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## Creating Smart Board Activities To Engage Students' Learning In Chinese Immersion Kindergarten

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CREATING SMART BOARD ACTIVITIES TO ENGAGE STUDENTS' LEARNING IN  
CHINESE IMMERSION KINDERGARTEN.

By Wenting Qiang

A capstone submitted in partial fulfillment of the  
requirements for the degree of Master of Arts in Teaching.

Hamline University

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## **CHAPTER ONE: Introduction**

Before I started my job as a Chinese immersion teacher, I prepared many teaching materials including art projects, such as Chinese calligraphy that I thought would be fun for the class. However, when I started teaching, I realized the biggest challenging that cannot be ignored – language comprehension. Everything that I said to the class was like a background noise to them. The more I talked, the less they are engaged. Luckily, I found that the importance visual aides are to immersion students. Using visuals helping students to understand my instruction instead of words. During my years of teaching, SMART Board has been a tremendous help. It builds up such a nice shortcut, which made teaching in immersion setting much more effective. Thus, my research question is: How to create SMART Board activities to engage students' learning in Chinese immersion kindergarten?

To a lot of parents, sending their children to kindergarten is a big transition to them, let alone an immersion kindergarten. It can be very overwhelming to many people. During open house and curriculum night, I got a lot of questions from parents asking questions such as “Do you teach everything in Chinese?”, “How do you teach when they don't understand Chinese at all?” A lot of parents send their children to Chinese Immersion program with excitement and uncertainty.

### **Definition of Immersion Program**

A language immersion program is defined as one that involves the use of two languages as the medium of instruction for academic content for no less than 50 percent of the school day. The goal of a language immersion program is to develop a student's (1) proficiency in English;

(2) proficiency in a second language; (3) intercultural competence; and (4) academic performance in the content area, at or above expectations.

There are one-way and two-way immersion program. One-way immersion programs focus on populations of students who have little or no exposure to the target language – Chinese when they enter the program. There are also two-way immersion programs, which generally involve equal numbers of English-dominant and Chinese-dominant students, and aim to support both groups in building their skills in both languages. All immersion programs are predicated on the concept of additive bilingualism, the notion that, simply put, two languages are better than one.

Immersion programs differ by student population, entry grades, parent, and community goals, and most conspicuously by their program model. The program model determines what percentage of instruction is done in English and what percentage in Chinese, and how this changes over time and across grade levels. Take the school district that I am working for, 100 percent of the classroom instruction is taught in Chinese from kindergarten to second grade. Students begin English Language Arts and reading instruction in third grade.

Research shows that there is no better way to learn a language successfully in a school context than in an immersion program. Since the language teacher and the content-area teacher are one and the same, students are exposed to a much richer palette of language and a more sophisticated range of concepts than they would be in traditional foreign language programs. Because teachers must function as both language and content teachers, language immersion programs are cheaper to staff than traditional foreign language programs.

## **Chinese Immersion Programs in the US**

Originally most US immersion programs were modeled after the Canadian immersion initiative in which students were immersed in their new language 100 percent of the school day. English was introduced at grade two or three and gradually increased to 50 percent of the elementary school day. Later, US programs began to vary how time was allocated to each language. Today, particularly in Chinese immersion, there is a variety of program models. The majority of Chinese immersion programs divide the K–5 school day according to a fifty-fifty model: 50 percent of instruction is delivered in Chinese and 50 percent in English. Other programs start with 80–100 percent of instruction in Chinese and then offer fifty-fifty in third or fourth grade, for example.

Chinese immersion is apparently an American phenomenon, fueled since 2000 by impressive French and Spanish immersion test results, new charter schools that tap local school district funds, federal grants and, notably, substantial infusions of Chinese government support, particularly since 2004.

Since 2004, China has set up hundreds of Confucius Institutes and Confucius classrooms in over a hundred countries. The institutes, mostly on university campuses, offer schools compelling incentives. China covers budget costs for teacher training, materials, top-notch cultural programs and student exchanges. China also offers \$10,000 grants to all schools that start teaching Mandarin. No figures exist for Chinese immersion efforts outside North America, according to an email response from a Hanban spokesperson.

Wang, director of the Asia Society’s Chinese Early Language and Immersion Network, based in New York, calls Minnesota a “hidden gem” in the immersion movement. Wang credits Minnesota’s Concordia College Language Villages for the model of an immersion laboratory. In

1984, it opened the Sen Lin Hu, or “Lake of the Woods,” Chinese village as part of its summer camp immersion programs. “Sen Lin Hu proved that immersion works,” Wang said. “It gave us both knowledge and best practice” (Wang, Year, p.#).

### **Benefit of Chinese Immersion Program**

Immersion programs have generally produced better second-language proficiency results than traditional foreign language teaching strategies. Since the students are intensively or fully exposed to the target language, it allows students to reach the level of second-language proficiency quickly.

Nationwide research clearly shows that in general, English language learners who are in one and two-way immersion programs and are tested in English score at or slightly below national average by fifth grade in math and language arts. They, too, had the best outcomes when they continued in immersion through at least eighth grade. Most importantly, nationwide studies indicate that those students do better than their peers who are in not in immersion programs. Students who are in Chinese immersion program perform exceedingly well in both English and Chinese. By fifth grade, Chinese Immersion students score as well on English reading and writing tests as their peers in the English program (Minnetonka Schools). Furthermore, the Chinese immersion students continually perform better in Math than the non-immersion students.

A lot of parents probably would worry about the achievement gap, but the statistical evidence suggests that immersion programs actually reduce it, according to Met . Besides that, however much it might seem that more classroom time in English would help English language learners, there’s no evidence that transferring them from immersion programs to an English-only programs improves test scores. And as they move through school, English language learners in

immersion programs drop-out at a lower rate than English language learners in English-only programs. “More time spent learning English doesn’t necessarily improve performance,” Met (year) said.

Since China joined the World Trade Organization in 2001, the federal government has made Chinese language and culture an important educational investment. China's growing economic presence will only make Chinese Language more of a factor in a global economy. Currently, China holds the largest portion of American debt and is quickly becoming one of the world's economic superpowers. Not only that, Chinese is spoken by one-fifth of the world’s population and is the number one first-spoken languages. Learning Chinese will open many career opportunities for students who can acquire fluency.

