Chapter 2
Four Areas of Constructing the Contextualized Curriculum

The generation of the contextualized curriculum is a process of construction based on a theoretical system in its basic mode, and then has been developed into a practical system. With the development of experiments, curriculum reform was gradually brought into schools. Therefore, the contextualized curriculum was the inexorable outcome of educational experiments and the continued need for development. It stresses the inducement of initiative, strengthening the sense of aesthetic feeling, focusing on development, permeating the humanistic and breakthrough practices in schooling. With the aim of penetrating to educators, a context full of aesthetics and wisdom, the principles of implication and empathy, the transformation of the role and strengthening the child's subjective consciousness in the field of psychology mean that children actively engage in learning so that they can be fully developed via activities. Therefore, the contextualized curriculum, as one mode of education, naturally integrates the activity curriculum into the subject curriculum. With the widening of the educational space, extra-curricular activities, class activities, field activities and the establishment of the thematic mega-unit curriculum and other courses, the teaching of knowledge, the development of intelligence and quality training have been involved in the clear goals of the contextualized curriculum, and then the contextualized curriculum has been brought into the classroom.

Aiming at children's development, the construction of the content of the contextualized curriculum is based on core courses, comprehensive courses, the transitional curriculum and source courses, which are called the four fields of the source curriculum. The contextualized curriculum, accordingly, integrates the systematization of knowledge, the operability of activities and the pleasure of aesthetics. It also emphasizes the specific atmosphere, arousing an enthusiastic mood and active engagement in learning. Therefore, the contextualized curriculum strives to combine the influence of the explicit curriculum with the implicit curriculum and constructs an open, pluralistic and network-structured curriculum system.

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2.1 Core Domains: Subject Contextualized Curriculum Linking Teaching Content and Children's Activities

In the teacher's mind in different disciplines, the priorities are rich emotion, latent potential and children. Teachers must not learn for students, directly replacing subject learning activities by transforming knowledge. Simply imparting knowledge neglects many important factors, such as emotion, aesthetics feelings. The goal of the contextualized curriculum is to cultivate children as people with good qualities and all-round development. Of course, this incorporates affective goals.
The subject of the contextualized curriculum brings children into optimized situations, in which curriculum content is combined with children's activities, effecting implication, empathy, role and the force of the psychological field, along with the active participation of emotion in education, the teaching process, mobile activities, awareness activities, language activities, thinking activities, touch, imitation and other physical activities, coupled with the creation of pictures, music, drama and art around these activities. It can be said that if there are no activities for children, it is impossible to discuss the participation of their initiative, not to mention the development of their abilities, intelligence and affection. The pansophist curriculum theory proposed by Comenius emphasized that "to combine the training of activities with cognitive activities" there was a need to "carry out practical activities in the process of recognizing things." Dewey's Activity Curriculum Theory also highlighted the important position of activities in children's experience.

Thus the subject of the contextualized curriculum creates an atmosphere according to the characteristics of textbooks, in which students feel a graceful climate in classroom , which combines disciplinary courses with children's activities and knowledge that has been inscribed in the context, so that knowledge and context are interdependent. Children interact with the situation and carry out relevant practical activities. They are active in this optimized situation, and their attitudes, emotions, language and behaviors enrich the situation, which overcomes the traditional Chinese subjects overemphasis on imparting knowledge but neglecting practices, or lack of specific information on operation and application. Meanwhile, to some extent the contextualized curriculum compensates for the defects which make it easy for the simple activity curriculum often to fall into a non-systematic state. As children's activities always promote the teaching process, thus it helps to deeply understand the degree of comprehension and application of the subject content.
In fact, from a broad perspective, the knowledge of all disciplines could be traced back to the origin of human activities, and in human activities is constantly promoted, developed and perfected. As Professor Zhong Qiquan of East China Normal University pointed out in his book *Modern Curriculum Theory*, "People are thinking, experiencing emotion and making judgments when they are involved in activities."

Children are engaged in experiencing, exploring, discovering, expressing and operating in a warm mood. According to this series of activities, children can take

the initiative in learning and become the main roles in the process of learning. The activities in these situations are not completely separate and irrelevant to their experiences; conversely, they interact with and reinforce each other, because all these scenarios are fused in the context and generated by teachers and students. In view of the important position of the subject curriculum in children's development, I put it forward as a "core area" in the subject contextualized curriculum.

2.1.1 Linking Subjects and the Child's Life

Around the world, social life is an important resource for learning knowledge: it is a vast and rich classroom. Therefore, the contextualized curriculum constructs the three dimensions of the child, knowledge and society, and classroom teaching and life in the subject situation can be linked through the real situation and the creation of simulated situations.

Although children's experiences are relatively shallow, in life they have contact with characters, scenery, things and events and they accumulate a lot of experience. Remember that Dewey once pointed out: "From the viewpoint of children, the school's obvious waste is children cannot completely and freely employ the experiences obtained outside the school within schools" (Dewey 1922/1985). Children's experience should be the starting point and foundation of the curriculum. However, children's experiences are often ignored, which is a tremendous lost opportunity.

The priority is to employ children's experiences fully when the subject contextualized curriculum links with life. The connections between Chinese teaching and the life world have been elaborated and introduced in the previous chapter. Here, an example from mathematics will elaborate further. Many children have a basic knowledge of and experience with numbers, and parents often help their children to add up with toys, which can be a very vivid mathematical enlightenment. After elementary school, with a richer experience of life, children's understanding of various geometric forms, scores, percentages and some of the basic laws of mathematics should be highly related to mathematics that cannot be ignored, and should be a fully utilized resource.

For example, in the fourth grade there is a lesson on "triangle understanding." When I was preparing the lesson, the teachers and I wanted to use the children's experience to relate to common triangles. An electricity pylon, a red warning flag, a high crane tower with a long arm are all triangles; the triangle is universal in life and is also known to children. So before the class teacher lets the children go out to find triangles, they should be encouraged through intentional attention to let the mosaic of the life of the triangle appear sharply before their eyes. Starting in class, letting students report examples from their own life before beginning the study of the triangle of income, means that children learn more efficiently and in a way that is closer to them. This shortens the psychological distance between students and

textbooks. The students are likely to find a variety of triangles—obtuse, acute, right-angled—and the personification of a "big triangle family" can be used so that they play the roles of different triangles, to introduce themselves to them. Let students observe, think about and sum up the different characteristics of each triangle and how common they are. Then guide the students in how to apply the characteristics of the triangle to life. Let the child pretend to be a carpenter and use the triangle's "stability" characteristics to repair a loose stool (as outlined in Chap. 1). In our class the children interestingly watched one of the students who play the role of little carpenter. He picked up a wooden strip on both sides of the stool, then collect a small hammer and some iron nails, then made a small bench which has triangles, so that the originally loose pyramid of the stool was in front of the child and they could truly feel the triangle's characteristics in a real-life application. In the active learning state, the children also enumerated their familiar small red flags and triangular cakes, and found that the triangle is not only stable but also aesthetic, and can save the raw materials. Such discoveries surpass the textbook and show that life will enrich the classroom. By guiding the children to discover and recognize triangles, and finally to apply the knowledge they have gained to their lives, they learn to be relaxed and interested, and an interest in mathematics is also cultivated.

Of course, experiencing maths in life is not confined to the things that children go through and the scenes the see. From the campus to the family and society as a whole, all of life around the world can be reflected in a maths class.

In addition to using experience as maths teaching, it is very meaningful and interesting to let children gather data themselves. If mathematical knowledge seems distant from children's real life and as a result maths learning is relatively boring, children will not understand their role and will be unable to produce an interest in learning, which leads to resistance to achieving the goal of learning. In fact, as long as the teacher is a conscientious person, they can find something of interest in children's real lives. Linking this part of the content with students' lives in a full way may bring unexpected results.

One maths teacher was teaching the fifth grade about the circumference of a circle and she asked students to collect data on the Shenzhou V spacecraft. In class, the teacher showed the video of the successful launch of this manned spaceship, and showed a schematic diagram of its flight trajectory. She naturally connected the study of mathematical knowledge with the latest high technology. As a result, this triggered the children's curiosity about space exploration, so that the atmosphere of inquiry was suddenly strong and their thinking was activated. Subsequently, the teacher designed problem scenarios so that students could finally realize how to calculate the perimeter. In her teaching, this maths teacher did not tell the students the method of measuring the circumference directly, but created an actual situation that let them measure the circumference of a spacecraft's orbit. In this situation, the students' previous experiences, such as winding, rolling and pulling, conflicted with the new problems arising from the scenarios. The previous cognitive balance had been broken, and "think how to calculate the perimeter" had become the inevitable

need for these students when their desire for inquiry had been activated. As Jean Piaget (1896–1980) pointed out, fifth-grade students are still in the concrete operational stage. The creation of a situation gives their thinking the support of specific things, and then effectively promotes their active thinking.

In our school, teachers are more concerned about the many current events in society, but also pay attention to the combination of these events and teaching, which brings unexpected results. For instance, the teachers took the example of Yuan Longping, who is called the "Father of Hybrid Rice" in China, with the aim of helping students to understand the differences between the past yield per acre of rice and the current Chinese food requirements, so that they calculated that 1,000 acres of hybrid rice can produce more than in the past to support more people's food consumption. This helped the students to understand the contribution of scientific and technological achievements to society. Moreover, children are particularly fond of sports and especially idolize sports celebrities, so the teacher made a comparison of a few sets of data, and the children conducted a comparative study on the nationwide record for the 110-m hurdle race, held by Liu Xiang. Children could feel the spirit and strength of the Chinese nation based on these data. In thematic educational activities called "I Love my Hometown, I Love the Hao River" (see later in this chapter), the teacher asked the children to collect some special information about the development of Nantong's various undertakings, such as its annual industrial output and the throughput of the port. Combining these data with maths teaching does not only give mathematics concrete connotations, it lets the numbers produce the power; also, it prompts students to feel the gratifying results of social development in the course of studying maths.

In the Patriotic Month, combined with the thematic mega-unit educational activities, the maths teacher delivers the "multi-digit reading method" in the fifth grade. It is not easy for children to understand terminology like million and billion —they do not have such a concept and these terms are not easy to read and write— so simply learning these numbers become very boring to them. I think that numbers are meaningful and valuable only if they connect with children's real lives. At that time on the National Day, the newspapers reported tremendous economic development in the production of grain, steel, coal, automobiles, electricity and other outputs. I discussed with the maths teacher whether children could be asked to collect relevant data and conduct comparisons, so that they could concretely understand economic development.

In fact, this was also a kind of social investigation, a vivid ideological education, which connected mathematics with the economic development of the motherland. The children collected data and were involved in group discussions, which created the context of a "motherland economic development exhibition." As the exhibition was about specific issues taking place in the children's real lives, they were engaged in making charts and carefully writing down numbers with multiple digits with the requirements of being accurate, clear and correct. Some of them drew tables and some wrote out the numbers, and then the "exhibition" was ready. There was a need for some instructors, so children raised their hands and asked to serve as instructors.

It demanded a loud and articulate voice and reporting the numbers accurately. In such a simulated application scenario, the children learned to read multiple digits through applying to be instructors and actively practicing the ability to report multiple digits. At the same time, they were proud at the astonishing speed of the motherland's economic development. In this way, mathematics learning, children's lives and the development of society were linked together.

Since then, the teachers have learned that maths can be linked with the context in various applications. The maths class at school has become interesting. Learning statistics about reading activities is another example. Students were required to collect statistics on reading and make them into a chart. In a similar way, when students learned about percentages, scores and proportions, they grasped methods of collecting data in class, school and society through a particular project to compile maths calculations in real life. Meanwhile, when they started to learn about the Chinese currency, students were asked to play the roles of salespeople and cashiers, so that they understood the currency system and exchange rates.

