

Professional inquiry based on teachers' ability of inspiration

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Abstract. The role of primary school teachers is positioned as the inheritor of human civilization and the enlightening teacher of school education. This paper discusses that primary school teachers, as educators, should have the professional ability to inspire. Based on the theory of heuristic teaching method in Chinese and Western, this paper analyzes teacher teaching from the perspective of phenomenological pedagogy, so as to examine the two aspects of primary school teachers' inspiration. Respectively from the teacher ideology level, the teacher firmness inspires the teaching faith; From the perspective of behavioral manipulation, the teacher uses the real situation of small questions to inspire the students' learning motivation, trigger their ideas, and actively participate in learning activities. Among the team members, the idea of using difference and students' mistakes enlighten each other with explanation, analysis, discussion and argument, and the teacher helps students when they are confused or the discussion appears deviation. Therefore, the appeal of primary school education practice to the professional quality of primary school teachers should be paid attention to, laying the foundation for the noble and happy life of children.

1. Introduction

Since the founding of the People's Republic of China in 1949, China formally promulgated the 9 sets of mathematics curriculum standard (syllabus), among them, 1963, 1978, 1992, 2001 and 2011, curriculum standard is a representative in 1963, 1978, 1992, the teaching goal of the syllabus are emphasis on cultivating students correctly and quickly in the ability for arithmetic. [1] In 2001, the curriculum standards put forward a new concept for the purpose of promoting the all-round development of students. The 2011 curriculum standards put forward the basic knowledge, basic skills, basic ideas, and basic activity experience, focusing on the connection between disciplines, the ability of students to find and put forward problems, and the ability to analyze and solve problems. Under the background of new era, mathematics curriculum standard set the new request to the student, from the dimension of target from mastering computing power to get the necessary mathematical knowledge to adapt to the social life, focus on the analysis found that put forward to solve the ability of the requirements of mathematics curriculum goal itself is rising, which requires matching teachers' professional ability have been strengthened.

In 2016, the report on the development of core qualities of Chinese students (hereinafter referred to as the report) clearly stated that the independent development of students should emphasize that students can effectively manage their own study and life. It can be seen that under the background of the new era, students should change from passive learners to active learners, that is, students should be able to cope with the complex and changing environment, reasonably plan and enjoy the learning process, learn to learn and develop diversified abilities, so as to obtain a happy and complete life. As educators, the professional quality of teachers should be changed accordingly. It can be seen that the role of teachers changes from knowledge carriers to inspirers and instructors to guide students' learning and growth, which is also an important reflection of teachers' professional quality.

2. Educational implications of teacher's ability of inspiration

Students of normal colleges and universities often encountered such a situation, apply for primary school teachers' job after graduation, the principal or hiring teachers usually ask the candidate's major.

My major is Chinese, Mathematics, English, hiring teachers think the applicant can competent for primary school Chinese, Mathematics, English teaching, with strong discipline characteristic, Teacher think that is very professional. But, the major that applies for is pedagogy principle major. Teacher do not have disciplinary setting, recruit a teacher to be able to think this applicant is professional not strong, cannot competent the teaching job of relevant discipline of elementary school. Therefore, it is necessary to analyze and clarify the professionalism of primary school teachers and seek the specific embodiment of the professionalism of primary school teachers.

2.1 The professionalism of ability of inspiration

Before discussing the status of the ability to inspire in the professionalism of primary school teachers, the concept of specialty and the professionalism of primary school teachers should be clarified. This is the logical starting point for this article.

2.1.1 Professional

In etymology, a major refers to one who specializes in some kind of career and study. There are two kinds of understandings of majors: one is the academic category set up by higher education according to the needs of social specialization. A major is to organize a whole set of studies to cultivate a kind of specialized talents, mainly to enable them to engage in related work in the future. The other is defined from the perspective of social division of labor and occupational classification, namely, specialized occupation. For example, doctors, lawyers and accountants are very professional jobs.