### **Summary**

Statistics show that Chinese is one of the most difficult languages for English speakers. Besides that, Chinese is a tonal language, in which the same combination of consonants and vowels can be pronounced very different ways. It is much easier to learn that in earlier years, especially if parents choose to put their child in an immersion program. The younger they learn, the more authentically they can reproduce these sounds.

In my five years teaching in Chinese immersion kindergarten and two years teaching pre-k Chinese immersion, I definitely have seen a lot of advantages for children who go to an immersion program in an early age. Not only will the students learn about the language, but they will also learn about all the subjects in Chinese. They advance from zero Chinese language background to understanding, reading, speaking and writing in Chinese; it happens so naturally in a fully- immersed language environment. I hope my research will help make the transition as smooth as possible for young learners who choose to be in a Chinese immersion kindergarten. I

also hope to find more information on how to combine new technology such as Smartboard to create fun and engaging lessons for young learners.

### **Chapter Two Overview**

In this chapter, I will share more detailed information about teaching and learning in a Chinese immersion kindergarten class. This chapter covers three themes, which are learning in a Chinese immersion kindergarten class, student engagement in a Chinese immersion setting and useful Smartboard functions in teaching in Chinese immersion class.

## CHAPTER TWO: Literature Review

Technology plays an important role in education these days. Students like the interactive feature of technology tools such as a SMART Board. With wise use, SMART Board can make lessons more fun and engaging, especially for immersion programs, where visuals are really important. My research question is: *How to create SMART Board activities to engage students' learning in Chinese immersion kindergarten classes?*

In this chapter, I will share more detailed information about teaching and learning in a Chinese immersion kindergarten class. This chapter covers three themes: learning in a Chinese immersion kindergarten class, student engagement in a Chinese immersion setting and useful SMART Board functions in teaching in Chinese immersion class. I will look at researches that were done regarding Chinese immersion programs, young children' (5 or 6 year olds) characteristics and technology including SMART Board implementation in education, and their advantage in engaging students.

### **Learning in Chinese Immersion Kindergarten**

*Immersion history and types.* Language immersion is a technique used in bilingual language education in which two languages are used for instruction in a variety of topics, including math, science, or social studies. The concept of language immersion was introduced to North America during the 1960s with the founding of the first French Immersion program in Canada (Jacobson, 2013). The first immersion programs were set up in Quebec by Wallace Lambert, Richard Tucker, and other educators from McGill University in 1960s. It was a French immersion program that began in first grade. Since the majority language in Quebec is French, English speaking parents wanted to ensure that their children could achieve a high level of French as well as English in Quebec. The teachers only spoke French to native English speakers.

With students moving up to higher grades, the program added more English to their instruction. The first immersion program started from Quebec, and then throughout the country, and eventually, the world.

The first Chinese immersion school in the US was San Francisco's Chinese American International School, which was opened in 1981. San Francisco's thirty percent Chinese-American population was a major factor in its early success. Since then, there have been about one to three new immersion programs opened every year. Things stayed pretty steady until 2007, when there were fifteen new Chinese immersion program started that year, and another twelve new programs the next year. By the end of 2013, there were 147 Chinese immersion programs in the US. (Weise, 2014)

Minnesota is one of the only states that offers K-12 Chinese immersion programs. Yinghua Academy was the first Chinese immersion charter school in the United States and first Chinese immersion school in the Midwest. So far, there are five K-12 Chinese immersion programs in Minnesota:

- XinXin Academy, Hopkins School District
- Excelsior Elementary, Minnetonka Public Schools
- Scenic Heights Elementary, Minnetonka Public Schools
- Madison Elementary, St. Cloud Area School District
- Yinghua Academy, Minneapolis, MN, Charter School

(Confucius Institute, University of Minnesota, 2015)

As more and more language immersion programs were created, other versions of this structure were introduced. Some language immersion programs started later in school, and then

language immersion preschools were started. According to Center for Applied Linguistics (CAL, 2011), there are three types of immersion program: total immersion, partial immersion and two-way immersion.

**Total Immersion** – Programs in which all or almost all subjects taught in the lower grades (K-2) are taught in the foreign language; instruction in English usually increases in the upper grades (3-6) to 20%-50%, depending on the program.

**Partial Immersion** – Programs in which up to 50% of subjects are taught in the foreign language; in some programs, the material taught in the foreign language is reinforced in English.

**Two-Way Immersion** – Programs that give equal emphasis to English and a non-English language and in which one to two thirds of the students are native speakers of the non-English language, with the remainder being native speakers of English (Asia Society, 2012).

Immersion programs are also categorized by when students start the program. Early Immersion, when students start learning their second language at five years old or six years old; Middle immersion is when students start learning their second language around nine years old or ten years old; Late immersion: Students start learning their second language after the age of 11 (CAL, 2011).

***Immersion challenges.*** Chinese immersion might not be suitable for all the children or parents. Some parents prefer to have their children master English before learning a second language. Meanwhile, some students have talents in other areas instead of learning language. Choosing immersion program is a commitment, parents need to do good research before making a decision.

There have been issues of segregation, non-immersion students being pushed aside, non-immersion classes with too many learning disabilities weighing down teachers, and immersion programs getting treated to extra grant money (Rimington, 2014). Some schools emphasize the immersion programs and put more money in the program. The students also really pride themselves if they are in immersion programs. There is a social division between the immersion and non-immersion students. A lot of times, the children in immersion programs think they are better or more special than the non-immersion students. Besides that, students in immersion program are being labeled as “Chinese/French/Spanish...students”, which can cause segregation and superiority feelings as mentioned above (Rimington, 2014).

Another challenge the immersion programs face is that when the students move to junior high, the students might have difficulty in transitioning. For example, in junior high, math will be taught in English. It could be a big shock for some immersion students because the math vocabulary they have learned was all in another language. The issues happens in other courses such as science and social studies (Rimington, 2014).

Designing, implementing, and providing ongoing support for language immersion education is no easy task. Pressing challenges include staffing, curriculum development and program articulation. Program administrators struggle to find high-quality, licensed teachers who can demonstrate advanced levels of oral and written proficiency in the chosen language. Elementary-level challenges are met with additional secondary-level issues such as scheduling and balancing students' educational priorities as the program moves up and through the middle and high school years (Fortune, 2010).