When sixth-grade students learned about their area, the teacher took them to a rural field. The students did not only feel fresh and interesting, but also were impressed by the concept of Chinese acres and hectares, which were not familiar to them and had little contact with their lives. When the students learned about percentages, they used a program called "Little Financial Expert," which helped them really practice their knowledge and had a good effect in the classroom. The discipline of language, whether it is reading or writing, has the same emphasis on how to read and write for the life needs of the ability to design an appropriate form or carry out applied training. This could be described as "seeing is believing." When children's thirst for gratification has been reached, they are more willing to engage in a new learning situation. They sincerely say things like "Nature is our classroom" or "There are countless examples of mathematical knowledge in life." Practice shows that the subject contextualized curriculum and life are interlinked, which adds vitality to disciplinary teaching, transforms difficult learning content into something easier to grasp and changes monotonous knowledge into abundant content. It is like a spring around the world and a social life for children's classroom learning.

In subject teaching, children's activities maintain the characteristics of the various disciplines and also embody the organic relations between disciplines and society. I feel deeply that all knowledge of Chinese literacy, mathematics and other disciplines is produced in a social context, and ultimately subject knowledge should come back to scenarios in the classroom. Therefore, activities designed in the subject contextualized curriculum often display knowledge in real or simulated social practices in the context of the application of the main content. What students learn is the subject of knowledge which links with production, life and other practices. Based on the needs of textbooks and the theme of the activities, children learn content in specific situations when they engage in the operational process, conducting observations, writing reports, playing the role of judge, creating

descriptions or retelling speeches. This ensures that every child can improve their capacities as they mature. Their learning process is full of a sense of accomplishment of "learning to use."

Naturally, subject knowledge that connects with children and their lives is perfectly constructed in line with the ways of the child, knowledge and society. This construction of children's cognitive laws is conducive to the inherent connection of knowledge and its transfer. The elements of the humanities and experiential courses are also well embodied in the curriculum. In such a process, because of the sense of aesthetics and interest in the context, it promotes the participation of teachers and students and forms emotional links among children, knowledge and society. This best mood state can drive and activate children's potential ability. Childish innovation will occasionally be displayed in the learning process. As Chinese female scientist Wei Yu said, "Innovation is a kind of intuitive thinking with passion." Therefore, there are typical characteristics of culture, emotion and innovation in the construction of children's knowledge in the subject contextualized curriculum.

2.1.2 Promoting the Teaching Process in a Series of Subject Activities

The teaching process has always been dominated by teachers and by teachers' explanations and step-by-step demonstrations. In such a teaching process, students can only be passive and can only have a "supporting role." Their principal position in learning cannot be guaranteed.

In order to embody the active position of students, the subject contextualized curriculum emphasizes a change in teachers' philosophy; meanwhile, it also requires full preparation with less design and arrangement of students' activities. It should be stressed that this is a major step in reforming classroom teaching. If teachers have the teaching concept that it is possible to start everything from students' thinking, then it is also possible to generate (生成, *sheng cheng*) the new form of teaching on the basis of *presupposition* (预设, *yu she*) with students' feedback. Those brilliant sparks and trails are often collisions of wisdom among students and teachers.

For instance, when I was designing a lesson called "Underwater World," I realized that the underwater world was a secret storehouse for humankind. When land-based resources are increasingly scarce and overexploited, human beings have to develop undersea resources. In fact, the development of the oceans has begun, so I changed the way of teaching this text with common sense to help students to understand this mysterious world, arousing their curiosity and interest. According to the texts, I designed a series of contexts to promote the teaching process with children's activities (Box 2.1).

Box 2.1 Teaching Design: Secret Storehouse
Student activity 1: Read Sections 1, 2 and 3 of "Secret Storehouse" by themselves to know that the ocean is big and deep

Teacher: In Section 1, what is big? (The land is big.) In Section 2, what is big? (The ocean is big.) What about in Section 3? (The ocean is very deep.).

Teacher: (showing the globe) Look, all the blue is the ocean.

Teacher inspires students' imagination: Can you imagine how big the sea is? (Students close their eyes, teacher describes the ocean in a soft voice.) The ocean is bigger than our country, China. The ocean is bigger than the sum total of the land. Then imagine the depth of the ocean. Put Mount Qomolangma in the deepest part of the ocean and a more than 8,000 m high mountain top will drown in the ocean. (Let the students appreciate the size and depth of the ocean.)

Student activity 2: Enlighten students by asking questions

The ocean is so big and deep. What kind of questions do you have? What kind of world is there under the sea?**Student activity 3: Understand the basic structure of the article**

Guide the students to grasp the beginning and end of the article, and to use their reading skills to get the main characteristics.

Students read the article.

They should notice the structure of the article, which can be summarized as a question being raised at the beginning, the answers to which are in the following seven sections. Then let the students grasp the main points of every section.

Ask questions:

light from the bottom of the sea
voices
animals
valley, plants
minerals
summary
} answer the questions

Student activity 4: Learn the whole article

Create context 1: Field trips (show a picture of the blue sea)

Description: Ms. Li is the president of the College of Marine Science and you are researchers. Now we are on the beach. We are going to dive to explore the seabed. Field trips are common in research to study particular things. Please put on your diving suit and go to the bottom of the sea. (Add a paper cut-out of a diver and move it slowly to the depths of the sea.)

(Continue slowly and softly): We dive 100 m into the sea and it is still light. At 200 m, it is not so bright. At 300 m, it starts to go dark. At 400 m, it is darker. Below 500 m, it is all black. What do you find?

Student activity 5: Create a presentation to introduce the scene 500 m below the sea

Students give their presentations.

Create context 2: Access to literature

This time we found strange sights at the bottom of the sea. In order to study one thing, it is often necessary to look up literature in addition to going on a field trip. Now I offer you a copy of "The Cold Lamp on the Bottom of the Sea." It will give you an idea of what starlight is like 500 m below the sea.

Student activity 6: Reading the materials

Guide to skimming: There is intensive reading and overview reading. In order to study a problem, we have to look up a lot of literature and it is impossible to read every word. However, scanning the literature enables us to have a choice. Intensive reading is for the important literature and skimming for the rest.

Student activity 7: Find the answer by reading

The starlight on the sea floor is the light from abyssal fish. Why do abyssal fish shine?

To sum up, the functions of shining are (1) to attract prey; (2) to locate companions; and (3) to defend against enemies.Rethinking the questions and firstly answer the questions by yourself, then describe what happened then explain how happen in the context. It is more attractive to describe the phenomenon first and then follow up with the reasons when you answer the question.

Create context 3: The virtues of modern machines

1. Inspiration: It is quiet at the bottom of the sea, but that does not mean that there is no sound. We can hear the sound by virtue of the detectoscope.
2. (Play a video or draw stick figures to show a detectoscope.) There is an oceanographer listening with a detectoscope on the television screen.
3. Description: In order to study something, we need make use of modern instruments and equipment in addition to field trips and access to literature. (Enter the context.) Now please continue to act as an oceanographer, put on a headset (put your hands over your ears to simulate the situation) and listen with the detectoscope.

Student activity 8: Act like a modern machine

Teacher simulates the sound of abyssal fish (gently) buzzing, chirping, woofing, purring.

Question: Did you hear that?

Why doesn't the teacher speak loudly? Explain the meaning of a whisper, as speaking in a low voice in private.

Student activity 9: Compare two sentences and enjoy the language

A. Animals at the bottom of the sea make different kinds of sound that you can hear with the detectoscope, such as buzzing, chirping, woofing and purring.

B. Animals at the bottom of the sea usually whisper. Some buzz like bees. Some chirp like birds. Some woof like dogs. And some purr like they are having a deep sleep.

Read the two sentences and say which you think is the better one. Enjoy the language.

Give some directions according to the students' answers.

The writer of B uses a rhetorical device, a metaphor, to describe the animals at the bottom of the sea. They treat the animals as humans who have many secrets to share with each other. It is mysterious. They expand the sentence pattern of A to create B. This makes the reader feel the context more easily and enjoy the splendor of the sea world more deeply.

Student activity 10: Read the sections of the article in turn

Create context 4: Compare the sections of the article

1. What is the theme of the fourth section of "Sea World"? What about the fifth and sixth sections? (Answer: four animals; five plants; six minerals.)
2. What about each section of "Humanity's Secret Storehouse"? Is there only one theme in one section? If there are several themes, how many? (Answer: animals, plants, minerals, summary.)
3. Direction: There is one theme in one section of "Sea World" and all the themes are in one section of "Humanity's Secret Storehouse." What they have in common is that they are the main part of the article. When we read an article full of information, we should give it subheadings. "Paracel Islands (one of the islands located in South China Sea)" is the same as "Sea World," in that there is one theme in each section (sea surface, seafloor, beach, island).

   We should give subheadings to a section that contains more than one theme in order to figure out the structure of the article. Students should

know that there are animals, plants and minerals at the bottom of the sea, which is a human storehouse.

Student activity 11: Find the contradictions in the two articles and think about them

Inspiration: Did you find any contradictions in the two articles? (Students should find out that there are 30,000 kinds of animals at the bottom of the sea from "Sea World" and 150,000 from "Humanity's Secret Storehouse." Lead the students to explore the context.)

We sometimes have contradictions when different data exist about one thing. We have to find out which one is right.

Inspiration: "Sea World" is an article from a textbook that I used 30 years ago.

Students may notice a sentence in "Humanity's Secret Storehouse: "due to the limited knowledge of the sea world, there are more treasures…" They may realize that 30,000 is a number from the past, which has been updated to 150,000. It is not a contradiction. It means that people know more and more about the sea world. We are pushing the door of the secret storehouse.

Student activity 12: Do a detailed reading and grasp the key words

There are 150,000 kinds of animals and many kinds of plants and minerals. How can we express the abundance of the sea?

Direction: Begin with the sentence about different animals having different activities to inspire students to describe then animals and their activities. Then choose four typical ones to give four examples. What would you choose to write about plants? What about minerals?

Animals: the slowest; the fastest.

Plants: the biggest; the smallest.

Minerals: write briefly about these.

What are the typical examples in "Humanity's Secret Storehouse"?

The heaviest; the smallest; those that move backwards; those that rely on extra force?

Direction: It is impossible to list all the examples to describe one thing. So showing the most typical examples is the simplest and smartest way to describe it.

Student activity 13: Watch the video about the sea world

Play a video about the fantastic scenes at the bottom of the sea or show students some pictures.

Teacher and students summarize the means of expression together.

Notice the heading and the end. Consider the full article.

Figure out the structure. Seize the key points.

Clarify the numbers. Grasp the full view.

Choose typical examples. Know the general ones.

Student activity 14: Read the fourth, fifth and sixth sections of the article

Student activity 15: Retell the content of the article creatively with a clear structure

Now we know the basics of the sea world. You, as oceanologists, should introduce the sea world to the other pupils. You can choose one form from the following (reflecting individualized teaching):

A. You come back from a field trip and give your report.

B. Two students in a group report one scene.

C. Describe the sea world briefly.

It is not difficult to find that students enjoy an interesting study in a series of contexts and when they are in a dominant position in the study. The teaching procedures follow the students' learning procedures step by step. Students have grasped the full view, summarized the article, seized the key phases, acquainted themselves with the sea world and had interest in exploring the sea aroused through this class.

Similarly, maths activities generally reflect the characteristics of exploration. Teaching procedures are pushed by guiding students to analyze, compare and suppose, and then to choose and judge.

2.1.3 Role Effect Helping Children to Devote Themselves to Learning

In the course of teaching, the inherent role of each individual student to "students" tends to get rid of the shackles of being taught and passive acceptance. The negative state of this role will also affect students' overall activity in the teaching process.

