

Chapter 4

How to Design a School-Based Curriculum: Case of Bridge Rhyme



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School-based curriculum refers to a diverse, selectable curriculum developed using the resources of local communities and schools through the scientific assessment of the needs of their students while ensuring the underlying quality of the national and local programs (Zhong, Cui, & Zhang, 2001). It coexists with the national and local curricula and is an indispensable part of the school curriculum system by providing the functions of adjustment, supplementation, and expansion (Wu, 2013). This chapter focuses on the design of a specific school-based curriculum. Taking the school-based course “Bridge Rhyme” from Maiyuqiao Primary School in Hangzhou, Zhejiang Province, as an example, we will examine the professional aspects of the course (the course syllabus and an overview of the implementation). Together, the four elements which are the course objectives, content, implementation and assessment answer the following questions: How do I want the students to turn out? What are the necessary materials and activities? How can I reach the goals? How do I know what they already know? In pondering these questions, we will learn how to design, implement, and assess a school-based curriculum, and also what distinguishes an excellent one from a mediocre one.

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4.1 Case Background

Maiyuqiao Primary School in Hangzhou City, Zhejiang Province, also known as the Fourth Primary School affiliated with Hangzhou Normal University, was founded in 1952. It is a well-known school that is a member of a formal group of schools. Since the basic education curriculum reform since 2000 in China, the school has pursued the goals of curriculum reform, focusing on the school motto of “strive for truth, move toward the future,” creating a school environment that embodies their vision of “helping children develop as individuals.” They have set up a range of courses suitable for the diversified development of the students with multiple choices and multiple assessment methods aimed at cultivating “healthy and optimistic, well-educated, well-mannered, educated, open-minded, and inclusive” youth. They have promoted the school-based implementation of the national curriculum, opening long-term, short-term, and micro-courses to enrich the national curriculum. At the same time, the school also offers a variety of school-based courses to meet the different development needs of students. It has offered activities such as the “Small Citizen Practice” course, comprehensive courses such as “Fishing Rhyme,” and the sporting arts course “Colorful Club.”

The school is located in Hangzhou, a city with UNESCO Mixed Cultural and Natural Heritage. There are countless bridges in the canal and the West Lake. The school is adjacent to the Beijing-Hangzhou Grand Canal, the longest and oldest artificial river in the world; the Xiawan Campus is located on its banks. Over the river are Jiangzhang Bridge, Dagan Bridge and Huaguang Bridge. The Hushu Campus is adjacent to the Grand Canal, the quiet Shuyuan Park, the prosperous Xinyifang, Maiyu Bridge, Desheng Bridge, and Chaowang Bridge. The Wenlan Campus is located west of the Gongchen Bridge and adjacent to the historic block of the Western Gongchen Bridge.

Using the school’s education philosophy as a foundation, “Bridge Rhyme” is a school-based curriculum developed independently by the school. It is a branch of the “Fishing Rhyme” course and is aimed at children in the third grade. Because the school shares the name of a bridge, Maiyuqiao, there are stories incorporated about the “Maiyu Bridge” and the “Maiyuqiao Primary School.” Studying the bridge itself is more practical than simply studying the history of the bridges.

Through a series of in-depth experience activities such as “ambassadorship,” “exploration,” “customs clearance,” and “drawing a canal,” this course guides students in exploring the culture of the bridges located at their doorstep, understand the heritage of the canal, inspire students’ love of the school, community, and Hangzhou, and cultivate their feelings of home. This course has been promoted numerous times in Hangzhou and even in national conferences; it is very popular among students. This course has also won the special prize in the fourth “Cherished Dream Cup,” which is a national school-based curriculum design competition.

4.2 Course Syllabus of “Bridge Rhyme”

- Course name:** Bridge Rhyme
Course type: school-based curriculum, self-edited
Applicable to: fifth and sixth grade students
Class hours: 32 lesson periods
Designers: Wang Yifang and Zhu Yaping/Maiyuqiao Primary School, Hangzhou, Zhejiang Province

References:

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4.2.1 Course Introduction

Our school is called Maiyuqiao Primary School. Children, do you want to learn about the bridge? In this course, your teacher will take you on a journey to learn about “meaningful” bridges, work with you to compile the “Hundred Bridges Map,” experience the wisdom of the Chinese people through the diverse meanings of the Chinese character “桥” (bridge), and ponder the meaning of bridges through the questions, “Without a bridge, is there still a pathway? Without a bridge, what would our lives be like?” We can also play sandbox games, visit the Gongshu Canal, design business cards for the bridges, and draw the “Canal Scroll.”