Teachers from different cultures also need to be culturally sensitive during teaching. Take Chinese immersion teachers for example, most of the Chinese teachers are used to teacher-

centered classroom, they are more used to the “talk and chalk” teaching methods. However, US schools place strong emphasis on social skills and language for communicative purposes (Fortune, 2010). That means, teachers from China need to switch their mindset, and turn it to a student-centered teaching style. Provide opportunities for students to explore and experience.

Promoting student understanding of more abstract and complex concepts becomes increasingly difficult in the upper elementary grades and beyond (Fortune, 2010). This is because students’ cognitive level is more advanced than their second language proficiency. Fortune thinks that this challenge becomes more pronounced in programs where the immersion language is character-based, since literacy development is more time-consuming and demanding.

Last but not least, another big challenge for immersion students is to use the second language. Since the students tend to communicate in a language which their peers use, most of the time, they are still talking in English. How to promote the students to use the immersion language is an ongoing challenge for teachers (Fortune, 2010).

***Immersion Benefits.*** Research has shown that when students learn in an immersion program, they not only learn the language, but also the skills that helps them succeed. Language immersion has proven to be the best way for children to learn a second language (Asia Society, 2012). Studies show that studying a foreign language helps academic performance across subjects, narrows achievement gaps and enhances cognitive development.

Immersion programs help students to learn a second language with high literacy skills. While students are in the immersion environment, they are also culturally immersed, which helps them to learn to appreciate different culture and perspectives. Besides that, immersion programs also benefits student’s cognitive development. Students in an immersion environment become more flexible thinkers and excel at critical thinking and problem solving (Rebora, 2008).

When presented with a problem, they are able to look for more than one solution. Bilingual children develop the ability to solve problems that contain conflicting or misleading cues at an earlier age, and they can decipher them more quickly than monolinguals. When so doing, they demonstrate an advantage with selective attention and greater executive or inhibitory control (Fortune 2010). The mental stretch students receive in an immersion classroom helps develop their cognitive control, which allows them to have better focus, juggle multiple tasks, and adapt to changing conditions. By integrating second language learning and content, it also benefits students' social and cognitive development as language immersion doesn't just involve memorizing words but provides a full range of insight into a new culture, which improves skills like divergent thinking, mental flexibility, and adaptability (Asia Society, 2012).

In today's world, the ability to speak a second, third, or even fourth language, is a tremendous advantage. A study completed in 2014 at York University by Bialystok, Peets, and Moreno looked at the development of metalinguistic awareness in children becoming bilingual in an immersion education program. The researchers found that the metalinguistic advantages reported in studies of early bilinguals emerged gradually in these immersion children, with tasks requiring less executive control giving positive results sooner than tasks requiring more executive control. Thus, all immersion children outperformed their monolingual counterparts in the morphological awareness tasks, even after two years of immersion, and fifth grade immersion program children were more accurate in the syntactic awareness tasks than their monolingual counterparts (Grosjean, 2014)

Students who go to immersion programs not only can develop a high level of proficiency in the foreign language, but also a positive attitudes toward the relating culture. It is also beneficial to send children to immersion program when they are young, especially if it's Chinese,

which is one of the most difficult language for English speakers. Research shows that the human brain is more open to linguistic development in the years before adolescence, and when students start learning a language in elementary school and continue over several years, they can more easily achieve high levels of fluency than students who do not start a second language until high school (Asia Society, 2012).

The language proficiency acquired, longstanding and consistent research study shows that developing a second language at early age doesn't jeopardize basic schooling goals, high levels of English language skills, and academic achievement (Padilla, Fan, Xu, & Silva, 2013).

### **Student engagement in a Chinese immersion setting.**

*Characteristics of 5 and 6 year olds.* According to Piaget's theory, five and six year old children are in preoperational stage (Psychology Notes HQ, 2017). They are so engrossed in egocentric thoughts that they believe their views of the world are shared by everyone around them. They can't comprehend that there are other ways of looking at the world and interpreting information.

At this stage, most of the children have a significant development in their use of language. A child can make use of internal representational systems to describe people, his/her feelings and his/her environment. Symbolic play also evolves at this stage allowing the child to engage in pretend play using available objects to represent something else, such as a spoon being waved in the air to represent an airplane (Psychology Notes HQ, 2017).

Here are some common characteristics of five and six years old.

Five years old, overall, they think life is good. It is a time full of happiness. Five year old children are also experiencing a lot of changes, they may go from being cautious and compliant to uncertain and oppositional (Wood, 2015).

Socially, they like to help and follow rules, they want to be “good.” They need consistent rules and enforcement. They respond well to clear and simple expectations. However, they may also test or oppose adult authority or show uncertainty, for example, they might not be sure whether to be “good” or “naughty.” They need empathetic rules discipline as they test limits and make mistakes (Wood, 2015).

Physically, they need a lot of physical activity, including free play. They are better at control of running, jumping and other large movements. Five year olds are still awkward with handwriting, handcrafts and other small movement. Their pencil grip changes from three fingered to other grips. It’s hard for them to copy words from blackboard. They can read one word at a time. They are also able to see close objects best, but have challenged to sweep focus smoothly from left to right (Wood, 2015).

Cognitively, five year olds see only one way to do thing, rarely see other viewpoints. They are imaginative and believe toys and other objects are alive. They think literally, for example, they think “raining cats and dogs” mean cats and dogs are falling from the sky. Reverse letters and numbers are very common among them(Wood, 2015). Five year olds also like to copy and repeat activities, they also like to try more new activities. They often think out loud before acting, for example, they will say, “I’m going to move the truck” before doing it. They learn best by exploring materials such as blocks, clays, finger paints, rocks and shells.

Six year olds have a lot of energy. Their bodies, minds and social behavior are changing dramatically. Eagerness, curiosity, imagination, drive, openness and enthusiasm all are at their peak.

Socially, six year olds are competitive. They sometimes can be bossy or critical. They either rush to be first or dawdle to be last. They want to have friends, they can talkative and noisy. Six year olds enjoy dressing up, putting on plays, etc. with other children. Meanwhile, they are easily upset when criticized or discouraged. They love encouragement, surprises, and treats. They might test authority with tantrums, complaining or tattling (Wood, 2015).