The subject contextualized curriculum attempts to promote children's learning through their activities in the context of learning knowledge; meanwhile, students learn to employ their knowledge in scenarios, which are the epitome of society, but are authentic and typical examples and are highly related to textbooks. For instance, in a Chinese literacy class, the scenarios reproduced are what the authors created, while in a maths or science class or in social practices, the scenarios are related to the theorems and formulas being discussed.

In the particular context designed by teahcers, children could be involved in thinking, emotion and language activities when they are required to play roles. In accordance with the needs of thinking, the emergence of roles makes the teaching content of education closer to students' real life. Let them learn the contents of the textbook by taking on a specific role, or reading aloud, or reporting the information,

or showing the action, or portraying the performance. The vividness and novelty of the role make children naturally engaged in the scenarios. Driven by emotion, the initiative of this kind of "force" is almost impossible to control. Suddenly, the logical, abstract and symbolic content in the textbook becomes very vivid and imaginal. This is precisely the positive result of role conversion in a given context.

2.1.3.1 Taking the Expected Role

When children play the role they expected , say as a scientist, astronomer, painter, poet, referee, PLA (People's Liberation Army), journalist or presenter, their emotions are particularly enthusiastic. Because the expectations of such a role conform to the child's thirst for emotional movement, prompting them with strong emotion, a good vision and participation in activities, they are engaged in the learning process. For example, when first-grade children learn the poem "Dawn of Spring," because the ancient poet employed the technique of flashback, it is still hard for them to understand even though it is a short four-sentence poem. If we neglect students' activities and only explain the meaning of a poem through the language of adults, it is hard for students to understand this representative of ancient Chinese poetry.

In my class, children were asked to play the role of a poet and they were excited.

The teacher described the scenario: "It is late at night and you (the poet) are reading by the light of a candle. You read, read and read some more, and then you are sleepy. It is midnight, it is windy outside, and the wind and the rain awaken you."

The children raised their heads and it seemed that they had also woken up.

The teacher continued: "You listen and listen, and then you go to sleep again in a moment. Early in the morning, you are disturbed by birdsong and you wake up."

The children stretched and some of them stood up.

At this moment, the teacher asked: "On this spring morning, you are awakened by the chirping of the birds. You wake up, walk to the window and write a poem. What two sentences would you be likely to write?"

The children were happy to imitate the ancient poet and said: "It's a wakeless spring morning, everywhere birds are chattering" (chunmian bu jue xiao, chuchu wenti niao, 春眠不觉晓, 处处闻啼鸟).

The teacher continued: "You the poet suddenly remember that yesterday at midnight you heard the wind and the rain, and you also think that after the rain the flowers will be knocked down. What are the rest of the sentences in the poem?"

The children said:"Last night's rain has ceased, the flowers are still falling" (夜来风雨声, 花落知多少).

In this way, students have a sense of role and experience unknowingly the poet's description of the situation. Because the role has changed, language behavior inevitably changes too. The enthusiastic mood of the role-play is suitable for the whole learning situation, all the students unconsciously enter into the role of the unconscious, the activities of their imagination almost synchronized with the

experience of the role. Children's whole body and mind are put into the role and they become the real protagonist.

Students could play the role of the author of text, as they could understand the contents and language in texts when students observe and listen the scenario with their own perspectives.

2.1.3.2 Playing a Fairy Tale Role

It often happens that teachers set up a fairy tale role corresponding to children's activities. Because fairy tales are magical and full of fantasy color, a fairy tale role is particularly attractive to children. In children's imagination, the classroom is shrouded with the charming color of fairy tales, such as the long-nosed elephant in the animal kingdom, the naughty little monkey, the cunning fox, the radish doll of the plant kingdom, the cauliflower girl, the willow sister, the younger grass brother, the little rain sister and the snowflake girl. Children are particularly fond of these roles. For instance, when I taught a lesson called "Boat in the Desert," students played the role of a camel. There were camel self-narrative activities and so on. The emergence of role-playing as a fairy tale character adds infinite vigor and interest to the classroom and the children's initiative increases greatly.

2.1.3.3 Taking a Real-Life Role

Real-life roles are part of children's life experience and the scenarios they create are the familiar background that they have experienced, so they feel very cordial. The child is really overjoyed when they play the role of Daddy, Mama, Grandpa or Grandma. Other kinds of roles are also familiar to students, including salespersons, traffic police, postal workers, farmers or drivers. Children feel novelty and interest when these very ordinary roles are reproduced in the classroom. Elements of language training and the use of language can be combined with real-life roles played by children.

Children are engaging in the learning process when they are involved in learning with an enthusiastic mood in a simulated real-life scenario. This cultivates students' ability to apply maths and greatly enriches maths learning. When the logical, abstract and symbolic content of the textbook becomes a vivid scenario, children's interest in maths is more intense.

The "realm of ego" (*you wo zhi jing*) can produce a huge invisible guiding effect. In accordance with the role played, the experience of thinking, dialogue, presentations, operations and other activities comes immediately to children's consciousness. By virtue of this feeling, they will quickly understand the role of the position in the situation, and of words and deeds. Children's experience is fully exploited in this context. The emotions of the role and the verbal behavior become as if they were the child's own thinking. When roles change, thoughts, feelings and language also change. So students cannot help playing the role of the identity, being

in the situation to think, to vindicate, to operate, according to the content of the textbook and teachers' and peers' expectations, rationally showing a series of behaviors and identifiable language expressions. The enthusiastic mood of the role-play suffuses the whole learning situation; not only the student in the role-play but also all the other students cannot help entering into the unconscious psychological effect, the deepest and most vivid experience of the psychological process of role conversion.

2.2 Comprehensive Domains: Children Benefit from Multiple Channels in the Thematic Mega-Unit Contextualized Curriculum

When contextualized teaching was expanded to contextualized education, I concerned myself with and absorbed the diverse, humanistic and comprehensive ideas in theories of the curriculum. Meanwhile, I was largely inspired by the incisive explosions in the comprehensive curriculum, proposed by the prominent educator Ye Shengtao (1894–1988) in China. Naturally, my "Combination of Four Aspects and Intensification of a Thematic Mega-Unit" (四结合大单元强化, Si jiehe dadanyuan qianghua) had been broadened and implemented in multi-disciplinary teaching.

As Ye argued, traditional education has some disadvantages, for instance "Due to the separation, each curriculum place extra emphasis on one realm" and the "Final goal of education lies in the comprehension of all realms, which means when the influences of the separated curriculums are assembled together, they constitute the systematic realm, in which students are immersed" (Ye 1980: 78). This really struck a chord with me, as the dispersion of traditional education obviously weakens its overall effect, and all information from the various spaces in school has an effect on students' mental world. Based on my common life with children, I realized that the content of pedagogy could be mutually integrated and strengthened.

Certainly, it is easy to integrate the separate disciplines. There are inner knowledge systems within each discipline. The priority issue for solving this is how to organize the orders of knowledge systems when they are integrated. So when i realized that I could not completely reorganize all situations in textbook, then I tried to start from the parts. In order to overcome the shortcomings of the boundaries between disciplines, I began to explore the mega-unit at the end of the 1980s. I was attracted by the concepts of "theme," "mega-unit" and "comprehensive," and I put forward the idea of thematic mega-unit activities. In "Experimental Study on Employing Contextualization to Promote the All-Round Development of Children's Qualities," I proposed that school subjects should "lead by moral education, headed up by Chinese literacy and creating synergy with the various branches," so that education could form joint efforts to increase its intensity.

At that time, because of the limitations of the available information, I had not yet encountered the dynamics of international curriculum reform. I did not realize until 1996 that Professor Zhong Qiquan had initiated a comprehensive education day, which had been proposed by the UK, France and Sweden. The contextualized curriculum was in conjunction with teaching as well as aesthetics to implement a "learning unit beyond the discipline" teaching plan, trying to create a mega-unit as a way to integrate the course via a topic involving the collaboration of several disciplines. I was very happy to see that my exploration and the integration of the world curriculum echoed the trend from the late 1980s to the end of the twentieth century.

In fact, the ideas of the mega-unit and of the contextualized curriculum had sprouted in my early exploration of contextualized teaching. At that time, I integrated national and supplementary textbooks, as similar content was in component units, classifying it with themes and combining it with classroom teaching, field education and observational activities. For instance, I took children to the Tianning temple and to visit Guangxiao tower. They were required to observe the shape of the tower and listen to the small bell under its eaves in the wind, but also were asked to recite sentences from an ancient poem, "Dare not speak loudly and fear to disturb people in heaven," by Li Bai (701–762) of the Dang dynasty. They also counted the levels of towers and small bells on the ancient pagodas and tried to understand the scenarios of maths education, then calculated the number of small bells. Then they drew pictures of the tower, finally organizing a dance at the end of the activities. Under the same theme, the relevant disciplines were organically combined to constitute a harmonious realm.

A thematic mega-unit contextualized curriculum integrates various educational and children's activities, each of the major units setting up a distinct theme, in which teachers and students are encouraged to be involved. Examples such as "Actions of Bees," "Let's Look for the Beautiful Place," "Concerns about the Disaster Area," "We Get the Wings of Imagination through Fairies," "Step through the Door of Science" and "Race with Old Father Time" are attractive themes for children. Each subject teacher and chief class teacher coordinate with each other, offering mutual support and making full use of similar blocks (相似块, *xiangsi kuai*) from teaching and pedagogical content, within and outside the curriculum, from campus to school to the family and society, under the guidance of the theme, employing the educational and teaching content to gather together various aspects of the focus on education. With the consistency of interaction of the components, the mega-unit contextualized curriculum puts in more educational effort and strengthens the depth and density of educational results. It can expand and find a way of integrating a comprehensive curriculum and embodies the superiority of curriculum synthesis.

A thematic mega-unit contextualized curriculum involves various subjects, so it needs more teachers to participate in the planning. For instance, there is a garden of winter sweet in our school and it was full of blossoms in winter. In order to prompt children to feel the tenacity of winter sweet, they were guided to feel the spirit of the blossom. As the team leader of the Young Teacher Training Center, I asked

teachers to participate in the planning. Each teacher was required to independently design a plan. It was a cold winter and the young teachers were assembled on the third floor of the school hall, with the north wind coming through the windows, but they were enthusiastic to participate in the training without any complaints about the weather.

I walked to the window and, looking out at the blooming winter sweet, considered that children not only need the spirit of winter sweet, the same as the teachers they should understand and appreciate that spirit. Education is poetic, but it needs more effort over a long time. The teachers handed in their proposals, which were brilliant. Subsequently the proposals were implemented for their respective programs. Students in the first and second grades were asked to conduct observations on winter sweet, particularly on their shape, color, blossom petals and flower heart. Students in the third and fourth grades conducted observations of winter sweet and then recited poems that praised the plants. In short, going up through the grades, gradually the understanding of winter sweet and the character of the sentiment deepened, through the experience of beauty.

Many teachers were involved in the thematic mega-unit contextualized curriculum, which developed quickly. Over the years of practice, experience accumulated on a variety of thematic integrated activities. The thematic mega-module curriculum has the characteristics of a distinctive theme, being accompanied by motion, the autonomy of children and various roles. Children actively participate in the mega-unit with enthusiasm, which greatly enhances the effectiveness of the education. Their vision has been widened and their comprehensive abilities are fully practiced in the thematic mega-unit contextualized curriculum. Over its long-term implementation, teachers all feel the superiority of mega-unit education, the key points of which are summarized in the following sections.