2.1.2 The professionalism of primary school teachers

Chen Wei pointed out in the research on curriculum setting of practice-oriented primary education major that the professionalism of primary school teachers refers to the outstanding special professional qualities of individual or group of primary school teachers who condense and sublimate on the basis of general professional qualities of teachers.^[2] It is a unique quality acquired by primary school teachers through professional education and continuous reflection and exploration in the process of practice, which is implicit or explicit and closely related to teachers' career ideal, belief, knowledge, ability and behavior. It is the core quality that differentiates primary school teachers from other majors. This marks the uniqueness and irreplaceability of primary school teachers. In the complex quality structure of primary school teachers, the ability to inspire is particularly important, especially in advocating student-centered classroom teaching, the ability to inspire teachers is more prominent.

2.1.3 Implications of illumination

In the professional structure of teachers, teachers' ability to inspire is particularly important. Inspiration is to induce development and make it understand the meaning.^[3] The teacher inspires towards the highest good, in order to be the highest purpose.^[4] Inspired teacher in modern education refers to the teacher with the attitude of a kind of invitation, to invite students to enter the world of human civilization, the teacher together with the children on the carrier of human civilization, inspired by the motivation of students, inspire the students' questions, ideas, thoughts, activities, etc. Open and lead children to explore the human world, in this way, teachers inspire children to learn their own professional roles.

2.2 The importance of ability of inspiration

The traditional requirement for teachers' professional quality is to learn to be a teacher and to be a model. Teachers should speak clearly to students, and teachers should play an exemplary role. Teachers' training in normal colleges also emphasizes teachers' demonstration. Teachers are the embodiment of knowledge, even students learn from teachers is the only source of knowledge. Most teachers adopt the traditional lecturing teaching method, which is an ancient method with both advantages and disadvantages. For example, the traditional teaching mode is mostly one-way teaching, in which teachers impart, explain, review, demonstrate, do homework and correct. Students listen, understand, imitate, imitate, apply, and eliminate. Lack of analysis, transformation of the link, the lack of inspiration –associate link. The teacher a speak after all, present a kind of student listen, the teacher write, the student write, the teacher ask, the student answer, the teacher take an examination of, the student back of appearance. In this mode, students' participation in learning is not

high and there is a lack of cooperative learning. The lack of cooperative learning is not conducive to the cultivation of students' innovative thinking and practical ability and the formation of critical thinking.

Nowadays, with the expansion of information channels and the arrival of the era of big data, teachers are no longer the only source of knowledge, and students can easily acquire knowledge through Internet and other ways. Compared with the past, teachers' teaching ability is not the most important part of teachers' professional quality. Therefore, in the context of the new era, teachers need to have the ability to inspire students to learn, that is, to change the teaching method, change the traditional lecturing mode into a heuristic mode, and change the one-way mode into a two-way interaction mode between teachers and students. (See Figure 1).

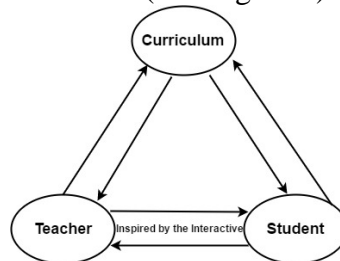


Figure 1. Heuristic interactive map.

Increase the frequency of peer interaction, group to group interaction and class interaction to inspire students' interest in learning, stimulate and maintain students' learning motivation, help students to realize multiple cognition, and create a democratic, free, civilized and harmonious classroom atmosphere. These are conducive to the growth and development of students, help students become active learners, and lay the foundation for children's happy life. This is the elementary school teacher specialized manifests, is the elementary school teacher essential ability, has the irreplaceable.