Physically, six year olds often chew pencils, hair or fingernails, which could be due to the discomfort of new teeth growing in. Their bodies are growing rapidly, eyes are maturing, so reading is easier for them, but copying from blackboard is still hard for them. They like lots of physical activity, but they get tired easily and get sick often.

Cognitively, six year olds begin to understand past and present, and how and why things happen. They are more able to see other viewpoints and understand reasons for rules. They love new ideas and asking questions (Wood, 2015). Children at this age also learn well through games, poems, riddles and songs. They are so ambitious that they often choose projects that are too hard for them. They learn well from field trips and hands-on projects. They also like to do a lot of work, but not that concerned with the quality of work.

***How to engage 5 and 6 year olds.*** Knowing five and six year olds' characteristics can help educators design lessons that are engaging. Most kindergarteners are five and six years old. Kindergarten students typically have short attention spans and need to have physical movement on a regular basis (Wood, 2015). Thus, teachers need to design lessons with proper length mixed with activities and movements. Kindergarteners love to interact with teachers and peers, so it is

important to provide an interactive learning environment for them. They also love hands-on activities, experiential learning makes the classroom fun, and it can also reduce behavior problems. When young children have a positive experience in kindergarten, it helps them socially and academically.

Kindergarteners love to play games. Games are a great way to keep them engaged. They also learn better when the teacher create a real-world connection to what they are learning, which gives them a greater understanding of why and how it works. Kindergartners are also very interactive, educators can't expect them to sit still and take notes. Educators should provide opportunities for them to talk and interact with each other during lesson. Engaging them with hands-on activities is always an effective strategy (Cox, J). Last but not least, educators should integrate technology such as iPads or SMART Boards into teaching. Young children tend to expect everything should be fun, technology in a way meet their expectation. It's interactive and vivid. Fun visuals and functions can really draw their attention.

Furthermore, it is critical to establish a good student-teacher relationship, when students form close and caring relationships with their teachers, they are fulfilling their developmental need for a connection with others and a sense of belonging in society (Pino-James,2014).

***Strategies of engaging students in Chinese immersion.*** In early stages, immersion teachers know that students will not understand everything they say. Teachers use body language, visuals, objects, exaggerated facial expressions, and expressive intonation to communicate meaning. In kindergarten, it is common for students to speak English with each other and when responding to their teacher. As the years progress, students naturally use more of the immersion language. (Fortune and Tedick, 2003)

There are ways to engage students in a Chinese immersion kindergarten class when they just started to learn the language.

Using use visuals, gestures, body language, expressions, modeling, and movement to complement verbal cues (Livaccari). At some level, some of the verbal languages can be replaced by pictures, and body language. While using the visuals or body movements, the teacher should say the direction briefly, repetitively and consistently, which helps students connect the language and the visuals. It's also helpful to use videos for more complicated direction. Teachers can find videos online, or simply make their own authentic video according to what the instruction is.

Motivating students to stay in the target language (Livaccari). Knowing that expressive language comes later than receptive language, teachers should allow students and encourage students to respond to teacher prompts and questions in English if they are not yet able to express themselves in Chinese. This is especially important to kindergarten immersion students, because they are new to the language. As students get older, teachers should encourage more Chinese conversation in class.

Breaking down instructions to one at a time. For examples, teachers can break things down into steps, starting with the thing that needs done first (Greutman, 2016). It's important not only for teachers who teach in a regular kindergarten classes, but also for Chinese immersion students. Young children can't remember a long and complex direction. The effective way to do is to break up directions into small steps. Furthermore, the teacher should make sure the direction is given as brief as possible because this is a language that they are not familiar with. After that, repeat the direction again. If possible, the teacher can demonstrate the steps before sending the class for the task.

Asking open-ended questions (Livaccari). It could be challenging for beginning learners like kindergarten children. However, with time, teachers probably should steer clear of questions that elicit only “yes or no” answers. Instead, they challenge students’ thinking, nudging their higher-order cognitive skills and giving ample time to articulate each response. In immersion classrooms, it is especially important that teachers encourage students to give longer and more varied replies (Met & Livaccari). It will be easier for young students if you provide them with some vocabulary or sentence structure for them to start with.

### **SMART Board in teaching**

*Technology implementation in teaching.* Children have the expectation that everything should always be interesting, so “teachers must find ways to work the technology into their lessons without giving students’ leeway for distraction”(Ossola, 2014). With the development of digital technology, students’ expectations have changed; they want interesting things happen with very little effort from them, which makes them think that being a little bored is not normal.

Educational capabilities are growing and changing each passing day as a result of technological innovations. From the use of blackboards to the use of iPads , technology has become an important part of education. From the traditional blackboard (1860) to overhead projector (1930) , till now the first SMART Board was introduced in 1991 (Paddick, 2016). The interactive whiteboards has changed what the classroom is like in 2018. With the evolution of technology, educational capabilities are growing and changing every day. Take the Internet for example, it contains so much information that is available to educators and students, and both research and instruction can be achieved through a click of the mouse. However, as technology moves forward, educators should keep up with advancement and embrace them in teaching. Otherwise, how can educators prepare students for a real world full of technology?

***SMART Board functions in teaching.*** The SMART Board is an interactive whiteboard with an interactive touch screen technology that connects to a projector or computer. It is about the same size as a standard dry-erase whiteboard. The surface of the board is touch sensitive, much like the laptop touch pad used to move your cursor around a computer screen. The image of the connected computer is projected onto the surface of the interactive whiteboard, allowing you to see exactly where to touch the screen to accomplish a task. Smart Notebook software is included with the SMART Board and allows users to compile notes, images, and other media into virtual notebooks which can be projected and edited using the SMART Board itself. The nice part is, the SMART Board interactive whiteboard works with any program loaded or available on the host computer (Bouchillon).

The SMART Board can be used as a touchpad and writing surface. Once the SMART Board has been oriented, and the electronic pens and eraser have been placed in their proper locations, the surface of the SMART Board will act as a touchpad or writing surface. Teachers and students can simply single or double touch to operate, or pick up a pen from the tray to write things on the SMART Board (SMART Technologies Inc.).