2.2.1 Confirming the Themes of the Mega-Unit Based on Social Background

Since the curriculum is integrated in some subjects, there must be a theme, otherwise it will not be able to lead the branches. How are the themes determined? From the effect of education, we try to improve the overall efficiency of education through thematic mega-unit education. We want to strengthen the intensity of education, which must have a broad background of a particular type, or a social background, so that our theme for education can embrace nature within the social life of the wider environment.

I think that such ideas could be considered as part of the nature of education, so it is easy to conform to the law. For example, when spring comes, teachers from the first and second grades confirm that the theme is “We Have a Party in the Spring.” Children are involved in the texts of “Spring Girl Comes,” “Color Pen of the Spring Rain,” “Kite” and “Small Tadpoles Looking for their Mama,” which are poetic

descriptions of the spring. In October, it is the National Day of our home country and we carry out the thematic mega-unit of "We Love the Mother of the Motherland." Children can feel the atmosphere of national celebration, and in particular they can feel the footsteps of progress. Whether in Chinese literacy or in a maths class, the themes all focus around loving the motherland. In Chinese literacy the lessons reflect the motherland's new appearance, describing the magnificent mountains and rivers. Mathematics integrates the data of reform into computations. The campus windows and class newspapers also are meticulously decorated with the themes of reform and nationwide change. The effects of the thematic mega-unit in a continuous situation are gradual progress and deepening. There is a warm and healthy atmosphere which is filled with love for the motherland, from an individual class to the whole school.

The thematic mega-unit contextualized curriculum displays its desired formation and creates themes linking the seasons and the social background based on the characteristics of the children. It pays more attention to cultivating children's love for the motherland and their hometown, as well as a consciousness of collectiveness, responsibility, autonomy, environmental awareness and development of children's ability to be hands-on, communication and self-care.

For instance, the Shenzhou VI spaceship successfully flew in October 2005. The whole country was cheerful. The children were also very concerned about this big issue in which they had a strong interest. We seized the opportunity and changed the Fairy Tale Festival to a thematic mega-unit on a scientific fairy tale, which was called "I Am a Little Doctor with Wings." All the students were interested in an infinite number of funny themes, in which they were full of imagination, passion and creativity, learned fairy tales, read fairy tales, drew fairy tales, wrote fairy tales and played fairy tales. The Chinese literacy class each year arranges a unit of a scientific fairy tale. This is supplemented by some classic scientific fairy tales, such as "Small Gecko Finds a Tail," "Round and Fang," "Traveler of Dust" and so on, not only enlarging the amount of reading and knowledge, but also stimulating students who are interested in science to understand the characteristics of a scientific fairy tale and have the desire to create one themselves.

Middle- and high-grade students also created books of scientific fairy tales. They designed the covers and illustrations themselves. The fifth-grade students also made a few fairy tale books. In maths class, the teachers displayed mathematical knowledge in the form of fairy tales, so that students could learn and apply the knowledge with vivid images. In the music class, the teacher taught students to sing "Forever Live in Fairy Tales" and "Blue Cats," which connect fairy tales with reality, and with life today and tomorrow. Other disciplines also combined scientific fairy tales with subject knowledge and skills, not only playing the core role of classroom teaching, which ensures the implementation of teaching tasks, but also enriching the content of teaching and promoting the development of activities.

In such a happy mega-unit activity, there were balloons everywhere on campus. The wise oldman came to the venue, surrounded by the recent Beijing Olympics mascots the Fuwa. Students in first and second grades played the role of "small tadpoles searching for Mama" with singing and dancing, expressing the joy of

learning fairy tales. Students in the third grade showed their interesting scientific fairy tale book on the stage and read the fairy tale. Students in the fourth grade publicized the fun of painting fairy tales with a scientific fairy tale gallery that was more than 100 m long. Meanwhile, students in the fifth grade created a maths drama and demonstrated their passion for writing fairy tales. Students in the sixth grade produced hundreds of unique science fiction models, expressing fairy tale miracles and their desire to achieve a better future. As they were cheering the countdown, when it reached "ignition, takeoff" the model of the Shenzhou VI spaceship made by the children themselves flew into the sky accompanied by cheers from the hall. Obviously, these activities were not only designed for the students, the teachers too were immersed in the scientific fairy tales. The children's patriotism was also stimulated by the idea of making the motherland better with their own innovations.

There are many other activities linked to seasonal events in mega-unit education. For instance, "Today I Am in charge" on Women's Day and activities during the Olympic Games in 2008. This way of following the pace of the times captures educational opportunities, helps students who are engaging in the activities touch the objective world, develop their social life and cultivate their sensitivity to current affairs, for their future personality development and socialization.

2.2.2 Breaking Disciplinary Bounds with Subject Integration

The thematic mega-unit contextualized curriculum takes into account the knowledge system of disciplines, but it cannot restrain children's activities that have impacts on the effect of mega-unit education. In order to accommodate children's activities, the subject content needs to be adjusted, especially in Chinese literacy and moral education, as well as artistic disciplines. Sometimes these subjects need to break the order of material, adjust the content, insert and supplement with more content which is more suitable for children's participation and improve the overall effect of the education.

On the theme of "Concerning a Disaster Area, Show the Love of Your Small Hands," into the mega-unit educational activities teachers integrated the related themes of love, such as themes in fairy tales and poetry as one unit. The maths teacher quickly collected data on donated money in the whole school. In the maths class, students discussed the theme in groups, combining maths teaching content, arithmetic, statistics, percentages, decimals and fractions. Students were guided to compile their own maths questions and calculate the results by themselves. On the one hand, the children could feel the love from the donations in this process; on the other, they understood the value of applying mathematics in real life. Besides the activities in the maths class, the music and art classes were also involved in the activities of showing the love of small hands.

In the Creative Month, in order to cultivate the spirit of inquiry and arouse curiosity about a new field, the third-grade classes combined the "seabed world" into a thematic mega-unit which covered the theme of an ocean tour. In the children's beautiful imagination, the sea was mysterious, beautiful and profound. In addition, it attracted their curious hearts. They aspired to have a glimpse of the boundless blue world and explore the mysterious spaces that are deep beneath the seabed. Aiming at satisfying the children's desire, the teacher integrated the teaching of various subjects so that students could understand the ocean, cultivate their love of the ocean and form the initial perception that the protection of the ocean is the responsibility of everyone.

At the same time, exploring various forms of the ocean world cultivated students' imaginative abilities and spirit of innovation to meet the new era of oceanic development in the twenty-first century. Because the oceans are the secret storehouse of humankind, developing their treasure is an urgent need. Guided by the subject, children's interests and the inspiration of their curiosity, they read a series of books about the oceans and actively gathered information, produced a picture exhibition on the theme of "Ocean Exploration," made a "Blue Homeland" ocean knowledge newspaper and launched an "Ocean Roaming" encyclopedia and knowledge contest. All the subjects began teaching around this topic. A series of Chinese classes were held on a set of texts, including "Undersea World," "Cold Lamp" and "The Secret Storehouse of Mankind." In the maths class, by the teacher applying the lesson to the carefully created ocean situation, students learned in a vivid and interesting way. In lessons on nature, teachers and students explored the underwater world of colorful biological and abundant mineral resources. The music class taught about the small conch shell. The art class was also full of life in a few consecutive lessons, from a "Hello, Huanhuan" mascot design to an "Ocean Imagination" painting contest, and then to a "Seabed World" marine environment simulation, letting the children fully exert their own artistic talent and creativity. The integration of sports was more innovative: the PE teacher became a "Marine Olympic Games" sponsor, proposing a "Happy Ocean" of fun marine animal games. Accompanied by cheerful music, the children wore their own homemade animal headdresses and became multi-colored starfish, bouncing swimming crabs, a smoky octopus, a colorful parrot snail, a penguin with a gentlemanly demeanor, a tall sea lion and so on. These family members of the marine life team participated in medal contests for each project. Interesting marine animal games brought the theme of a trip to the ocean to a climax in the major unit educational activities, the school playground becoming a veritable "happy sea."

In thematic mega-unit educational activities, the children are truly immersed with their whole body and mind. These are contextualized activities and they are also teaching activities. Therefore, they prompt the children to be engaged in the emotion initiatives, receive a lasting and stable educational effect through the dispersion of emotions.

2.2.3 Implementing Comprehensive Practices Based on Children's Autonomy

The thematic mega-unit contextualized curriculum provides a broad space for children's activities and children are fully active in the thematic context, which fully embodies their subjectivity. From the start of the activities, including planning, exhibition board layout and decoration of the classroom, everywhere the children are active and show the potential of their wisdom.

This was true of the ocean journey, as described above, and the entire activity was carried out by the students themselves. They showed great enthusiasm, gathered a lot of marine knowledge and pictures, designed a lovely mascot of a dolphin called Huanhuan, depicted the imaginary future underwater world with clever pens, and also with their own small hands meticulously crafted various marine animal headdresses.

Another example, "We Have a Party in Spring," was a thematic mega-unit integrated activity for first-grade students, which was a way of cultivating students' practical abilities. The children were involved in activities called "I Am a Small Flower Gardener," "Spring Is Growing Up," "Where the Spring Is" and "Spring Doll Footprints." They came to understand nature and society and scientific knowledge on health, while they watched kite-flying performances and enjoyed sports games with their parents.

A thematic mega-unit activity can also be based on social background and involve a series of activities according to the measurements and selected themes of the National Moral Education Initiatives. In 2005, there were solemn commemorations of the Sino-Japanese War (1937–1945) and the sixtieth anniversary of victory in the Second World War (1939–1945). The school pursued the theme of "Remembering History, Loving Peace and Rejuvenation" in the context of the whole society. Under the guidance of teachers, they were invited to participate in narrative activities concerning veterans of the Sino-Japanese War. They watched television programs and movies, decorated an exhibition and edited a pamphlet called "Bearing in Mind the War of Resistance against Japan." All the disciplines were collectively prepared to organize the corresponding teaching units and each grade class carried out individual activities. For instance, teachers in the Chinese literacy class compiled a series of anti-Japanese poems and essays, and guided students to complete reflections after reading and editing a newspaper, which prompted students to understand the suffering and the glorious history. In the maths class, children used charts and proportions, and compiled problem-solving questions concerning statistics about the Sino-Japanese War. In the music class, teachers taught anti-Japanese songs, so that children could connect the melody with love of the motherland. Finally, the school held a chorus festival as a climax to the whole activity, in which all the students sang anti-war songs. Because the theme of the activities was distinct, it had a rich form and all students are engaging in the dynamic activities? It had the desired effects. Each class held competitions and students' initiative and creativity were greatly stimulated.

Based on different scenarios, the thematic mega-unit contextualized curriculum prompts children to be inspired by enthusiasm for the mood and guides them to carry out a series of symbolic activities. In the thematic mega-unit called "The Fairy Tale Is Your Friend and also Your Teacher," the children participated in such symbolic operations. All the classrooms were decorated with colors and it seemed like we were walking into a beautiful fairy tale world. The teachers looked like they were going back to childhood; the students were more excited than can be described. We cherished the emotion between teachers and students and guided the feeling of a beautiful fantasy realm. After that, the children were asked to speak about and write fairy tales, rewrite their own stories for the drama, make headdresses and play out a fairy tale. In this festival of fairy tales, we received more than 1,000 fairy tales and more than 2,000 pictures of fairy tales, which concentrated on symbolic operations in a relaxed and enthusiastic way. Students even launched a newspaper, for which they interviewed teachers and completed reports whilst doing the typesetting and designing the layout, in which their ability to comprehensively use the language was improved. Meanwhile, some of their classmates produced excellent articles, for instance "Little Swallow," "Observer," "Bamboo Shoots in Spring," "Stars" and "Venus." Based on the plots and roles of the context, students were involved in compiling problems on the chosen sites or carrying out a calculation contest, which were typical symbolic operations of the context.