4.2.2 Course Objectives

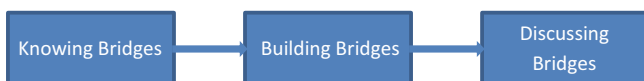
1. Know the culture of bridge. Through numerous channels, collect the names of various bridges in Hangzhou starting with Maiyu Bridge, learn the origin of the names of the bridges on the Gongshu Canal, work together to compile the “Hundred Bridges Map,” and experience the wisdom of the Chinese people through the diverse meanings of the Chinese character “桥” (bridge).
2. Understand the nature of bridge. Conduct field research on the bridges from Wulinmen to Gongchengqiao, combine the findings with data collection to understand the various types of bridges and to display the bridge with the

“most special form” through a series of activities such as drawing bridges, modeling of bridges, designing of bridges, and construction of bridges.

3. Through reading literary works about bridges in Hangzhou and a “Hometown Bridge Tour” based on the principles of “respect, loyalty, goodness, and courage,” each person writes a paragraph and expresses his/her deep understanding of the meaning of “桥” (bridge).
4. Through the comprehensive study of this course, students will understand that bridges are a unique cultural heritage of Hangzhou, understand the unique regional resource of “knowing Hangzhou through a single bridge,” and have their affection for bridges, the school, and their hometown enhanced.

4.2.3 Course Content

The course is divided into three units, namely Knowing Bridges, Building Bridges, and Discussing Bridges. The content units are arranged as follows:



Lesson 1: Share the course syllabus.

4.2.3.1 Unit 1: Knowing Bridges: Looking for Bridges, Editing the Hundred Bridges Map (11 Lesson Periods)

Lesson 2–3: Start from the Maiyuqiao Primary School. Visit the school history museum to learn about the history of Maiyuqiao Primary School. The whole class takes a group photo in formation to look like the style Maiyu Bridge.

Lesson 4: Establish a Bridge Names Ambassador Group (all students were assigned to different Bridge Names Ambassador groups). In the form of games and a lottery, the “Bridge Names Ambassador” groups of bridges such as Maiyu Bridge, Desheng Bridge, Jiangsheng Bridge, Gongchen Bridge, and Beixing Bridge will be set up, and their flags will be made. The “ambassadors” will complete tasks by conducting research and designing interview questions.

Lesson 5–6: The Bridge Name Ambassadors will visit the bridges to explore interesting facts about the bridges and record what is found.

Lesson 7–8: The teams of the Bridge Name Ambassadors will select the most meaningful bridge names, make business cards for the bridges, and tell compelling stories and anecdotes about the bridges.

Lesson 9–10: All of the students will consult relevant materials (the library, Gongcheng Academy, or the Internet) to find the different Chinese characters for “bridge”; they will compile these findings in their Hundred Bridges Map to be

displayed on the window display panels. They will experience the wisdom of the Chinese people through the diverse meanings of the Chinese character “桥” (bridge).

Lesson 11–12: The Bridge Name Ambassadors Exhibition will be set up, where each group will choose a way to display their work. The following are possible ways to do so: (1) school newspaper—handwritten newspaper to display the Hundred Bridges Map; (2) radio station—read-aloud stories that introduce the bridges; (3) collaborate to draw the “Finding the Hundred Bridges Wall”; or (4) organize students of “the Bridge Name Ambassadors” to trace their footprints, edit the interview track video, and so on.

4.2.3.2 Unit 2: Building Bridges: Finding Special Bridges, Bridge Exhibition (10 Lesson Periods)

Lesson 13–14: Find the “most special bridge.” Divide into groups (2–4 people), complete tasks, each person brings an iPad or conducts online research in the computer classroom; or have extracurricular activities on the Gongshu Canal (limited to the section between Wulin Gate to Gongchen Bridge) to find what they think is the bridge with the “most special form” and measure it.

Lesson 15–16: Drawing bridges and modeling bridges. Choose the “most special bridge,” and the team will cooperate to create a fan painting and a clay model of it, then arrange them on the display racks.

Lesson 17–18: Learn more about the shape of bridges. Understand the different types of bridges such as arch bridges, beam bridges, pontoon bridges, suspension bridges, and cable-stayed bridges. Select a type of bridge to model using the computer or by hand. Exchange works between groups and choose the best bridge model design drawing.

Lesson 19–20: Bridge construction. According to the bridge model design drawings created in the previous two lessons, the group members will work together to build a “most special bridge” using different materials, write a summary report, and display their work. Feel different materials, different bridge decks, and different bearing capacities. Students are required to prepare sketches, materials, decorations, and so on in advance, and each part needs to be able to remain in a fixed position.