Another commonly used function is to use the pens, highlighter, & eraser From the Board. (SMART Technologies Inc.). When an electronic pen is lifted from its tray, it allows teachers or students to write on the board with that color of electronic ink. In fact, as long as the pen is out of its tray, any object that you touch to the board will write in electronic ink, even with finger. The same is true of the eraser. It is especially interactive when inviting students to come up to the board to writing words, or Chinese characters with different fonts and colors.

In addition to Notebook software, SMART Board software includes many other tools such as SMART Recorder. It can record everything on the SMART Board interactive whiteboard,

which allows teachers to record things or lessons with a microphone and play the videos/audios to the class. Configurable Pen Tray Tools can customize the color, width and transparency of the digital ink produced by the pen tray styluses, which can be very fun to use in class (SMART Technologies Inc.).

***The advantage of using SMART Board in an immersion classroom.*** SMART Board enhances the teaching and learning effectiveness by the effect of “animation-on demand” in classrooms. This is basically a dual delivery of geometric concepts by texts, narrations and words accompanied by pictures, illustrations and animations (Leung, 2008). Meanwhile, teachers in immersion classes may find the SMART board a helpful tool. SMART Boards can help educators create an engaging learning environment, which gives educators more time to teach. Durán and Cruz (2011) have concluded that when the teachers used Smartboard technologies’ during their lessons, they were more liked by the learners as the learners marked those lessons to be thrilling and exciting and that learners were feeling more motivated. Yáñez and Coyle (2011) have explored that the learners’ perceptions of learning with Smartboard technology in the classrooms, they conducted a survey study that focused on an English language immersion classroom in a British primary school in Spain. The results of the study specified that children preferred to interact more with the Smartboard and that its’ properties were significant and engaging for the students particularly the non-native speakers.

So what’s the advantage of using SMART Board in an immersion classroom? What kind activities can the students do through using SMART Board?

Visualization. Because of the language obstacle, visuals are really important for students to understand the instruction. SMART Board provides the option for teachers to show anything from the connected computer, or they add their own images, videos, and other tools that are

specifically intended for the teaching purpose. It can provide students with an enriched learning experience by projecting visual elements (Cox, J)

Interactive. Research has repeatedly demonstrated that students learn best when they are fully engaged, and hands-on learning is one of the best ways to do that (Cox, J). SMART Board has a lot of functions to create games, which children really love. In immersion settings, games make lesson more fun and engaging, children don't even realize that they are actually learning by playing fun games. Teachers can find interactive games through internet and use them in the lessons. Besides that, teachers can also create their own games through SMART Notebook, which makes class very dynamic for young children.

- Recording and note taking. Brainstorming is a very common exercise in immersion class. Students brainstorm about new words, ideas and thoughts. It comes so easy for teachers to present them on the SMART Board and make them visible to the students. Teachers can add and delete any content accordingly.
- Accommodation. SMART Board can accommodate different learning styles. Tactical learners can use the screen and learn by touching and marking at the board, audio learners can have a discussion and visual learners can observe the teaching on the board (PLB).
- Enhance collaboration. For immersion teachers, especially Chinese immersion teachers, a lot of times, they need to create their own authentic lesson presentation by using SMART Notebook. By making lessons digital, it made sharing much more convenient. This is especially beneficial to new teachers because they can get well made lessons from experienced teachers (PLB).

## **Summary**

This chapter includes research on what to expect in learning in a Chinese immersion kindergarten class and the benefits in learning in immersion program. The chapter also covers student engagement in a Chinese immersion setting, such as five and six year olds characteristic and engaging strategies in Chinese immersion programs. Furthermore, in this chapter, you will also find research about useful Smartboard functions in teaching Chinese immersion class.

## **Remaining Questions**

During my literature review, I found a lot of research regarding the benefits of immersion program, and the benefits of using modern technology such as SMART Board. According to (Wood, Yardstick), five and six year olds (kindergarteners) learn well through games and activities. Smith et al. (2005) indicates the Smartboard play a significant role in positive approach and attitude of the learners because of its easiness of use and the flexibility. Moss et al. (2007) also has similar findings, which shows that both the teachers and learners in classrooms have generally favorable attitudes towards the use of the Smartboards technology. A majority of the subjects included in the study related their increase in interest and motivation with the improved quality of presentation of the educational content. However, these studies are based on the views of the teachers and learners and there is inadequate evidence to identify the actual impact of these technologies on the learners' motivation. Furthermore, there is a deficiency in research regarding how SMART Board can impact kindergartens learning in a Chinese immersion program. Modern technology is playing an important role in education. With wise use of tools such as SMART Board, immersion teachers, especially kindergarten Chinese immersion teachers can really benefit from them, and making a positive difference in engaging students.

This research paper aims to find activities and games that SMART Board can create to help Chinese immersion teachers in engaging students.

### **Chapter Three Overview**

In chapter three, I will include my research method, and my research role. Besides that, there will be information of the research background and the research design. The research will be focused on SMART Board implementation in Chinese immersion kindergarten class, and how it changes students' learning. During the research, I will adopt the qualitative method to collect data.

All the SMART Board activities and games used to collect data are created by myself. The data will help me with my research question "How does SMART Board to affect students' learning in Chinese immersion kindergarten".

## **CHAPTER THREE: Project Description**

### **Introduction**

In the previous chapter, there was research information about both immersion programs and SMART Board implementation in teaching, which serves as a theoretical lens that can help with my research. During the literature review chapter, I found abundant resources that show how technology makes a positive influence in students' learning and the impact of using SMART Boards in teaching in Chinese immersion kindergarten. My research topic is "How to create SMART Board activities to engage students' learning in Chinese immersion kindergarten?" The purpose of my study is to help educators, especially immersion Chinese teachers, understand the value of using technology, such as SMART Boards in teaching. I also want teachers to take advantage of the great potential of SMART Boards to make the first year of immersion kindergarten fun and engaging for students.