2.3 The research progress

2.3.1 Foreign perspective

The study of enlightenment goes back to the ancient Greek period, the Socratic midwife. In his teaching, he often raises questions to students from simple things, inspires students to think and pretend that they know nothing, and then uses the method of cross-examination to make students fall into the dilemma of self-contradiction, resulting in confusion, and then teachers supplement the inspiration and induction, so that students step by step approach the correct conclusion. Plato, one of his students, believed that the school was primarily concerned with the search for truth, not with memorizing a fixed doctrine, and that the teaching process focused on illumination. Aristotle objected to teachers giving the garments of their thoughts directly to their students, and having them learn the cutting of the garments of their thoughts. In the 17th century, the Czech educator Comenius opposed to mechanical indoctrination in teaching and advocated that teachers should stimulate students' desire for knowledge in every possible way to achieve the purpose of enlightening students' wisdom. As the basis of the whole teaching work, Herbart, the world German educator, inspired students' various interests, and put forward four stages of inspiration, namely understanding-association-systems-method. In terms of heuristic teaching, the German democratic educator in the 19th century, Friedrich Adolf Wilhelm Diesterweg said: teaching is to arouse students' intellectual enthusiasm. There are five stages in Dewey's reflective thinking: insinuation -- problem -- hypothesis -- reasoning -- trial and proof.

2.3.2 Domestic perspective

Heuristic teaching, as the treasure of Chinese traditional teaching thought, has a long history. Ancient Chinese Confucius in The Analects of Confucius put forward the classic judgment, he tried to understand the degree of not to enlighten him; Do not enlighten him until he knows it well enough to express it. If he can't generalize, don't give him examples again and again. Confucius' teaching thought points out in his book, a theoretical work on teaching, that a master teacher is good at teaching students by means of inspiration. To guide the students, but never lead the students by the nose; To be strict with students, but never make students feel depressed; Students should be inspired to think at the beginning of the question and never tell the final result to the students.^[5] A guide is a

teacher. In the modern research, Cai Yuanpei proposed the reform injection teaching method, mainly opens the student to read the enthusiasm and the interest. Tao Xingzhi pointed out that the responsibility of teachers lies in teaching students learning methods, enlightening their thinking, cultivating their self-learning ability, and exploring the source and destination of knowledge. As early as 1929, Mao Zedong proposed that we should resolutely adopt the method of inspiration, research and experiment in teaching to develop students' initiative and creativity in learning. After the founding of the People's Republic of China, Cui Handing said in the theory of modern teaching art, whether teaching is enlightening depends not on the form but whether it guides students to think positively. That is to say, teachers should inspire the flow of students' thinking.^[6] The purpose of a teacher is to inspire his students to think.

2.3.3 Research review

From 1979 to 2019, 6,644 articles were precisely matched, and 279 articles were precisely matched by the input of heuristic teaching on CNKI. In summary, the research focuses on the following six aspects. Research on the importance of heuristic teaching, basic problems of heuristic teaching in mathematics, the application of heuristic teaching ideas in mathematics teaching, experimental research related to heuristic teaching in mathematics, research on the heuristic method in mathematics teaching, and practice research on heuristic teaching in mathematics. By reviewing the research status of heuristic teaching at home and abroad, researchers continue to enrich the research of heuristic teaching on the basis of inheriting the essence of traditional heuristic teaching thoughts at home and abroad. The heuristic teaching thought fundamentally reflects the objective law of teaching activities. The research of heuristic theory and practice combined with mathematics is the current development trend. This article combines the mathematics classroom teaching activity, analyzes the heuristic teaching method importance as well as the operation process.

3. Teachers inspire the ability to act on Suggestions

First of all, from the consciousness level of teachers, teachers should firmly inspire students to learn the faith. Secondly, from the perspective of teacher behavior, teachers have the ability to inspire students' learning motivation throughout the process, generate problems, generate ideas based on problems, and participate in learning activities according to existing ideas.

3.1 Consciousness level: firmly inspire students to learn the faith

As a new period of primary school teachers must first firm inspire teaching faith. It is necessary to integrate the teaching belief that inspires students' classroom teaching into the personal belief system of teachers, and construct a part of personal philosophy throughout the daily teaching behavior.

Teachers should believe that although students have different learning and growth qualifications, they can all learn. In terms of students' beliefs, teachers should convey a positive attitude and belief that they can learn.^[7] from the perspective of students' own learning, everyone is born with the ability of self-learning. Self-learning is transcendental and a necessary condition for human behavior. Everyone has the ability, through the teacher inspired, students can learn independently.