Lesson 21–22: Bridge Exhibition. Each group (2–4 people) brings the bridge they designed and shows their “most special bridge” to the rest of the class. Five minutes are given for each presentation. Explain (1) What is the form of the bridge? (2) Why is it the “most special?” (3) What are the highlights and ingenuity of the design? After the exhibit, the various bridges are displayed on the prepared panels.

4.2.3.3 Unit 3: Discussing Bridges: Hometown Bridge Tour, Recalling Bridges (8 Lesson Periods)

Lesson 23–24: Turntable game; according to the principles of “respect, loyalty, goodness, and courage,” divide the students into the four groups of “bridge of

respect,” “bridge of loyalty,” “bridge of goodness,” and “bridge of courage” to go to the vicinity of the Gongchen Bridge and look for the corresponding clues.

Lesson 25–26: “Hometown Bridge Tour.” Search for a bridge of patriotism (such as Gongchen Bridge), bridge of loyalty (such as Desheng Bridge), bridge of goodness (such as Zuojia Bridge), bridge of sacrifice (such as Chaowang Bridge), and so on. Place a flag on the bridge and tell the ancient and modern story of the bridge. Record videos with parents or classmates.

Lesson 27–28: The four groups give an account of their experiences, and the class discusses them together to look for the meanings of the bridges: connection, communication, dedication, sacrifice, and so on, and students write a short essay of 600 characters or more. Go to the “Langdu Pavilion” on the side of Gongchen Bridge to talk about the meaning of the bridge. After recording this, the students edit the video.

Lesson 29–30: Recreate the ancient scene of “customs clearance” using a diorama, show the “congestion of river vessels,” show the difficulty of moving on the bridges, and discuss the image that bridges are a communication tool between the two sides of the river.

Lesson 31–32: Summary and assessment. Scroll showing the canal, display the traces of “respect, loyalty, goodness, and bravery” in bridge travel, the Hundred Bridges Map, multiple forms of bridges, introduction of “Bridge Name Ambassadors” and “Bridge Form Ambassadors” reports, and play the representative video. Combine the learning process and displayed results, undertake a comprehensive assessment of the final results, and give assessment awards.

4.2.4 Course Implementation

4.2.4.1 Course Resources

- (1) The “Bridge Rhyme” textbook, which was edited by teachers in the school.
- (2) Related Power Point and micro-courses created by the teacher, the teacher instruction manual, and the study activity manual.
- (3) Bridges around the school, bridge-themed venues, and the school history museum.
- (4) The students’ self-made learning tools.

4.2.4.2 Teaching/Learning Methods

(1) Knowledge Introduction

A “bridge” is a concrete object. In Hangzhou, a city with many bridges, students have more contact with bridges in their daily lives compared to students elsewhere, and are very familiar with the form and structure of bridges with local characteristics.

However, they require guidance from teachers to understand how to connect the forms of bridges with more extensive historical and cultural meaning. For example, they require the guidance of teachers in understanding famous bridges both within and outside China and the historical stories, poetry, nursery rhymes, and the like that are related to bridges. Providing such guidance will help students form a rational understanding of bridges.

(2) Guidance for Practice

Guidance revolves around the central theme of “bridge.” During the course implementation, the solution to certain bridge-related problems can be regarded as a small task. Under the organization and guidance of the teacher, students can learn to discover such problems and enhance their problem-solving skills. For example, to design a business card for a bridge, the teacher needs to help students understand the basic content of business cards so that the students’ designs will be more meaningful.

(3) Study Tour

The “Bridge Rhyme” course requires the full utilization of the bridge resources of Hangzhou to make the study of the course more vivid and intuitive. It is especially necessary to visit themed venues to accumulate knowledge, understand history, and stimulate the students’ enthusiasm for the bridge-themed course. At the same time, the teacher can also invite professionals who have an in-depth understanding of the bridges in Hangzhou to the school to introduce the bridges’ history so that the students can develop their feelings toward their hometown throughout the learning process.

The “problem-oriented” curriculum implementation strategy reported that students who participate in the course have learning styles that are different from what was previously understood. They must learn to utilize independent, cooperative, and inquisitive learning methods. They will think independently and work in teams to accumulate experience during the process to achieve the objective of improving their overall qualities and abilities.

It should be noted that the curriculum implementation encourages students to communicate fully, exchange opinions, share discoveries, and explore ways to solve problems in the process of promoting independence, cooperation, and inquiry. However, in the process of communication, there must be instructions and guidance on issues such as the sequence of communication, methods of handling disputes, and the type of language used in reports.