I decided to create a website that contains SMART Board activities which can be a resource for Chinese immersion teachers. I hope the resource will help teachers find ideas and activities for their lesson plans. I also think it will be a great platform for children to engage learning at home. I plan to use this website for my 2018-2019 school year, I will share it with my colleagues and students. The content of the website will align with the kindergarten Chinese immersion curriculum in my school district. I will include project description, research theory, choice of methods and timeline in the following content.

### **Setting and Audience:**

The setting of my project was a public school, which offers k-5 Chinese immersion programs. The school is located in the west metro area of the Twin Cities in Minnesota. The school district serves more than 10,000 students and 10 communities. It includes a preschool, six

elementary schools, two middle schools and one high school. There are also more than 3,000 nonresident students open enrolled in the school district. There are two schools that offer Chinese immersion programs in the school district. About half of all Kindergarten students enroll in Chinese Immersion and half enroll in the English Kindergarten program. All of the Chinese Immersion teachers are native speakers. The school district has had a strong connection with China and Chinese education. The school that I work for is the first schools in Minnesota to offer Chinese as a world language.

The population in my school is quite diverse. Most of the students are Caucasian. 83.3% kindergarten students had preschool experiences before going to kindergarten. 22.2% of the students attended Pre-K Chinese immersion programs. 16.7% students have either their mom or dad who understands or speaks Chinese. 77.8% students do not have any prior Chinese language knowledge when they came to kindergarten immersion.

### **Research theory**

Children have the expectation that everything should always be interesting, and they learn best when they are engaged. Teachers must find ways to work the technology into their lessons without giving students' leeway for distraction (Ossola, 2014).

Furthermore, Kindergarteners love to play games. Games are a great way to keep them engaged. That's why creating a website with SMART Board games could be very helpful to make learning more fun. Children tend to expect everything should be fun, technology is a way meet their expectation, it is interactive and vivid. Fun visuals and functions can really draw their attention.

Based on my research, I plan to create a website for audiences including Chinese immersion teachers, students and their parents who are interested in learning Chinese. After research on how to make a user-friendly website I found that one of the most important features for a website is optimizing the user experience. For example, using the standard task sequence is one of the keys to increase positive user experience. Users learn certain sequences of behaviors and perform best when they can be reliably repeated. For example, users become accustomed to looking in either the left or right panels for additional information. Also, users become familiar with the steps in a search or checkout process (Research-Based Web Design & Usability Guidelines).

### **Methods**

The method that I choose for my project was to create a website that contains SMART Board activities. The website can be very helpful to share SMART Board activities with immersion teachers, or for students and parents who are interested in engaging in fun and interactive learning after school. The website improves parent engagement in their child's learning in school. Parents can see videos of class projects. They can see pictures of their children's big achievements. This are kind of interaction can help parents become more involved in their child's teaching (Cooper, 2014). The website will be applied to use in the 2018-2019 school year. I also intent to share it with other Chinese immersion teachers in my school district.

### **Project description**

The website consists of three parts with activities that I created all by myself. All activities designed for this research were integrated with the curriculum. The math activities are aligned with Minnesota Academic Standards for Kindergarten: Standard 1: Recognize and sort basic two- and three-dimensional shapes; use them to model real-world objects. The Language

arts (Chinese) is focused on identifying high frequency words, which is one of the requirements in my school district for the Chinese immersion program. The health activity is focused on healthy and unhealthy food, which is also one of the units in kindergarten health curriculum in my school district. The goal is to teach students the skill of developing awareness of physical and emotional well being.

***Part 1: learning about shapes.*** Shapes are one of the important units that students need to learn in kindergarten. According to (Wood, 2015 ), five and six year olds (kindergarteners) learn well through games and activities. I created three different games for this unit. The first one is to choose the correct answer according to the shape. The second is matching pairs with the right shapes. The last one is to categorize shapes with real life objects on the SMART Board, such as what objects are circles and what objects are triangles (see APPENDIX A).

***Part 2: learning 15 high frequency Chinese words.*** Besides understanding and speaking Chinese, another goal for kindergarten students is to recognize Chinese characters. Students are required to learn 15 high frequency Chinese words (SEE APPENDIX B). The rationale for this part is because high frequency Chinese words are challenging for children to memorize. This is due to the fact that Chinese is not a phonetic based language. Naming the character requires students to engage in expressive language skills, which comes later than the receptive language skills. Meanwhile, students' cognitive levels are more advanced than their second language proficiency (Fortune, 2010). Fortune thinks that this challenge becomes more pronounced in programs where the immersion language is character-based, since literacy development is more time-consuming and demanding. Due to the challenge that Chinese immersion students face, I think integrating SMART Boards with lessons can make character learning much more fun and engaging.

Five and six year olds are competitive. Children at this age also learn well through games, poems, riddles and songs (Wood, 2015). I designed a racing game that students can pair up and play together, or the students as a whole class can play with me. The dice will roll to a certain name when you click on it, and you move according to the number and land on the character. The players are required to say the character they land on. The first to reach the last character wins. I also created another game which uses the “magic pen” and “eraser” function of the SMART Board. When students play this game, they use the eraser and gradually erase the color that covers the “secret character”. The students gradually use the eraser to “reveal” what the character is. To increase fun in this activity, we can see who can guess the character first (see APPENDIX C).

***Part 3: healthy and unhealthy food.*** With the development of digital technology, student’s expectations have changed; they want interesting things to happen with very little effort, which makes them think that being a little bored is not normal. One key advantages of using SMART Boards is that they are interactive and encourage active student participation. Teachers can invite students up, one-by-one or in groups, to use the board.(Forbes, L)

In this unit, the class will learn about healthy and unhealthy food. The SMART Board game that I created for this has varieties of food. Students need to choose the food and put it in the correct category (healthy food or unhealthy food). The fun part of the game is that if the students drag the unhealthy food and put it in the healthy food section, the food will be rejected. If the students choose correctly, the food will be dissolved (see APPENDIX D). It’s a very visual interaction design to help the students understand the differences between healthy and unhealthy food.