There are generally only two or three thematic mega-unit contextualized courses in each semester. However, with their distinct themes of horizontal communication of various disciplines, these skillfully combine the explicit curriculum with the implicit curriculum. The dynamic continuity and synthesis of the activity make the educational situation vivid and profound. In this way, the thematic mega-unit curriculum brings children's cognition and emotion into a new development area in school education.

The thematic mega-unit contextualized curriculum makes the whole campus like the contextualized curriculum of the big classroom. In such a happy, warm, beautiful situation, the boundaries between classes and disciplines are blurred and ultimately broken. Meanwhile, the gaps formed between teachers and students in traditional "dignity" education have gone. All these activities embody the common efforts of teachers and students in the whole school. They make a plan, are involved in discussions, form a program and work together on integrating the thematic educational scenarios happily.

Children who grow up in optimized situations are nourished in their minds. Such an education will affect the formation of their personality and of all-round qualities, which will influence their lives. In fact, to the teacher, it is because of the thematic mega-unit contextualized curriculum scenarios that teachers and students can grow in a happy situation.

Students have no burden when they are involved in thematic mega-unit contextualized curriculum activities. They devote their dedication and fully play to their ingenuity in the activities of their classmates and in cooperation.

Box 2.2 Instructional Design Typical Case 1: "I Love the Yangtze River, I Love the Hao River" Themed Activity

Background

To the east of it is the eastern sea of China. To the south of it is the Yangtze River. It is an important city which has many harbors in the north of the Yangtze River estuary. It is our hometown, Nantong. There is a mother river, the Hao River, going through the city. It has witnessed generations of Nantong people living here. Nantong is a great city whose people are excellent. The Number One Scholar in the late Qing Dynasty, Zhang Qian, ran his business and managed education in Nantong. Here he created several firsts in China. Therefore, Wu Yongliang, an academician of the Chinese Academy of Science, came up with an idea that Nantong is the first city in the modern period of China. All the Nantong people are proud of it. A Nantong Port Negotiation Meeting will be held in September, which is a chance to encourage city development and for pupils to enhance their understanding of the history of our hometown. Through it, pupils will come to love their hometown more. Therefore, we organized an "I Love the Yangtze River, I Love the Hao River" themed activity.

Objectives

1. To lead students to a realistic context in several ways. To provide students with a chance to know more about the history, places of interest, geographical advantages, celebrity stories, folk customs, folk crafts, local specialties, economic characteristics, new look and city development planning of their motherland. To begin with the love for the motherland and then to stimulate the love for country, and love for country always starts with love for its mountains and fields.
2. To form an overall understanding of society, nature and self, and develop a love for nature and the hometown from involvement in the activities.
3. To cultivate students' abilities to ask questions and solve problems with others, and to make good use of knowledge. To foster students' traits, such as cooperation, willingness to share and a positive attitude to life.

Design and Implement Teaching Procedure

1. *All the grades participate, clarify the theme and create the context*

There are more than 4,000 students from six grades. They are of different ages and levels, therefore each grade has different activities. They differ in the context, the objectives and the grade themes according to students' hometown and characteristics.

An initial speech was given by the School Moral Education Department at a morning conference. An introduction to Nantong was given to students through Red Scarf Television and the Small Magpie radio station. The documentaries *The Song of the Yangtze River*, *Look Down on Nantong*, *Zhengda Variety Show of Nantong* and *Make the World Understand You—Nantong* were played at the school, which was imbued with a Nantong atmosphere. The slogan "I Love the Yangtze River, I Love the Hao River" and pictures of the Yangtze River and Nantong were displayed on the bulletin board.

Many students paid attention to the following poem in the photo exhibition. It aroused their love for their hometown so that they wanted to know more about Nantong:

> There is a piece of land, born from the sea, listening to the roar of the Yangtze River.
>
> There is a piece of land, harboring the strong backbones of five mountains, pouring out the beautiful Hao River.
>
> There is a piece of land, playing the harbor nocturne with diligence, promoting the blue and white rhythm with wisdom.
>
> This is our lovely home—beautiful Nantong.

An initiative, "Welcome to Nantong Port Negotiation Meeting, Be a Good Teenager," was sent to all the teenagers in Nantong. They enjoyed the activities on the Hao River and in the ecological green area and Olympic Park. They surfed the Internet and read books. They finished an observation report. They published a newspaper. They visited specialists and took photos. They wrote a poem and drew pictures. They created a student union. The views of their hometown impressed them a great deal and they grew in the activities.

2. *Combine subjects, develop a contextualized curriculum*

In order to achieve the overall educational effect, the activity was organized as a combination with moral education, Chinese, mathematics, English, music, sports, art, nature, society and other subjects. Every subject was free to play its disciplinary advantage to different grades. All the subjects joined together to form a contextualized curriculum.

In the Chinese class, students read beautiful poems and articles, and introduced celebrities and places of interest to each other. Students in the first and second grades read poems about the Yangtze River, such as Li Bai's "Say Goodbye to Meng Haoran in Guangling" and Du Fu's "Climb to the Height." Students in fifth and sixth grades read "Small Bridge" and Yu Qiuyu's article "At the Foot of Woof Mountain" in his book *Hard Trip of Culture*. The teachers compiled reading books such as *Nantong—The First City in the Modern Period of China*, *Stand by the Bridge of My Hometown* and *Culture of River and Sea*.

In the maths class, students felt the great changes in their hometown through measuring, calculating, drawing and other digital tools. They solved application problems. They undertook field trips and interviews and read literature to gain a lot of data. They used the data to create some application examination questions.

In the English class, students introduced their lovely hometown to foreign guests. They tried to describe the Hao River, the Yangtze River, Woof Mountain, the new culture plaza, the sports and exhibition center and the museums in English.

In the music class, the students learned songs about Nantong, such as "Nantong Is a Great Home," "Nantong Is Beautiful" and "Embroidery in Nantong." They got to know more about their hometown from the lyrics and the melody.

In the art class, students of different grades felt the nature of their hometown through sketches, watercolors, gouache, oil paintings and other forms.

In the PE class, students listened to stories about the Olympic champions in Nantong. The teachers recommended that students read the book *Peak*. They had a PE class in the sports plaza.

In the science class, students investigated how to protect the environment. They took a sample of water from the Hao River and then analyzed the water quality. They went to the communities, streets and parks to interview citizens about the current situation of environmental protection of the homeland, and they proposed that people should protect Nantong together.

In the society class, students watched the documentary *About the Yangtze River*. They designed a questionnaire to understand what they know about Nantong and their views on city development.

In the computer class, students surfed the Internet to gather information about Nantong.

3. *Students of different grades participate in different activities*

3.1. Students of the first and second grades enhanced their sense of pride as Nantong teenagers through acquainting themselves with the beautiful scenery and customs in happy and interesting situations.

Students of the first grade had spent less than one month in primary school. Their objective was to get to know their hometown. They went to the ecological green area in the east of the Hao River and enjoyed the beautiful views. The teachers told them the history of the Hao River and they listened. They sang the song "Hometown Is a Good Place." They walked along the Hao River and counted the old towers.

Students in second grade participated in a series of activities such as "Paint Your Hometown," "Talk about the People in Your Hometown," "Taste the Food in Your Hometown," "Sing the Song of Your Hometown" and "Praise the Beauty of Your Hometown." In the activity of "Taste the Food in Your

Hometown," students were introduced to Nantong specialty food: West Pavilion crispy shrimp sauce, Haimen goat, Rudong clam, Ma round, cloud cake and so on. They were shown the crafts and understood and appreciated the blue cloth, dyeing crafts and whistling kites.

3.2. Students in third grade visited the Nantong Spinning Museum, which was the first spinning museum in China. They furthered their understanding of their hometown's economic development through the old looms and spinning wheels.

The students visited people undertaking Nantong's famous folk craft, small silk tie dye. After several processes, a small piece of silk becomes a colorful craft. Students tried to make themselves a small piece of silk. There were many wonderful combinations of yellow, red, blue, green and other colors. In this way students approached the culture in Nantong.

Students in the fourth grade organized several activities, such as "I Learn the Craft in My Hometown," "I Make Food in My Hometown," "I Create a Newspaper for My Hometown," "I Take a Photo of My Hometown" and "I Design the Application Examination Questions."

3.3. Students in the fifth grade made good use of resources outside the school. They visited experts and listened to them relate the history of Nantong. They visited the museums. They visited the five mountains in Nantong. Before the autumn trip, they looked up literature to find out more about the culture of the five mountains. They had the theme of five mountains in pictures, "Talk about Jun Mountain" and "Tale of Jun Mountain." The teachers developed specific themes for the curriculum, such as "Poem and Paint about Nantong," "Enjoy Nantong," "Reflect on the History of Woof Mountain" and "Tale of Nantong." Students undertook several cultural studies and compiled research papers, such as "Tale of Nantong," "Folk Art and Food Culture in Nantong," "Basic Necessities of Life in Nantong," "Drama of Nantong," "Cultural Landscape in Nantong" and "Language in Nantong."

Students in the sixth grade did research with the theme "Give Us a Visiting Card to Nantong." They divided the research into five parts: spinning, education, architecture, health and life, and sports. They took a trip on the Hao River and visited museums. The guide words "Welcome to Our Hometown" were sincere and attractive. They went on cruises to take photos of Nantong and enjoy the landscape. They visited the harbors and interviewed the chief engineer of Yao Harbor Company. They heard a lot of exciting information and understood the government's plan in more depth. They did research with the theme "Stand by the Bridge of My Hometown." They got to know more about the Hao River and their hometown. They came up with some advice. They published a proposal on protecting water. They wrote a letter to the mayor.

Box 2.3 Instructional Design Typical Case 2: Mathematics Culture Festival Themed Activity

To mathematicians, mathematics is theory. To other disciplines, mathematics is a tool. To everyone, mathematics is a way of thinking, as well as a kind of cultural spirit. It is a bright pearl in the history of the development of human civilization. As M. Klein said, "Mathematics is always the main force in the formation of modern culture. At the same time, it is an important element of this culture."

Therefore, the objectives of the mathematics contextualized curriculum in our school are to enhance students' cognitive knowledge, but also to cultivate aesthetic, cultural and emotional edification. We combine the feelings of maths culture with children's spiritual world to promote their all-round development.

In order to further students' understanding of the interaction between mathematics and the development of human society, and give them a chance to experience the value of mathematical science—application value and cultural value—the first Mathematics Culture Festival was held. We hoped students would improve their cultural quality and creative consciousness.

Program of the First Mathematics Culture Festival of the Second Affiliated Primary School of Nantong Normal University

1. *Purpose*

   Mathematics is a science, a kind of culture, as well as the foundation of civilization. The cultural and aesthetic context of mathematics is the key to the mathematics contextualized curriculum. In order to create a rich cultural atmosphere in the school, the first Mathematics Culture Festival was held. We hoped that students would realize mathematics' rich cultural heritage and feel the infinite charm of mathematics through different kinds of activities; that they would find that mathematics is fun and useful; that they would then be able to use mathematics in life; that the activity would stimulate students' love for mathematics; and that it would promote the formation of their mathematical literacy.

2. *Theme*

   Promote mathematical culture and feel the charm of mathematics.

3. *Content and Schedule*

First Grade

Activity Content

3.1. Go shopping and pay to consolidate knowledge of the currency (from May 8 to May 13).

Accompanied by their parents, the students go to the store and buy something. The parents take photos of the items they buy and their behavior. Students describe the process of paying in their own language and write about the photos.

3.2. Tell mathematics stories (from May 1 to May 31).

Week 1: Students collect mathematical stories in various ways.

Week 2: A storytelling contest is held in every class.

Week 3: The storytelling contest is held in each grade. There is one student from every class participating in the contest.