4.2.5 Course Assessment

The students' semester grades are presented in a weighted manner and consist of procedural assessment (90%) and a final assessment (10%).

4.2.5.1 Procedural Assessment (90 Points)

(1) Unit 1: Knowing Bridges (30 points, students' self-assessment)

Assessment criteria (5 points)	Literacy direction	Assessment level (student self-assessment)		
		Very good (5 points)	Average (3–4 points)	Not very satisfactory (1–2 points)
I can tell the story of Maiyu Bridge	Expression			
I can actively search for bridges with different names	Proactivity			
I can share interesting bridge names with team members	Sharing			
I can design creative business cards and advertisements	Creativity			
I can work with team members to compile the Hundred Bridges Map	Cooperation			
I can share the bridge name search process	Sharing			

(2) Unit 2: Building Bridges (30 points, teachers' assessment)

Assessment criteria (5 points)	Literacy direction	Assessment instructions (assessor as teacher)
Can go out and look for a special bridge and measure it in the field	Independence	According to the performance during the practical inquiry, give the corresponding ratings: positive = 5 points; average = 3–4 points; not active = 1–2 points.
Can make a fan painting of a bridge and make a clay model of a bridge	Creativity	According to the completed process and results, give the corresponding ratings: beautiful = 5 points; relatively beautiful = 3–4 points; average = 1–2 points.
Can complete the bridge design plan with the team members	Cooperation	According to the degree of participation in the design process, give the corresponding ratings: strong participation = 5 points; relatively strong participation = 3–4 points; average = 1–2 points.
Able to prepare bridge materials, decorations, etc.	Seriousness	According to the material preparation, give the corresponding ratings: fully = 5 points; average = 3–4 points; not enough = 1–2 points.

(continued)

Assessment criteria (5 points)	Literacy direction	Assessment instructions (assessor as teacher)
Able to build various types of bridges with different materials	Creativity	According to the finished work, give the corresponding ratings: creative = 5 points; average = 3–4 points; not creative = 1–2 points.
Can accurately and clearly introduce a special bridge	Expression	According to the introduction, give the corresponding ratings: independent completion = 5 points; assisted completion = 3–4 points; not completed = 1–2.

(3) Unit 3: Discussing Bridges (30 points, teachers' assessment)

Assessment criteria (5 points)	Literacy direction	Assessment instructions (assessor as teacher)
Can search for bridges that show “respect, loyalty, goodness, and courage” and tell their stories	Practice	According to the search process, give the corresponding ratings: 5 points = proactive; relatively proactive = 3–4 points; not proactive = 1–2 points.
Able to create a story, nursery rhyme, and perform poetry about a bridge with group members	Cooperation	According to the participation, give the corresponding ratings: cooperated = 5 points; average = 3–4 points; no cooperation = 1–2 points.
Can actively participate in the bridge discussion	Sharing	According to the discussion, give the corresponding ratings: in-depth = 5 points; average = 3–4 points; not in-depth = 1–2 points.
Able to go to the Langdu Pavilion and express the meaning of bridges	Expression	According to the expression of the meaning, give the corresponding ratings: profound = 5 points; average = 3–4 points; superficial = 1–2 points.
Can participate in the “customs declaration” game	Participation	According to the performance in the game, give the corresponding ratings: active = 5 points; average = 3–4 points; not active = 1–2 points.
Can write a paragraph about “Bridges and Me”	Interpretation	According to the paragraph written, give the corresponding ratings: wonderful = 5 points; average = 3–4 points; not great = 1–2 points.

4.2.5.2 Final Evaluation (10 Points, Teacher Assessment)

According to the students' output and behavior, the specific assessment methods are as follows:

(1) Student output: Canal Scroll (6 points)

Assessment criteria	Literacy direction	Assessment instructions
Able to independently design creative bridges (3 points)	Innovation	According to the completed output, give the corresponding ratings: innovative = 3 points; relatively innovative = 2 points; not innovative enough = 1 point.
Able to cooperatively display the “Bridge Name Ambassador” and “Bridge Form Ambassadors” activities (3 points)	Cooperation	According to the initiative and cooperation shown in the activities, give the corresponding ratings: proactive = 3 points; average = 2 points; not proactive = 1 point.