Teachers should realize that their role in the classroom is to be a professional inspirer. Professor Max van manen once pointed out that a teacher is a person who stands in the position of caring for children, and the thought of guiding or guiding contains a sense of attention and encouragement. The teacher's role is to lead the way, to lead the way.^[8] enlighten students' understanding with teachers' understanding and awaken students' understanding with teachers' understanding. Teachers invite and lead children into the civilized world in an inviting manner. Teachers and children live together and accompany children to discover and explore the essence of human civilization and lead children into the civilized world. The essence of education and teaching is revealed at the moment when teachers interact with children. Teachers are the inheritance of human civilization, the company of school education and the enlightening person of children's life. They inspire students to seek truth, kindness and beauty.

3.2 Operational level: inspired point of view analysis

3.2.1 To inspire students' learning motivation in the whole process

The class session can be roughly divided into five parts: question and motivation, process and method, exploration and thinking, diversity and comparison, summary and reflection. Among them, the learning motivation for teachers to inspire students in class does not lie in the inspiration of the first link, which simply attracts students' attention. Inspired the first step is mainly aim was to stimulate interest, this is the first to inspire motivation, inspire the students' learning motivation should also be run through the whole classroom always, namely in the first step to inspire the students' learning motivation to achieve the purpose of stimulating interest, continue to inspire the students' learning motivation, lets the student in the perspectives of thinking collision occurs, is the moment of collision in the thought, essence, exchanges between people to emerge, learning motivation is maintained. Finally, the motivation is to ignite students' desire to further explore knowledge. Students' motivations before class, in class and after class are linked together to form a complete and continuous motivation chain throughout the whole process of classroom learning.

Ning lianhua and Tu Rongbao pointed out in the inheritance and development of basic mathematics education in China that the two key elements of heuristic teaching are questions and hints.^[9] the main purpose of the question is to stimulate students' thinking, while the prompt is to help the teacher when there is a deviation in the discussion. In his article intellectual liberation in the teaching of ignorance, the professor pointed out that teaching is the stimulation or liberation of the will to learn.^[10] this kind of stimulation has basically the same meaning as the inspiration mentioned in the article. Teachers can first create vivid and real learning situations through inspiring questions to make learning happen naturally. If necessary, cooperate with music, art, animation, dance, magic and other forms. The real life situation is to stimulate students' interest in learning before learning activities take place, and then through students' real learning activities, students can get real learning experience, which is accompanied by the evaluation of teachers and students and the evaluation of students. Educational phenomenology inherits the tradition of phenomenology and returns to life itself and life world. Phenomenology of pedagogy takes children's life world as the direction of teachers' efforts, and requires every educator to face the original real life of education directly, pay attention to students' life experience, and realize the significance of education. Teachers use evaluation to promote motivation, and use experience to promote motivation, so as to maintain students' learning motivation. After learning activities, teachers can help students solve problems by leaving problems to students, providing them with solutions, and guiding them to use library resources, network resources, other school resources and community resources after class. Leave the classroom with the problem and solve it after class.

Recently, in the Beijing live teaching exchange activity from teaching to learning, the reverse reasoning lesson taught by Feng Lin in Beijing primary school was fully affirmed by the famous British scholar Paul Ernest. Teacher Feng first led the whole class to do finger exercises from easy to difficult, stimulated the students' learning motivation before class, and made every student in an excited and positive state. Then, by comparing the positive situation with the negative situation, the key point of this class was introduced to invert the problem. The motivation of students was maintained by using the daily life subway, Xiao Ming going to school, and the fun situation of mathematics. A series of activities inspired students to participate in activities and generate ideas, and then they left with their own thinking.

3.2.2 Inspire students to take the initiative to participate in activities

In the process of inspiring students to take the initiative to participate in the activities, team members do their jobs, actively join their own contributions to the group, each student is a staff with ideas, add luster to the group contributor. This kind of group activity presents a kind of positive and progressive learning state, students get a kind of dare to think, dare to do, dare to say optimistic and confident, show the students a good mental outlook. When students are able to generate their own ideas and have the desire to share with their peers through teachers' inspiration, learning activities become a natural thing. In benign learning activities, students think, question, criticize and reflect.