3.3. Assemble graphs to consolidate knowledge of rectangles, triangles and parallelogram (from May 14 to May 20).

Students cut out different sizes and shapes of rectangles, squares, triangles and parallelograms to assemble different graphs. New graphs are encouraged.

3.4. Counting game (May 18).

All students participate in a counting game. There will be first, second and third prizes.

Activity Achievement

Collection of mathematics stories, excellent photographs in each class, good graphs, great homework.

Second Grade

Activity Content

1. Quotes from famous mathematicians.
2. Stories about mathematics.
3. Mathematics common sense
4. Solve mathematics riddles.
5. Play mathematics games.

Week 1: Collect relevant information.

Week 2: Read stories about mathematics and tell stories on Wednesday and Friday mornings.

Week 3: An interesting quiz of mathematics riddles is held in the playground. Four classes are in one group.

Week 4: There is a competition for a total of 24 points.

Activity Achievement
Collection of literature, printing plates of wonderful pictures.

Third Grade

Activity Content

1. According to the textbook contents, teachers instruct students to make paper cut-outs showing axisymmetric, translation and rotation principles. Design and make an annual calendar (from April 30 to May 11).
2. Collect mathematics stories and tell them in class. Three or four students tell stories in the morning meeting time to each class. The overall story-telling team consists of one or two students from each class (from May 14 to May 18).
3. Combined with the Ten Years Old Celebration, a show will be held of self-made mathematics comedy or fairy tale programs (June 1).
4. Games: "24 points," "30 Snatch" and so on (one game per week, from February 21 to May 31).

Activity Achievement
Paper cutting, exhibition of calendars, photos, performance programs, mathematical culture reader.

Fourth Grade

Activity Content
Design an emblem for the Mathematics Culture Festival (from May 8 to May 13). Students demonstrate familiarity with numbers, symbols and graphs. Encourage them to use symmetry, translation, rotation and other methods to create an emblem for the Mathematics Culture Festival which can reflect its connotations.

1. Put on a show in each class (from May 13 to May 21). Students collect stories about mathematicians and learn to tell a story. There is a Story King Contest in each class. Students can perform a fairy tale drama in the contest and there is a show for the whole grade (May 25).
2. Special events in every class (before May 18):

   - Newspaper of stories about mathematicians
   - Mathematics jokes and songs
   - Mathematics fairy tales and poems

- Mathematics couplets and mathematics in life
- Mathematics games and quotes
- Mathematics stories and future of mathematics
- Ancient questions and mathematics games

Activities differ from class to class. The activity is shown on the doors and windows to attract teachers and students to participate.

Activity Achievement
Emblem panels, photos, layout of class environment

Fifth Grade

Activity Content

1. Design a mascot for the Mathematics Culture Festival (from May 8 to May 11).
2. Collect mathematics quotes, anecdotes, puzzles, masterpieces by Chinese mathematicians, mathematics riddles, couplets, magic and other literature to compile mathematics reading materials (from May 14 to May 18).
3. Organize a "I + Maths = Smart" mathematical knowledge contest (from May 21 to May 25).
4. Students write "Mathematics through My Eyes" compositions (from May 28 to May 31).

Activity Achievement
Compilation of mathematics extra-curricular reading material, mathematics kaleidoscope, panels of mascots for the Mathematics Culture Festival, best poster of mathematic diary.

Sixth Grade

Activity Content

1. Students give lectures about mathematicians' stories (one or two students per class) to every class at morning meeting time.
2. Introduce a mathematics quote every day.
3. Sudoku contest:

- Introduce the rules of Sudoku on the school television program.
- Select one player from each class.
- Hold a contest in the grade.

4. Compile mathematics extra-curricular reading material and a mathematics kaleidoscope.
5. Play mathematics games (e.g. Magic).

Activity Achievement
Mathematicians' stories, compilation of famous mathematics quotes, compilation of mathematics extra-curricular reading material and a mathematics kaleidoscope, carved disc of the Sudoku contest.

Summary

During the Mathematics Culture Festival, we carried out abundant mathematical activities. Knowledge of mathematics was integrated into students' daily lives. Mathematics became a kind and easy-going person to students, who got acquainted with it in many ways which aroused their interest. They learned to think, learned to cooperate and learned to use mathematics in daily life. There was an atmosphere of loving mathematics, learning mathematics and using mathematics in the school. Watching the kids counting 24 points with a furrowed brow in a serious face, I could not help but cheer for them secretly. I was moved imperceptibly when they were telling the stories of mathematicians. I was happy when they thought over and over about mathematics riddles. I was proud when looking at their mascots, newspapers, dramas and poems. I knew that they had enjoyed the aesthetics and culture of mathematics.

During the Mathematics Culture Festival, you could hear the children say things like:

"I can do it, these 24 points!"
"I have a different way to do it!"
"I can't figure out this riddle."
"I can! I can!"
"Uncle Yang Le is amazing!"
"I will be better than him when I grow up!"
They picked up their pens to record their feelings.

We're crazy about mathematics

Mathematics is the key to wisdom. Mathematics is the golden sun. Mathematics is the wings of a dream. Recently, a Mathematics Culture Festival was held in our school.

"Wow! How beautiful!" Every classroom had a new look. The classrooms became a sea of mathematics. They became the world of wisdom. There were mathematics riddles in the windows. During the recess, students stood next to the windows and thought about the riddles. I could see the light of wisdom in the eyes. Look! The windows were full of mathematics jokes. Students were so interested in them that they did not want to miss a word. Look! The

windows were full of couplets. Students read them. With a happy laugh, I knew that mathematics was not boring symbols and numbers, but a wonderful life.

"Hahaha!" We put on a text-based drama. The group of Cai Zhihui performed "A Bad Fox and Triangle." They made the role vivid. Cai Zhihui, the bad fox, was smiling and staring at the little chickens. The chickens were frightened, hiding behind their mother's wings. After laughing, the students realized the stability of a triangle. The group of He Tianyu were playing allegro and integrated mathematics into the allegro. There was also the group of Huang Handan and the group of Xu Shulou. Students showed their talent on the tiny stage and found interest and fun in mathematics.

Mathematics is the key to wisdom. Mathematics is the golden sun. Mathematics is the wings of the ideal. We are crazy about mathematics.

2.3 Connective Domains: Going Beyond the Interim Contextualized Curriculum

2.3.1 Principles: Combine a Short Time in the Classroom and Outdoor Activities

Preschool children often yearn for primary school life. They have a great enthusiasm and are waiting for the day when they can pick up their bag and go to school! In their eyes, primary school must be very interesting. As a student at primary school, they must be very happy.

However, when they have stepped through the gates of the primary school, they seem to be frustrated. They are even fearful of life. From kindergarten to primary school, the learning environment has changed, they are learning much more and it becomes a huge burden. There is only a summer vacation after children leave kindergarten, but there are such huge changes that many children cannot quickly adapt to the challenges. In the first half of kindergarten, there is only half an hour of indoor homework classes. The rest of the indoor and outdoor activities include observation, gymnastics, singing, dancing, games and other activities, and children do not get up until 15:00 as they have an afternoon nap. After the summer vacation, they begin primary school, where they have a completely different environment. They have to be involved in the morning class, through the whole morning, and they do not rest in the afternoon. Other than for PE and a short recess of 10 min, the children stay in the small world of the classroom almost the whole morning and afternoon. Their life is filled with literacy, writing, arithmetic, a series of symbolic activities. They seem to have lost the fun of childhood. This change is unsustainable for children of preschool age. It forms the "steep slope" of the kindergarten–

primary school transition, which inevitably affects the love of primary school life of those in the first grade.

In order to improve the connection between preschool education and primary school, we have to reduce the slope, to overcome the lack of cohesion in early childhood and primary education; we have to set up a transitional contextualized course. Aimed at preschool children just leaving kindergarten, and according to the actual requirements of primary education, the reasoning proposed during the transition period is that the principle of arranging the new learning life is "linking indoor short courses and outdoor observation." The specific approach can summed up in roughly the following areas.

We suggest reducing the duration of each session from 40 to 30 min, and increasing the break time from 10 to 20 min. The main subjects are divided into various classes and the teaching format changed. For instance, the Chinese class is divided into Hanyu Pinyin literacy, phonetic reading of Chinese characters, observation of speech and an interesting mathematics class. There are also some activities including "Story King" and singing games. The outdoor activity time is increased and field activities are carried out regularly. The indoor short course uses various means to enhance the teaching content.

Box 2.4 Instructional Design Typical Case 3: Transition Class

Type of Chinese curriculum: phonetic notation, reading, conversation, outdoor activity

Transition class: review phonetic notation, single characters in the following titles of text in textbook

We Are Kids
Small Schoolbag
Campus Is Beautiful
The Crooked River
Are q and g Alike?
Small Goldfish
Orchard in Autumn
My Little Schoolbag
Fairy Tales beside the Flower Bed
The National Flag Is Rising
Outside the River

Rest time: 30 min for each class, 20 min for recess, nap to 14:30

The transition class is an attempt. Seven first-grade teachers are full of creativity and eager to carry out the exploration. During the first round of the experiment, I added several articles to the compilation of reading supplements in order to guide the children to love the campus and understand the world around them.

In the first lesson, we shared the article "Campus Is Beautiful" and started to get to know the campus. We, the teachers, observed the campus with the

children. We went to the school gates first and took a good look at them. We read the name of our school. Then we walked through the campus and carefully appreciated its beauty. The students looked here and there with great curiosity. They looked at the trees. They looked at the flowers. They looked at the grass. They found the beauty in the campus. After that, we started to learn the article.

In the vivid real-life context, it was easy for the children to learn this essay when they imagined that they were standing by green trees, red flowers and green grass. Meanwhile, they had a sense of intimacy with a new learning environment; they felt that their campus was beautiful. If students had not been in the specific situation but had been isolated from the environment when they were taught such rigid sentence patterns, "there is…," "have a … and …" or harder descriptions like "Our campus is so beautiful!" it would have been harder to find ways to handle their learning.

The transitional course, therefore, is closer to the courses in kindergarten but is also at a higher level than kindergarten. Early reading begins at the same time. In the transition course, we also created the theme of "Observation, Speech and Comprehensive Reading," which links understanding of the world and language. As a matter of fact, these two aspects cannot easily be separated.

Box 2.5 Instructional Design: Orchard in Autumn

There are many fruits in autumn and children all love fruits, because they are colorful and of all different shapes. Fruits are beautiful. Wouldn't it be wonderful if students could go to the orchard? We looked up the information and found that the orchard was too far away from our school. I thought that the situation could be real and could be simulated as well. The real orchard was too far, so we simulated an orchard in the courtyard of our campus. We painted three thick tree trunks for apples, pears and jujubes, and winding grape vines. Students brought apples, pears, persimmons, grapes and pomegranates from home. We put the fruits in blankets and imagined that this was an orchard in autumn. The students were happy when they walked into the orchard. Above the gate, there was the title "Orchard in Autumn". The students came to the orchard and started to spell out the title.

They walked into the courtyard and sat on the floor. I said to the students: "Kids, this is autumn. Look, Aunt Autumn is coming." A team of young girls acted as Aunt Autumn carrying baskets and walked into the orchard accompanied by beautiful music. I said: "Aunt Autumn is coming. What are she going to bring us? Let us guess, kids!" The students could not wait to answer. I continued: "Be quiet. Close your eyes." They were so lovely and put their hands over their eyes, although several boys were impatient and opened their eyes. The teachers put the fruits in the trees when the children closed their eyes. The students opened their eyes as soon as the music

stopped. “Wow!” they cheered. The trees were full of all kinds of fruit. I was excited to report: “Ah! This is the present Autumn Aunt brought to us!” The students were surprised, excited and could not help but clap. We observed, talked, read and did some simple mathematical calculations.