(2) Behavioral performance: presentation (4 points)

“Bridge Rhyme” Display Assessment		
Assessment criteria	Literacy direction	Assessment instructions
Able to report on the display on the exchanges on bridges (2 points)	Expression	According to the presentation given, give the corresponding ratings: confident = 2 points; relatively confident = 1.5 points; average = 1 point.
Able to actively propagandize the school and protect and promote the bridges in their hometown (2 points)	Proactivity	According to the actual development, give the corresponding ratings: proactive = 2 points; average = 1.5 points; not proactive = 1 point.

Final score = Unit 1 (30%) + Unit 2 (30%) + Unit 3 (30%) + Summary (10%)

Note: Assessment note: 90 points and above = excellent; 70–89 points = good; 60–69 points = qualified; 60 points or fewer = needs more work

4.3 Case Analysis

One of the concepts of school-based curriculum development is to emphasize the scientific, democratic, and open nature of curriculum development (Cui, 2000). School-based curriculum is different from national and local curricula. The original intention of the school-based curriculum is to enhance the adaptability of the national curriculum to the locality, school, and students. The school has the right and obligation to develop or select a suitable curriculum for the school. The basis for establishing a school-based curriculum is to combine the traditions and advantages of the school with student interests and needs. Therefore, the assessment of a school-based curriculum also has its own unique nature. Regarding how to deliberate on a school-based curriculum, a team led by Professor Cui (2000) from the East China Normal University proposed 16 criteria for deliberating on the professionalism of a school-based curriculum from the four dimensions of advancement, consistency,

technicality, and originality. These dimensions are used to assess whether the school-based curriculum is in line with the national curriculum and the times, whether the curriculum is consistent, whether the course syllabus conforms to technical specifications, and whether the course design is thorough. The course described above is one of the school-based courses developed by the Maiyuqiao Primary School within the spectrum of “Fishing Rhyme” courses. In general, the “Bridge Rhyme” course can be considered an excellent school-based course according to the four dimensions of the team led by Professor Cui Yunhuo.

4.3.1 Reflecting the School Educational Philosophy

The school educational philosophy answers the question, “What kind of person should the school cultivate?” The school education philosophy is the soul of all the work done by a school; it is the starting point of the curriculum construction work as well as its destination. It reflects the vision of the school; it defines where the school is headed as an organization. It provides the mission, that is, what kind of graduates does the school need to cultivate to achieve its vision and educational objectives. It is the consensus of the school education community, and it also acts as a guide for the actions of each member. It reflects the school’s characteristics and delivers the cultural connotation and development direction of the school.

The “strive for truth, move toward the future” motto of Maiyuqiao Primary School is simple and timeless, and it not only reflects the cultural style of the century-old school but also syllabus its development vision. The school adopts “let each child have personalized development” as its educational goal to focus on the intellectual development of the students. It uses the principles of “respect differences, appreciate individuality, open up education, and develop in a diverse way” in holistic education as the school’s mission to set up diverse development, diverse choices, diverse assessment in classes in the pursuit of richness, openness, and integration. These help to satisfy the needs of students to experience diverse and personalized development as much as possible, and foster “healthy and optimistic, well-educated and a model of propriety, learned, open-minded and inclusive” youths. Maiyuqiao Primary School makes full use of its profound cultural heritage, and the school’s educational philosophy is embodied in the development of its school-based curriculum.

The practical, sporting art, and knowledge development categories of the courses of Maiyuqiao Primary School constitute a school-based curriculum system with thoughtful planning and integration, which fully reflects the strong curriculum planning consciousness of the school. There are some independent courses under each course category; each of which has a course syllabus that has definite plans for the course objectives, content, implementation, and assessment. The school-based curriculum of Maiyuqiao Primary School focuses on diversity and selectivity. The courses are divided into the compulsory and elective course and the class hours for each are spread throughout the semesters. This allows students to make their choices

according to their needs and is also conducive to the overall course arrangement. The “Bridge Rhyme” course originated from the school’s name and its geographic and cultural environment. Starting from the school’s history museum, it not only inherited the spirit of openness and diversity from the school’s holistic curriculum, but it also helps students to learn from practical experiences, learn how to learn, and learn to be open and inclusive through the course. At the same time, the orientation of the curriculum is a good response to the talent needs of modern society. This course is not a “principal-based course” or a “teacher-based course,” nor is it a derivative of local characteristics or local culture. It is tree-like, rooted in the school’s educational philosophy and multi-disciplinary curriculum needs. Such a curriculum is school-based, and this type of curriculum appears to be lively and vivid, and is not something that can be easily replicated by other schools.