## **Project development**

In order to build a website, it is important to find a platform for my needs. There are a lot of platforms that provide website creation services. At first, I thought about finding a service in China since I want my website to have the Chinese language function. However, I also thought that my main audience will be in the USA. That's why I finally settled on finding a server here. Besides doing research myself, I also asked my friends and colleagues who have experience in creating websites. Wix was recommended that because it seemed to be more user-friendly. It allowed me to login with my current google account, which saved me time to register for a new username and password. After I successfully logged in, the first question I encountered was "what kind of website do you want to create?" Wix offers a variety of website options including business, online store, designer, restaurant and food, photography, accommodation, etc. I looked through all the categories and decided to use the website model geared for "community and education".

I chose a colorful background for the website because I wanted to deliver a fun experience to the audience. They can navigate through "home page", "SMART Board activities", "subject" and "contact us" functions. Since this website is going to be an ongoing project, I also set up a section where people can "chat" and share ideas with me.

## **Summary:**

In this chapter, I describe my project "How to create SMART Board activities to engage students' learning in Chinese immersion kindergarten" and the website I will create to aid in achieving this end. I stated the rationale of why making a website with SMART Board activities can be beneficial for students' learning. I make clear timeline of the capstone project and website.

### **Chapter Four Overview**

Chapter Four will present what I learned from making the website and connect my own experience with the literature review. I will discuss what my further ramifications and beneficial impact my project can have in the learning environment.

## **CHAPTER FOUR: Conclusions**

### **Introduction**

I have been teaching Chinese immersion kindergarten classes for 5 years. During my teaching, I found how important it is to make learning fun and effective for children. This is also the main reason why I chose my research topic “How to create SMART Board activities to engage students’ learning in Chinese immersion kindergarten?” My project is to build a website with SMART Board activities that can be used in my own classroom and shared with other teachers or parents. The website contains 3 parts, which are learning about shapes, high frequency Chinese words, healthy and unhealthy food. Each part will include some activities that I created, and designed to fit into the kindergarten curriculum in our school district. The purpose for creating this website is to engage students learning, sharing with colleagues to enhance collaboration and to encourage more parents involvement as well.

In this chapter, I will include project development, my personal growth, implications and limitations of the project, future research, and a conclusion. The research that was conducted for the purpose of this capstone throughout different content areas including Chinese Literacy, Math, and Health lasted about 8 weeks. The results gathered include the following:

### **Connecting the literature review**

The literature review in chapter two convinced me that children learn best when they are having fun. The technology available changes what education can be and do today in the classroom. During my research, I found that children have the expectation that everything should be interesting, “teachers must find ways to work the technology into their lessons without giving students’ leeway for distraction (Ossola, 2014). My own experience tells me that kindergarteners

love to play games. Games are a great way to keep them engaged. That's why I feel I need to create a website with SMART Board activities for them to keep engaging learning outside of schools.

From my literature review, I also found that five year olds are awkward with handwriting, handcrafts and other small movement skills (Wood, 2015). My teaching experience, supports this finding. A lot of kindergarten students have a hard time copying words, or gripping pencils. Thus, writing Chinese characters could be very challenging. However, that doesn't mean they can't learn or learn to write Chinese characters. SMART Board offers the possibility of simply using fingers to write characters with vivid colors rather than fine and small implements.

SMART Board enhances the teaching and learning effectiveness by the effect of "animation-on demand" in classrooms. It is basically a dual delivery of geometric concepts by texts, narrations and words accompanied by pictures, illustrations and animations (Leung, 2008). Those SMART Board features made it easier for teachers to engage students in kindergarten Chinese immersion classes.

Besides that, my literature review also described how SMART Board can help educators create an engaging learning environment. Durán and Cruz (2011) have concluded that when the teachers used Smartboard technologies' during their lessons, they were more liked by the learners as the learners marked those lessons to be thrilling and exciting and that learners were feeling more motivated. Yáñez and Coyle (2011) have explored that the learners' perceptions of learning with Smartboard technology in the classrooms, they conducted a survey study that focused on an English language immersion classroom in a British primary school in Spain. The results of the study specified that children preferred to interact more with the Smartboard and

that its' properties were significant and engaging for the students particularly the non-native speakers.

Research has repeatedly demonstrated that students learn best when they are fully engaged, and hands-on learning is one of the best ways to do that (Cox, J). SMART Board has a lot of functions to create games, which children really love. In immersion settings, games make lessons more fun and engaging, children don't even realize that they are actually learning by playing fun games. Teachers can find interactive games through the internet and use them in the lessons.

Last but not least, several researchers have shown that with the help of SMART Boards, students could be best involved during the lesson, thereby developing their personal and social skills, as well as creativity (Millum & Warren, 2014; Türel & Johnson, 2012; Yang & Teng, 2014). That said, the Smartboards have the potential to increase student enjoyment and motivation, and to provide more opportunities for student participation and cooperation (Torff & Tirotta, 2010; Turel, 2010; Türel & Johnson, 2012).

### **Personal growth**

From the experience of writing the capstone and making the website, I have a new understanding of how important it is to make plans before hand and change plans when on the fly when necessary.

I spent a lot of time on the literature review, the whole process was very time consuming. However, it helped me get a lot of great resources that are important to my capstone. Although I have my own teaching experience, when I looked at other research, I started to gain new perspectives on things. For example, I used to struggle dealing with students who have difficulty paying attention in class. After the literature review, I knew what to expect from students who

are five or six years old. I have a better understanding of what their characteristics are and what can help their ability to learn.

I have always had the idea of creating an online platform for Chinese immersion teachers to share resources. Thanks to this project, my dream can come true. In our school district, a lot of English language teachers or even Spanish immersion teachers have the ability to find activities online very easily. There are a lot of resources available online, such as Teachers Pay Teachers, or Pinterest. They contain a lot of great ideas and materials that can be used right away, which saves a lot of time in researching and preparing. As a Chinese immersion teacher, I know how hard it can be to find resources that we can adopt right away. I hope the website I make will contribute a little to Chinese immersion teachers, especially to those who are new

Furthermore, while during my research, I realized how important websites can be in forming a positive and engaging parent, teacher, student relationship. The website can be a platform to tie us together. I, as an educator not only provide teaching and learning in a school setting, but also extend that into the family. This delivers a message that learning never stops, it can also be fun and engaging.

### **Communication and sharing**

The website that I created will be shared among the Chinese immersion program teachers in my school during teacher workshop. I also plan to share this website to my 2018-2019 school year students and their parents, which will provide them a recourse if they want to engage learning after school.