The following is a record of the dialogue between the students and me.

Teacher: Kids, Aunt Autumn brings us so much delicious fruit. We should send our appreciation to her.

Students: Thank you, Aunt Autumn!

Teacher: What is your favorite fruit?

(Students said apple, pear, dates, grapes.)

Teacher: What does it mean to bring us so much fruit in autumn? Let’s give an example of two kinds of fruits.

Students: Aunt Autumn brought us apples and pears.

Teacher: Yes, Aunt Autumn brought us three kinds of fruits, what would you say?

Students: Aunt Autumn brought us pears, apples and persimmons.

Students: Aunt Autumn brought us apples, pears …

Student: and pomegranates.

Student: Aunt Autumn brought us apples and grapes …

Student: and dates as well.

Teacher: Aunt Autumn brought us so many delicious fruits. And their sizes and shapes are not the same. How can you express their number?

Teacher: (picking up an apple) How many apples are there?

Student: This is an apple. (个)
Teacher: What else can you say?
Student: This is an apple. (只)
Teacher: A jujube is small and round.Teacher: What about grapes?

Student: This is a bunch of grapes.

Teacher: Fruits are not only delicious, but also very pretty. Let’s observe their appearance and color.

Student: Red apples.

Student: The apple’s face is red.

Teacher: Excellent!

Student: Yellow pears.

Teacher: Good! What about dates?

Student: Round dates.

Student: Grapes are purple and transparent.

Student: I would say that grapes are watery.

Student: Grapes are sour and sweet.

Teacher: There are so many fruits hanging on the tree. How can you express this meaning?

Student: There is an apple on the tree and another one.

Student: The tree is full of apples.

Student: The branches are full of apples.

Student: There are bunches of grapes on the grape trellis.

Student: The round dates are innumerable.

Teacher: Very good. The fruits are delicious and smell good. We will eat them after class.

After the discussion, I said: "In this little orchard, we seem to have come to a big orchard, where there are countless fruit trees. Now we will learn an article. The title is 'Orchard in Autumn.'" I showed the children the article:

q i ū t i ān d e g uǒ y uán

Orchard in Autumn

q i ū t i ān gè zh ǒng g uǒ z i s hú l e p íng g uǒ

In autumn, so many kinds of fruits are ripe. Apples,

l í z i hé zǎ o z i g uà mǎ n zh ī t óu y í zh èn

pears and jujubes are hang in the brunches. When the wind

l i áng f ēng c h uī l á i g uǒ y uán l ǐ p i ā o c h ū

is flowing, the sweet smell flows out from the orchard.

t i án t i án d e x i āng wè i

甜 甜 的 香 味。

The students read the article happily. They imagined a picture of the orchard based on the simulated orchard. They could recite the article after a while.

Then, the mathematics teacher arrived. She led the students to count the number of fruits and do a counting game. Therefore, the students knew that the numbers were real.

During the transition class, we took the students outdoors. Because of their young age, we chose a nearby place to which we could walk. Observation, reading and conversation were combined and the students' imagination was cultivated.

When the transition class goes into a simulated situation, it is easy for the students to accept. It can help them transfer from kindergarten to primary school. It made me realize that students can adapt to new circumstance as long as they feel interested and comfortable. Based on this investigation, parents think that the transition class makes students love school life more and it is a great link between kindergarten and primary school.

2.4 On-site Domains: Bringing Children into the Outdoor Contextualized Curriculum

The field contextualized curriculum follows a long-term process of practice and research. Because I am a Chinese teacher, I naturally took into account the children's language materials at first. At that time I felt that children were far away from the vast world as they were isolated from real life and just lived between books and homework, the family door and the school gate. Therefore, they had narrow horizons. As a result, their childhood life was not only boring, but also caused a lack of imagination in thinking, and their language was wizened and tasteless. As traditional Chinese literacy teaching is far away from life and nature, I knew that words and symbols needed to be strengthened by images and symbols. In this way there is communication between the world around them and their own lives. On the other hand, I think of humankind from infancy to preschool, from word to phrase, from multiple words arranged combined into sentences, gradually achieving the complex process of language automation.

As famous writer and thinker Lu Xun (1881–1936) argued, infants learning language are "without teachers, no textbooks" and they independently overcome their original language learning difficulties. Infants in the bosom of nature are sucking on rich nutrition in the specific situation of their lives, the rapid development of perception, on the basis of a gradual learning of language, mastering symbols and maintaining a balance between the two signaling systems. However, classroom teaching often discards the successful experience of children's independent language learning and imperceptibly the link that the child naturally

maintains between the two signaling systems is severed, leading to a loss of balance. I think we should accord with nature and use children's experience of language learning to let them return to nature, and let the world put a broad and generous embrace around them. Moreover, many masterpieces and texts in Chinese textbooks, which are based on nature, are drawn from life.

The knowledge that children accumulate about the world, including their perspectives, experiences and apparent or hazy appearances, directly correlates with the development of the knowledge, ability and potential to learn. It is very different if a child grows up in a closed environment and another child grows up in an open world. In addition, the latter must be better than the former because the world around them is a source of children's cognition, which should flow into the classroom. I think that this is the most precious, most beautiful and irreplaceable nourishment given to children by heaven.

As a matter of fact, the background to field education has a long history, going back more than 2,000 years. The generation of the Chinese sage Confucius put forward that teaching should be implemented under the "pear tree," which is a thought about natural teaching. Zhuangzi, the founder of Taoism, also proposed to educational thinking that there is naturally a "mass division" between heaven and earth. In other countries, French Enlightenment thinker Jean-Jacques Rousseau (1712–1778), who proposed the "naturalistic curriculum theory," advocated that courses should be mostly in nature. He paid great attention to children's "direct experience" and said: "If there is no breathing to the flower incense, see the beauty of the branches, stride on the wetting and soft lawn, how can make him feel the joy?" (quoted from Zhong, 2015: 79). The Soviet educator B.A. Cyxomjnhcknn (1918–1970) provided examples of field education, such as "school under the blue sky" or "300 pages of nature's book." Therefore, I use field education as a source for the contextualized curriculum and take students to the source. After many years of practice, I summarize here three points about the implementation of the field contextualized curriculum.

2.4.1 Prefer to Access Aesthetic and Broad Fields of Vision

The interaction between children's development and the context around them is a form of movement. Therefore, we strongly expanded children's horizons and broadened the educational space. We opened a field activity course for the lower-grade students at least once every two weeks, and for middle- and high-grade students once a month, because when children are young, especially those students coming from the first, second or third grades, field activities should be carried out in local places. In the light of the forward wind, their whole bodies are bathed in the sun and the air, and it is more comfortable than staying in the enclosed and crowded space of the classroom.

First, I chose a large field behind the school. The children just needed to spend ten minutes walking or running across a bridge. A small river, some farmland, a grove of trees, an old pagoda—all of these construct a child's early acquaintance with the world around them. The experimental class starts from here and opens a window to the wider world.

We preferred typical scenes around the world, from a single natural scene to a corner of social life in the context of nature. We tried to select appropriate fields so that teachers could visit them again and again. First of all, we set up a network of field activities. Starting from the school, we walked across the river to the west side of the school and the ancient Guangxiao tower, then along the river at the edge of the city and to the outskirts of the foothills and riverside of the Yangtze River. Each point paints a wealth of pictures.

The first-grade students came to the riverside. The ducks, small fish and shrimps were all good topics for them. The peach trees on this side of the river and the willows over the river became vivid data for the teaching mathematics. The children were standing by the river, imagining the river running down toward the distant sea.

I recorded the time I spent outdoors with the students in an essay, "Cole Flowers Are Yellow Again":

> Each year, whenever the cole flowers are yellow, I take the students to the field. We embrace the spring. I teach them to recognize the flowers in the field. They have no need to dig for wild herbs any more. They don't know the story of a garland of cole flowers. They search for different wild flowers. They think the wild flowers are of exuberant vitality. No one waters them. No one fertilizes them. However, they are alive. The field in spring is the lover of painters. It is also the children's teacher and friend. In the field, the children run and fly kites. They play with butterflies, birds and insects. They enjoy the wonderful views of the spring. They play with tadpoles and crabs in the river. They explore how a tadpole becomes a frog. How attractive the field in spring is to the children! How much nature can give to children! The students don't want to go home.

2.4.2 Comprehensively Observe, Think and Practice

The abundant educational resources in the field naturally become the ideal classroom for comprehensive education. In the field contextualized curriculum, we make full use of it so that children can undertake observations, thinking and practice.

The spring fields are vibrant and show boundless vitality. I took the students to the riverside. They learned to observe the new tender buds on the bank and watch the flocks of ducklings jumping into the water and swimming merrily in the stream. Based on their observations, the children understood the realm of the ancient poem: "Bamboo, mahogany for two or three of the branches, when the river flows warm" (Su Shi, 1037–1101). Then the students went along the river to find tadpoles, carefully observing a group of small tadpoles swimming around in the water. Spring is also the season of cauliflower blooming in the fields. Countless bees were pollinating the cauliflower, merrily humming and singing, and flocks of white

butterflies also came, flying into the spring cauliflower, adding unlimited fun to the colorful picture. We seemed to have entered a world of cauliflower. The vivid images and rich aesthetic feeling led the children to unfold their wonderful imaginations and abundant positive thinking. They said, "Let the cauliflower play a game. Who will be the referee?"

2.4.3 *Coordinated Development of Cognition, Affection and Will*

Nature is not isolated, it is connected with people, and it is also interlinked with society. Therefore, field education not only can allow children to acquire the most vivid knowledge of cognition, but also can develop morality and aesthetics via the undertaking of some thematic activities.

In guiding children to know the world around them, the experimental class also infiltrates moral and aesthetic education through the field contextualized curriculum. When the children were standing in the beautiful fields, they interviewed the people who worked so hard on their lands; they witnessed the dramatic changes in socialism's new constructions in rural areas and deeply understood the reform policies. The teachers always took them to the outskirts and to the new houses, and asked them to draw portraits of the new houses, calculate how many there were and describe them, so that they could feel the change in their hometown.

There is a large reed marshland on the Yangtze River, but it is very charming for children. The first-grade children do drills here: under the foot is the wetland, the head is gently blowing white like the reed, and the red flag is in the ranks at the front, fluttering upwind, in order to overcome difficulties and twists and turns. The children are finally drilled with a glance at the side of the reed marshland. In this field contextualized course the children gain a great deal, and they themselves speak most clearly. Here are some excerpts from what the Hu Tingting, Wang Wei and Wang Jing classmates wrote after the activity:

> Yingying autumn wind, treading on a leaf, bathed in a drizzle, our fifth-grade classmates and teachers came to the riverside, ready to carry out reed marshland activities.
>
> Standing on the embankment, looking to go, the reed marshland is gray and boundless, appears unfathomable. I can't help worrying: Is there a road? The mud is so rotten, will our feet sink in? The autumn winds blow and the reed marshland is like a platoon waving to us. We immediately set out, the teacher and several strong "Hercules" leaders. We follow through the reed marshland. The beginning is a stone dike, but not for long, then comes the "Attention, there is no road ahead" command.
>
> The teacher put the reed aside, pressed it to the knee and then quickly lifted the foot to press it down; the action is neat. We also learn how to copy the teacher, struggling to poke the reed down. But the reed seemed deliberately to oppose us, bouncing on our faces, tripping

up our feet. Suddenly, I got two feet stuck in the mud. I hurriedly grasped the reed to pedal: the result was that my foot was up, but my shoe was still trapped in the mud!