4.3.2 Course Development

Focus on Developing the Students’ Interests Curriculum exists for children. Without children, there is no curriculum. Children’s interests are the vitality of school-based curriculum. Paying attention to, researching, and satisfying the legitimate interests of students is the logical starting point as well as the destination of a school-based curriculum (Cui, 2008a). Before the course began, the teachers first evaluated the needs of the third-grade students through interviews and questionnaires mainly related to the students’ expectations of the course content and learning styles. In the teachers’ minds, they always ask themselves, “what do our students need?” After answering this question, they then clarify, “what can we offer?” After a sample survey of third-grade students, it was found that the students were all local students, and their home addresses were all near the school. Most of them were born and raised in Hangzhou; some are first-generation residents of Hangzhou but have lived there for many years. Students are very familiar with and interested in the bridges around the school. After clarifying the scope, level, and type of interests that the students have, the teacher fully tapped existing and available resources both inside and outside the school such as the school’s history museum, bridges around the school, bridge-theme venues, the themed venue in the school’s STEAM (Science, Technology, Engineering, Art, and Mathematics) center, and teachers who are good at drawing and building bridges. The survey of student interests conducted in the previous semester yielded high-quality information.

The teachers give students the full ability to choose their courses during the implementation process. The Bridge Name Ambassadors in the Knowing Bridges unit allows students to organize their own cooperative teams to select the most interesting bridge names and present them in any way they like. In the bridge-building activity, students are also free to form their own groups and use their own methods to find a bridge that they think has the “most special form” then draw, model, build, and display it. In the bridge tour in the Discussing Bridges unit,

students act as ambassadors in looking for clues, planting flags, recording their read-aloud in the pavilion, and creating dioramas. The teachers always give students independence and choices and develop their skills using a variety of methods such as project-based learning, practical activities, report presentations, and a variety of games to meet the multi-faceted needs of students as much as possible and provide them with opportunities to perform in diverse ways and express their interests.

The objective setting, content arrangement, teaching methods, and assessment methods of the course are all centered on the needs of students, and coincide with the idea of the “practical curriculum model”(Shi, 1996) presented by Schwab (1971). The practical curriculum model regards teachers and students as the main body and creator of the curriculum; they are organic components of the curriculum. The focus of the curriculum development is to take it as a continuous process of interaction between the elements of the curriculum system, especially the interests and needs of the learners. Putting learners at the center of research is also in line with Dewey’s (1903) “child-centered” ideas. This course is far removed from the method of rote memorization used in traditional education; rote memorization has been replaced with a life-oriented, child-oriented curriculum format. The integration of simple and fun design of activities such as “compiling the Hundred Bridges Map,” “conducting a bridges meeting,” “ambassador trips to bridges,” and “diorama reports” into the learning process help students to understand the culture surrounding bridges and the structure of bridges. These various teaching methods help students to recognize the historical and cultural heritage of Hangzhou and enhance the students’ affection for bridges, the school, and their hometown, rather than teaching them through dry lectures. This kind of curriculum, with a development that starts with the students and their interests, is worth studying and advocating for.

Course Syllabus Technical Specification The course syllabus is the most direct and vital text for deliberating on the merits of a course. If a course does not have a course syllabus, it cannot be called a course, because this means that the relevant parties or teachers have not thought about it thoroughly and professionally. A course is a detailed professional activity that requires a process of planning or designing, implementation, and assessment (Cui, 2016). The course syllabus is a program syllabus written by the teacher based on the curriculum standards or guidelines and related materials; it reflects the various elements of a specific course. A complete course syllabus includes the pre-record (school name, course type, designer, date, appropriate grade level, class hours), the main body (course objectives, course content, course implementation, course assessment), the necessary conditions, and other content (Cui, 2009). It is a course guide and a cognitive map. The course objectives, course content, course implementation, and course assessment are the four core elements of the course syllabus.

Professionalized school-based curriculum design refers to the process of continuously improving and enriching the course elements according to certain technical specifications. The “Bridge Rhyme” course takes part in this process. The course syllabus is complete, with basic information, background analysis, course description, course objectives, course content, course implementation, and course