Professor Paul Ernest spoke highly of professor Feng Lin for organizing students to participate in activities. The activities are as follows:

Preparation: finger exercises

Activity 1: Xiao Ming got up this morning. He spent 30 minutes brushing his teeth, washing his face and eating. Then he left home. Question: What time did Xiao Ming get up today?

Activity two: After a bus stops, 8 people get off and 12 get on. There were 37 people on the bus when we left the station. How many people were on the bus before the station?

Activity 3: Four number cards are transformed into fun math in the following 3 steps. Excuse me, what is the original order of the four cards?

Before class, Mr. Feng maximized the enthusiasm of the students. Learning activities in line with the real life situation of the students were set up in class, and a well-designed activity record sheet was provided for the students, so that each student had activities. The division of labor in the class was clear and the students actively participated. Real needs in real situations; Real activities in real processes. Students participate in real activities and inspire real thinking, which is where real learning takes place.

3.2.3 Inspire students to generate ideas

Nowadays, it is advocated that teachers should have the ability to inspire students. By setting good situations and inspiring questions, teachers can inspire students to generate and generate problems, and try to let students generate ideas and express them in the interaction between students and teachers, so as to refine their ideas and generate the desire for learning activities.

In the open class, Mr. Feng boldly asked the team members to stand in the center of the platform to explain their ideas. However, one boy got the wrong idea and insisted that he was right. He thought Xiao Ming got up at 7:30 and 15 and 30, and the final result was 8:15(Fig. 1)

Fig. 1 Student's mistake

	Question and Answer	Analysis
Question	Q: Xiao Ming got up this morning. He spent 30 minutes brushing his teeth, washing his face and eating. Then he left home. What time did Xiao Ming get up today?	Given the time to school, time to travel, time to wash, what is the time to get up?
Right Answer	School: 7:30 Calculation: $7:30 - 30 - 15 = 6:45$ A: Xiao Ming gets up at 6:45.	Reverse the time of getting up according to the situation.
Wrong Answer	School: 7:30 Calculation: $7:30 + 15 + 30 = 8:15$ A: Xiao Ming gets up at 8:15.	Add up all the time according to the forward thinking.

In the group, several other students explained and analyzed each other, discussed and argued, and then thought and discussed. Teachers in this process of inspiration and induction, and students discuss together, and then inspire induction. The way of combining teacher-student interaction with student-student interaction makes him realize the process of pushing back. From the perspective of types of inspirations, the inspirations between teacher-speaker students, between individual students and speaker students, between group members and speaker students, and between teacher group members and speaker students.

4. Conclusion

In regular classes, teachers put forward questions to inspire students to think, and what they most want to see is the positive response of the whole class and the smooth completion of all procedures according to the teaching plan. Especially in the open class, in order to ensure the class effect and progress, the teacher hopes the students to say the right answer in one step. If the students say something wrong, what they say is not the answer the teacher most wants to get, which often makes the teacher feel out of control. However, teacher Feng boldly let students expose their mistakes and use their mistakes to conduct heuristic teaching. Mistakes are inevitable, valuable, valuable and worth exploring.

Teachers should have the ability to inspire, from the level of consciousness, teachers should firmly inspire the teaching faith. From the perspective of behavioral manipulation, the small problem situation can trigger students' learning motivation and trigger students to actively participate in learning activities. Teachers should pay attention to the dialogue and exchange with students when inspiring students to think about problems. Teachers should not be in a hurry to inform students of their answers. They should use the idea of difference and students' mistakes to enlighten each other, explain, analyze, discuss and argue with each other, and assist students when they are confused or deviate from the discussion. To help students form the quality of learning, cultivate students' critical ability, innovative spirit and practical ability, so that students become an heir of human civilization, all-round development of the social person, learn to learn the integrity of the person, for children's future life to prepare for a noble and happy life.

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