The road became more muddy. We just walked, my shoes were soaked, white sneakers turned into black sneakers. One of my feet had just pulled out of the mud and the other foot sank. I pulled hard and my feet came out, and we went to move on. A classmate of gas drum said: "How could we go out of such a muddy path?" I forthrightly said: "That year, when the Red Army soldiers were on the Long March, their conditions were much harder than ours, but they could cross the meadow, go over the snow-capped mountains. What are we at this point?" "Yes, you are right, we must go down!"

"Guys, don't be discouraged!" the teacher's inspiring words came to our ears. We multiplied our confidence to move forward; whether it be landslides or mud, it would not stop our pace.

We are on the embankment, all like clay figurines, you look at me, I see you, we all laugh, and the laughter echoes over the reed marshland.

Ah, we won! The students stood on the river bank, in the autumn breeze, suddenly relaxed and happy. Looking back, over the boundless reed marshland, a winding path greeted us. I suddenly realized that the road was at the foot of it. At the cost of sweat, you can step out onto a road.

Other children said: "As long as we are as brave as a rush, we can overcome difficulties, insist on victory!"

It is not difficult to see that this field education cultivates willing children and helps them understand more about their life. It is not possible to produce this kind of sentiment in class. The green barracks are the places for which children yearn. During the training day, the soldiers were in charge of the drill and the children were full of enthusiasm; they looked like young soldiers and were engaged in the training. At night, they listened to the soldiers' narratives about army traditions and their experiences of military service. More inspiring essays were written.

So far our field situation curriculum has been running for almost 40 years, since the autumn and winter of 1978. Each field contextualized curriculum has different backgrounds and aims, but there were three connections among them, which are summarized below.

2.4.3.1 Providing Learning Resources that Integrate All-Subject Teaching

The field situation curriculum started from language teaching and the needs of children's assignments, and then recognized that such a curriculum also could provide vivid scenes for children's mathematics learning and, naturally, that music, PE and art classes also could be included in field observations. Many times in the field contextualized education I saw children in the embrace of nature. These were appearances of life's emotions in gorgeous color and sound, which left a deep impression on the children's memories. When learning Chinese, these vivid images in the real-world situation could be drawn on as the best complement for their learning.

Also, when children are involved in learning mathematics, such as measurement and other practical operations, they could carry out a specialized program of field activities, so that teachers could combine field activity with recent subject teaching content.

Children are in the wide embrace of nature and look at the world with their eyes wide open. In the field contextualized curriculum they are in the optimum place to observe speech, practice maths assignments, understand scientific knowledge and ecological change, conduct social investigations and so on. In the beautiful situation of observing, imagining, thinking, learning and exchanging, in this unique, broad, rich field situation, they naturally come to understand the surrounding world and gain research-based learning organically. For example, children can observe the flying swallows of spring and also study the characteristics of migratory birds. They can observe both foggy fields and the formation of fog. They can both feel the flow of the river and investigate the river's changes, study and comprehend the importance of protecting water resources and scientific methods for doing so. In these real situations, children's thinking is authentic, enthusiastic and active, and they have a wealth of sources for learning various branches of knowledge.

2.4.3.2 Enriching Students' Perceptions Based on Thematic Mega-Unit Education

In thematic mega-unit education, under the guidance of subjects, there are not only various integrations between subjects, but also connections within and outside the classroom. Therefore, in carrying out thematic mega-unit educational activities, teachers basically take the children out of school, touching down in nature, conducting observations on social life, carrying out investigations, visiting places and collecting data, so that children can obtain sharp perceptual materials and related materials.

When the "I Love the Yangtze River and I Love Hao River" thematic mega-unit activities were carried out, teachers in different grades planned how to implement them. Some teachers led the child on a tour of the Yangtze River, others took students to visit the Hao River. It was said that the Hao River, like the Seine in Paris, France, flowed around the city. We tried to let children recognize the unique beauty of their Nantong hometown and understand its modern businesspeople and educators like Zhang Jian. Also, the students visited the first museum on the Hao River bank and went to the Blue Calico Museum, which is located on the east shore of the Hao River, and observed the process of weaving.

Middle-grade children had a tour of Nantong City. They went on a boat, enjoying the scenery of the Hao River, and then visited places associated with historical figures and the cultural heritage of the river. They not only felt the beauty of their hometown, they also began to understand the history of the city in which they were living. Here are some of the children's essays after they returned:

The Hao River, the Mother River of Nantong, is also the ancient moat of Nantong. It is located in the urban area, flows around the city and encompasses 700,000 square meters, many landscapes, lush trees, and a bridge pavilion on the waterside, hidden in the course of boats and yachts on the rippling water.

The boat started slowly, my mood could not be calmed down. Neither could I help being attracted by the river: The Hao River is 10 kilometers long, 15 meters at the widest point, the water comes in vast waves, shaped like lakes, the narrowest part is only 10 meters, like a drifting ribbon. Nantong City now expands outside the periphery of the Hao River. That is the reason that somebody compared it to the Seine in Paris and described it as an "Oriental Venice."

The Hao River southeast of the shore, here is the Nantong Museum, which was the first museum established by Chinese. It was said to be founded in 1905 by the Nantong industrialist Zhang Jian, so it has a hundred years of history.

The most striking sight on the river is the giant sculpture, which reflects the history in the fields of industry, agriculture, business, culture, education and other aspects from 1895 to 1926. The sculpture reproduces the large Nantong cotton mill and 27 other majestic buildings and famous figures from Nantong, including Zhang Jian, Wang Guowei and Shen Shou. Let us appreciate the history of our hometown.

The field contextualized curriculum is not merely a case of walking out of school. As a curriculum, it must have clear objectives, specific content and implementation processes. For example, in the autumn children have a Harvest Festival, when the higher-grade students take the lead and use their own hands and the fruits of their labor to decorate the school like a fairy tale building. The big pumpkin is on top of the dwarf's cabin in the big tree, there is a head of corn and countless grains of rice, in a hill-like heap in front of the cabin. Several female teachers are also deeply involved and show their ingenuity with a needle in a thread of peanuts, hanging in the doorway of the fairy tale building, just like a special bead curtain, which is really original. The children in first and second grades are also eager to do what they can in the Harvest Festival. They go to the countryside to get carrots. The teachers all try to let the children participate in agricultural labor.

Box 2.6 Instructional Design Typical Case 4: Admiring the Moon on an Autumn Night

The poem "The Moon Is So Much Brighter Than Usual in the Mid-Autumn Festival" inspired me. We should take the students to watch the moon during the Mid-Autumn Festival. It will stimulate their imagination.

I am talking about the students in third grade. There should be some guidance for them to admire the moon.

It is the location that is the key element in this activity of admiring the moon. It should be big enough. I thought about the playground first, but the playground was empty, there was no atmosphere there. I considered the park next, but there were too many trees to block students' view.

Finally, I chose the right position: on the bridge outside the park. It is a bridge over the Hao River. The surface of the water is wide. Nothing can

block students' horizon. What is more, they can admire the moon in the water.

I told the students to gather at the gates of the park 15 min before the moon rise. We went to the bridge in a line, hand in hand. Wu Zhou, the student at the head of the line, said to me: "Let us walk quickly. Grandpa Moon is waiting for us."

Students can write a great poem in such a situation. My heart was warm. And I quickened my pace.

The students played in front of the gates of the park for a while. Then we sat on the ground. They looked to the east side of the sky and expected the moon to rise.

The reason I asked the students to arrive 15 min early is that I wanted them to wait for the moon. And during the waiting time, they could appreciate the beauty around them and be thirsty for it.

After a while, a child yelled: "Look. The moon is rising."

"Yes, opposite. The moon is rising."

A round, big, red moon was rising from the east. It was the first time I had watched the moon so sincerely. I inspired the students to describe the situation.

"The moon rises in the east, so big, so round, so red, so beautiful!"

"The moon resembles a red lantern!"

"The moon is as red as the rising sun, but not so dazzling, so radiant!"

They were right. The moon was as red and beautiful as the sun in the morning.

The children continued to describe it: "The moon rises from the far grove quietly."

"Who can draw an analogy?" I asked.

The children stared at the rising moon and one of them said: "The moon seems to be hanging on the branch."

"Ms. Li, I have a different description from his. The trees in the sky stretched out their long arms to hold the moon."

Long arms. Hold. What a vivid and correct description that was! I thought it would be impossible to write such a beautiful sentence in this situation.

The moon was rising. When the moon was in the middle of the sky, we could see its shadow. I guided the students to combine observation and imagination, science and mythology.

"Do you see the shadow of the moon? Do you know what it is?"

The students said: "It is an osmanthus tree. It is a rabbit. My grandma told me." The students seemed to follow the myth of the moon.

"Ms. Li, they are wrong. The shadow is round like a ring of the moon."

Ah! Science and myth. Reality and fantasy. The students were trying to explore the truth of the moon with a wonderful fantasy.

A gust of wind blowing, a row of willows swaying beside the river. The shadow of moon in the river was broken. I said thoughtfully: "There is a

moon in the sky. What about in the water?
"Then the children sang songs affectionately :

Bright round moon,

The round moon is like silver,

Would you like to play hide and seek with me?

You. Ah! With a smile on your face, which side of the cloud you are hiding in?

The children were all immersed in the poetic. On the way home, I asked them: "Could you write a composition to describe the moon you see tonight?"

"Of course!"

"Could you give the composition a title?"

"The moon is rising."

"The moon night."

"Admiring the moon on an autumn night."

The children gave their suggestions one after the other, showing their interest in writing.

The day after the Mid-Autumn Festival, we discussed the outline of the composition. We came up with the general order: waiting for the moon, the moon is rising, the moon is rising higher and higher, and we are in the situation of admiring the moon.

Some of the children came up with an imaginative outline: we see the moon's smiling face, the moon plays hide and seek with us, and we really want to fly to the moon.

The children wrote excellent compositions.

I would suggest that literacy, reading and writing start at the same time. There is a process of exploration and improvement, which proves the feasibility of optimizing the structure. In order to enrich the teaching content, I tried to consolidate the syllable to teach ancient poetry, showing four lines of syllables.

As a way of curriculum setting, field activities help children to walk out of enclosed small classrooms and freely breathe the fresh air, and to realize the vast, boundless universe under the sky. In the process of understanding the world, children gradually learn lots from the contextualized curriculum. Nature directly or indirectly activates the children's senses. Such a way of openly storing information provides inexhaustible, abundant resources for children's cognitive, language, thinking and affective activities. Therefore, children's hearts and knowledge of these storehouses can continue to be nourished and enriched, in which the human mind is shaped. Outdoor contextualized education promotes children to embrace nature and acquire a wealth of perceptual materials. They are exposed to a living source of thinking and speech. They develop the analytic reasoning of both imagination and logic. These living resources greatly enrich the cognitive activities in the classroom.

From the combination of disciplines and activities in the classroom to breaking the boundaries of subjects, the contextualized curriculum walks out of the classroom and carries out the linkages in a mega-unit. Also, it goes out of the school and provides access to the wider world, coupled with the transition between early education and primary schooling, and is a supplement to the micro-curriculum, such as the network in general and the educational space. Again, children as the main role of the series of activities had been engaged in the contextualized curriculum.

The application of the contextualized curriculum brings joy into the classroom. It changes the "indoctrination teaching style" and the single means of "listening analysis by teachers," using learning by rote which causes a heavy burden and the low efficiency of a passive learning situation. It aims at children's thinking characteristics, according to the means of shaping them, the breakthrough of aesthetics, "sentiment" as the link, the resources of real life. Therefore, children can use their brains rationally and there is a harmonious teacher–student relationship. Eventually, children realize the fun of exploring, aesthetics, recognition and creating, and even the interest in pursuing the rich spiritual world. Also in the course of training, such primary education for the healthy growth of children's knowledge, ability, intelligence and emotions will have laid a solid foundation for all-round development.