assessment. Background analysis is the reason for opening a certain course. It is the basis for formulating and understanding the course objectives and correctly assessing the course plan. The course introduces the origin of the course from the relationship between the school and the bridge and at the same time, combines the school's educational goals with the practical significance of the course. The course objectives are realistic, clear, and actionable. First, the course objectives have an ample foundation and is based on the actual situation of the school and the third-grade students. Second, regarding expression, with the students as the main body, knowledge and skills, processes and methods, emotional attitudes, and values are closely related and well integrated. Explicit behavioral verbs are used to embody the learning conditions and portray the level of performance. In terms of course content, the three units (Knowing Bridges, Building Bridges, and Discussing Bridges) in the course are systematic designed with special topics, class, hours, and structure that are based on the students' learning needs and related to their student life; the course syllabus was arranged to be shared during the first sessions. The course implementation can creatively apply diverse learning methods according to the learning characteristics of the students. In addition to teaching knowledge, the course also adopted methods such as field trips, group cooperation, reports, and other such methods. At the same time, the course resources are also complete; it contained not only the material resources but also the conditional resources. In the course assessment, the assessors, areas for assessment, assessment methods, and actions to be taken on the results are clearly identified. The combination of the procedural assessment, summative assessment, and final results is presented in a weighted manner. The assessment criteria and methods for each unit are provided to embed assessment in the teaching process, thereby allowing it to be assessed and operated. Among the 32 lessons, the last two were retained as the final assessment of the course to better examine the extent to which the objectives were achieved and how they can be revised upon completion of the course.

Consistent Course Elements Whether the school-based curriculum is professional is mainly reflected in the internal consistency of the curriculum. It includes three aspects: the school-based curriculum is consistent with the requirements of the curriculum policy, the curriculum elements are consistent, and the internal logic of the curriculum elements is consistent. The basis for designing a consistent course lies in finding the core of its consistency. In a school-based curriculum, the course objectives are the soul of consistency, and the four elements of the curriculum should be consistent with each other, with the objectives as the core. Whether the curriculum is suitable for the expected learning outcomes is the most important principle for organizing teaching content around teaching priorities. The important factors affecting teachers' choice of teaching methods are the curriculum objectives; the core principle behind the teachers' choice of assessment methods is to match them with the curriculum objectives. Consistency requires further clarification of the school education philosophy, the mandate to assess student curriculum needs and teacher curriculum development awareness and competencies, and the requirement to utilize available resources (Cui, Zhou, Cen, & Yang, 2016).

The “Bridge Rhyme” course is based on the school’s consideration toward its image of “healthy and optimistic, well-educated and a model of propriety, learned, open-minded, and inclusive” graduates, the cognitive and emotional needs of the students regarding the bridge, the origins of the school and the bridge, and the teacher’s curriculum awareness. Thus, there are four objectives: (1) Through a variety of channels, collect the names of various bridges in Hangzhou starting from Maiyu Bridge, understand the origin of the names of the bridges on the Gongshu Canal, work together to compile the “Hundred Bridges Map,” and experience the wisdom of the Chinese people through the diverse meanings of the Chinese character “桥” (bridge). (2) Conduct field research on the bridges from Wulinmen to Gongchengqiao, combine the findings with data collection to understand the various types of bridges and to display the bridge with the “most special form” through a series of activities such as painting bridges, creating molds of bridges, designing bridges, and constructing bridges. (3) Through reading literary works about bridges in Hangzhou and a “Hometown Bridge Tour” based on the principles of “respect, loyalty, goodness, and courage,” each person writes a paragraph and expresses his/her deep understanding of the meaning of “桥” (bridge). (4) Through the comprehensive study of this course, understand that the bridge is a unique cultural heritage of Hangzhou, understand the unique regional resource of “knowing Hangzhou through a single bridge,” and enhance the students’ affection for bridges, the school, and their hometown. The objectives use verbs such as “collect,” “understand,” “research,” “read,” and “present” to describe learning conditions such as “group work” and “field research.” The ultimate objectives include experiencing the wisdom of the Chinese people, gaining a deep understanding of the meaning of bridges, and cultivating a feeling of love for bridges, the school, and the hometown. The course started with clear, realistic, and limited objectives rather than starting from the goal. The objectives were clearly defined, balanced, and implemented.

The curriculum structure and arrangement of the three units (Knowing Bridges, Building Bridges, and Discussing Bridges) are closely related to the goal, which is conducive to its achievement. For example, if Unit 1 (Knowing Bridges) is geared toward achieving the first objective, it is organized with tasks such as collecting the interesting names of the bridges and compiling the Hundred Bridges Map. If Unit 2 (Building Bridges) is geared toward achieving the second objective, it is organized with activities such as searching for bridges and displaying bridges. If Unit 3 (Discussing Bridges) is geared toward the third objective, it is organized with activities such as the Hometown Bridge Tour, the discussion of the significance of bridges, and the essay on bridges. Through systematic organization of the content, students naturally understand the unique cultural heritage of bridges, understand the origins of the bridges and Hangzhou, and achieve the fourth objective by experiencing the learning process. The course was borne out of the degree to which students have met the objectives. The appearance of assessment design in the course plan indicates a change from experience-based education to professional education (curriculum). It can be said that assessment design is an important symbol of professionalism in the course plan (Cui, 2016). In this course, the assessment design can

effectively correspond to the course objectives, and the procedural assessment is the primary assessment. Each of the three units has been provided with assessment criteria and a final summative assessment, which is done on the students' work, and performances have also been provided, along with clear assessment criteria. Such an assessment tool shows that the course designer is confident; different assessors can also effectively use the same tool.

