their identities and relationships as different roles at any time to cooperate with other students. The purpose of this operation is to ensure that each student's course resources are developed and utilized. For example: "You say and I guess" guessing games. According to riddles, there are two types of riddles: riddles of things and words. Students can be divided into different roles, such as riddle-creator, riddle-broker, note-takers, prize-givers, supervisors, and prize-givers. According to the two types of riddles, the students can be divided into two groups, and the members of the group also play different roles. Some are responsible for collecting data, and others are responsible for understanding the knowledge and skills of riddles. The three elements of a riddle are riddle face (the subject of the thing), the riddle item (the number of things), and the riddle rules. Some people are responsible for formulating the rules of the game, and some are the moderators. In the next event, students can exchange their group members and

student roles. Through role exchange and member cooperation, every student can use relevant resources.

C. Creating a generation mechanism to utilize student course resources

The generation mechanism refers to a method in which the objective learning content and learning tasks and subjective resources reflect each other in the course of curriculum implementation, and the object and subject resources interact to generate new ideas to achieve the use of student curriculum resources. Because the effect of this mechanism is to generate or create new knowledge, opinions, and methods, we call it a generation mechanism. The elements of this generation mechanism are teachers, students, parents, tasks (questions) and inquiry (process). The operation of the generative utilization mechanism requires teachers or parents to arrange and assign corresponding tasks. Students learn and explore the problem according to this task, and finally solve the problem. The advantage of the generative utilization mechanism is that it emphasizes the unexpectedness in the utilization process of the mechanism, that is, to create an unexpected harvest, generate new things, let students truly participate in this creative process, and make full use of student curriculum resources, so as to produce unexpected effects in practical activities. Generative also emphasizes the dynamics and generativeness in the development process, so the generation process is full of creativity and challenges. The research learning and inquiry teaching activities that we usually talk about belong to the use of students' generative curriculum resources. For example, when a teacher assigned a research task to students, he said: In spring, various plants are in full bloom, and the colors of the flowers can be said to be colorful. The question to be solved in this research study is, why are some flowers red? Some flowers are blue? Some flowers are white? Are there other flowers in other colors? The student's task is to give specific reasons and reveal the mysteries. So the students started this research learning activity. During the discussion, Student A said that I have read something similar to this question in a magazine. Among them, the color of the flower is related to the pH of the flower. Student B immediately asked: What decision is red and what decision is white? Student A said: I can't remember the specific content. Based on this clue, they found books and materials about plant flowering. After constant searching, reading, and discussion, they finally came to a conclusion: the color of a flower is actually determined by the pH of the petal cells. Anthocyanins are contained in petal cells. When the petal cells are acidic, the petal color is red; when the petal cells are alkaline, the petal color is blue; when the petal cells are neutral, the petal color is purple. From this they come to the following conclusion that the color of flowers actually changes with the pH of

anthocyanins. If there is no pigment in the petal cells, the petals are uniformly white(iv) Create a community mechanism to utilize student curriculum resources.

Community mechanism refers to a group composed of learners and assistant scholars who cooperate with each other under the guidance of common curriculum expectations. In the mechanism of student curriculum resource utilization, the constituent elements of this community mechanism are schools, families, communities and student teams. The operation of the community mechanism requires student teams or groups to carry out related activities in school, family, community and other places to improve the efficiency of utilizing student curriculum resources utilization. Therefore, it is necessary to establish a community among schools, families, communities and student teams. Under this community, the school is responsible for establishing new teaching concepts, changing student learning methods, and giving full play to the initiative of the student groups, such as actively participating in school meetings and receiving foreign guests. Families and communities should also work hard to create a good environment for students to use curriculum resources, such as to let students participate in family affairs decision-making and the maintenance of the community environment. In addition, student groups should be fully involved in the construction and decision-making of families and communities, and regular lectures and publicity work related to the utilization of student curriculum resources should be carried out, so that the student group can give full play to its role in schools, families and communities. This mechanism makes full use of the students' personal knowledge, growth background and other resources which is helpful for the use of student curriculum resources in practice.

V. CONCLUSION

The development and utilization of students' curriculum resources is one of the important contents of the new curriculum reform, and it is also the necessary condition to realize the new curriculum reform. In this process, we should recognize the essence of curriculum resources and avoid misunderstandings such as not taking students as curriculum resources, fragmented use of students' curriculum resources, inconsistent understanding of students' curriculum resources, and negative utilization of students' curriculum resources. At the same time, we should classify the students' curriculum resources from different angles, accurately grasp the dynamic, initiative, generative and cooperative characteristics of curriculum resources, and develop and utilize students' curriculum resources by creating situational mechanism, cooperative mechanism, generative mechanism and community mechanism.

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