4.4 Summary and Reflections

This case tells us that this is a school curriculum innovation model that conforms to China's current national conditions and is also in line with the common concepts in school-based curriculum development. However, school curriculum innovation is a continuous behavior or pursuit. In addition, there is still the possibility of further exploration in this case.

First, does the relationship between the school educational philosophy and school-based curriculum need to be more explicit? The students' curriculum needs are fundamental to the school-based curriculum. Maiyuqiao Primary School should further clarify how the students' needs are the basis for the school-based curriculum development. The school-based curriculum objectives reflect the needs of students and the goals of school education. The biggest difference between school-based and national and local courses is that it is "school-based"; responding to students' needs is the primary goal of the school-based curriculum. Although the current development of the "Bridge Rhyme" course has involved a survey of student interests, and students enjoy this kind of course, a series of fundamental questions still need to be considered. Do the students have other interests? How are these interests integrated with the series of courses such as "Bridge Rhyme" and "Fishing Rhyme"? To solve this series of questions, we need to look at it from several aspects. First, further refine and clarify the relationship between the "image of Maiyuqiao Primary School graduates" and the school-based curriculum. Second, analyze the needs of the students and reflect these needs in the curriculum. Third, do a satisfactory job of collecting feedback from students and parents during the curriculum assessment and modify and improve the existing curriculum accordingly. Fourth, adequately plan the school-based curriculum and further strengthen the "consistency test," that is, seek consistency between the school's educational philosophy, overall objectives of the school-based curriculum, the curriculum structure, implementation, and assessment (Cui, 2008b).

Second, does the school need to clarify its management practices and safeguards? How can the school establish a school-based curriculum assessment and management system that, while being based on the interests of the students, can avoid purely pursuing said interests to ensure the quality of the course? How should the school manage the relationship of its curriculum with the national and local curriculum? How can it ensure the coordination between students when they perform activities outside of the classroom with personnel? How can it establish contact with and the

sharing of internal and external curriculum resources? In addition to material resources, how can the human resources (teachers) be maximized? Can more teachers be given the opportunity to perform and create? This series of questions requires particular attention to the following points. First, the school should set up a school-based curriculum development committee and give each member corresponding rights and responsibilities. Second, the school-based curriculum development committee should organize the students' curriculum needs and available resources. Third, it should clearly define the objectives of the school-based curriculum and come up with a specific subject and course and form a holistic and systematic perspective to deliberate on the curriculum arrangement given the balance between students; curricular needs and available resources. Fourth, the school should do an excellent job in training the teachers on curriculum awareness and abilities. Fifth, it should form a complete school-based curriculum assessment system.

Third, is it necessary to improve the expansion of the national curriculum through school-based curriculum projects such as "Bridge Rhyme"? The school-based curriculum is a breadth and depth expansion of the functions of the national curriculum. That is, the full implementation of the national curriculum for the entire student body poses some difficulties or cannot be fully implemented; for some students, it is imperative and possible to expand its function. "Bridge Rhyme" selected the theme of "bridges" and expanded and deepened learning activities. It enriched and optimized the students' knowledge structure and made some attempts to deepen knowledge about a certain theme. However, it is also possible to carry out cross-learning or interdisciplinary development, and even improve the content, learning methods, and requirements in-depth. Regarding breadth, the coverage can be expanded such as with the analysis of the theme-related areas of the school (what are the advantages or characteristics of them, or what are their shortcomings), which could be followed by analysis of the students' interest and growth points. This could then be combined with the requirements of the time, cultural features, and so on, to constantly improve the subject coverage. At the same time, regarding depth, it should be studied whether the same theme of bridges can be applied to different grade levels and whether it can become a series of school-based curriculum that is compatible with the students' age characteristics, interests, and learning foundations, spanning the lower and upper grades. Of course, with expanded breadth, this series could be offered to different grade levels with varying complexity or topics. As far as the school is concerned, it is necessary to provide students with as many themed activities as they can choose. Based on the characteristics of the school-based curriculum in the different levels and given that it is continuously being improved over the years, there needs to be a connection as students transition from one grade level to the other, and the degree of freedom in selecting courses must be appropriate.

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