### **Benefits of the project**

Chinese immersion programs are relatively new in the U.S. As a Chinese immersion teacher, I found it to be challenging to find the authentic resources which I can use in teaching. I have also seen the advantage that SMART Board can offer to immersion programs. It is interactive, fun and engaging. With these factors, I find it to be necessary to create a website that offers SMART Board activities of different subjects, which can be implemented into Chinese immersion educators' classroom. Besides that, I have also been asked to recommend online Chinese learning resources by students' parents. With this project being accomplished, I can also see the benefit for parents and students to use this website as a fun after school learning tool.

### **Limitation of the project**

While I was mostly content with my project, I still think there is room to make it better. One of the major concerns is that all of the activities require users to install SMART Board software. The website can be easily used in our own school, because each computer was equipped with this software. However, I doubt all the families have the access to that. The website will be very limited for low income families.

Since all the SMART Board activities are all authentic and created by me, the amount of resources that I could put on the website is limited. However, I regard it as a continuous project which I plan to keep working on in the future.

### **Implications of the project**

My research question is how to create SMART Board activities to engage students' learning in Chinese immersion kindergarten. The purpose of creating a website that contains SMART Board activities is because there are very limited online resources for Chinese

immersion teachers. This website is intended to provide a platform to share activities that can be adopted right away. It also offers after school learning opportunities for students and parents to engage in learning, which can create a positive learning environment at home as well as school..

### **Future research**

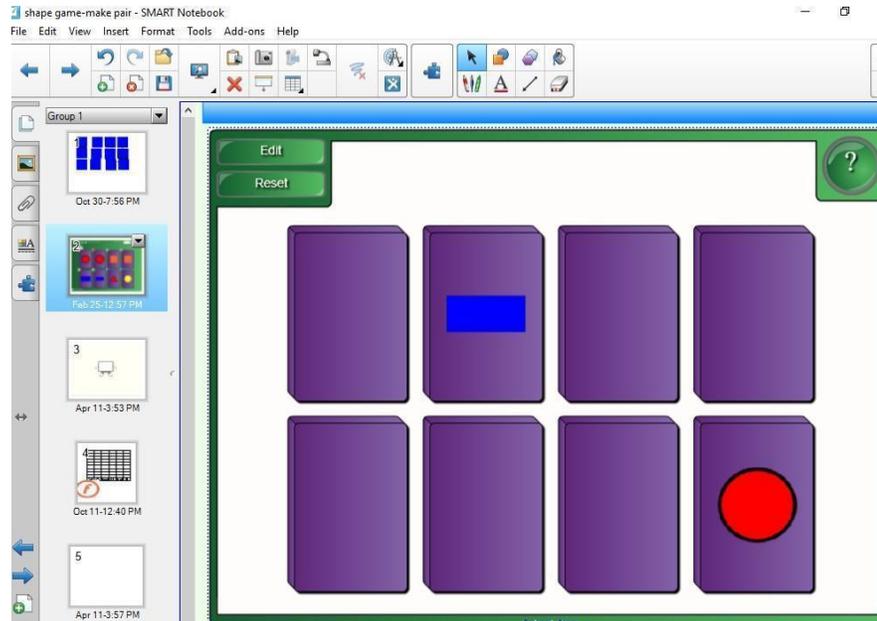
I will continue to collect more information about Chinese immersion students' learning in different content areas. In my current project and research, I included language arts, math and health in my website. For my further research, I plan to put other subject areas such as science, music or art on the website as well.

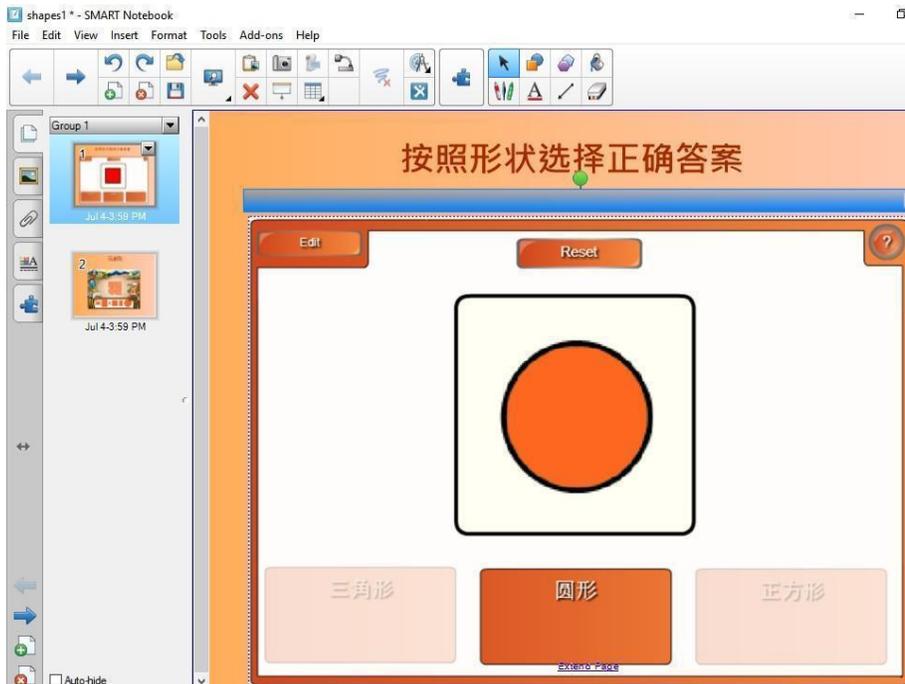
### **Summary:**

My research question is *how to create SMART Board activities to engage students' learning in Chinese immersion kindergarten*. The website I created is intended to provide an online platform to share resources with colleagues. It also can serve as an after school learning tool with families. Evidence shows that SMART Board greatly increases participation and engagement. It also brings the reserved students out of their shells. Dörnyei and Ushioda (2011) considers motivation as one of the major factor in the process of second/foreign language accomplishment. The Smartboard has transformed a typical classroom into a stimulating and encouraging learning environment (Hockly, 2013). I hope my website will extend learning from a regular classroom to any place and and any time.

# APPENDIX A

## Shape Unit SMART Board Activities



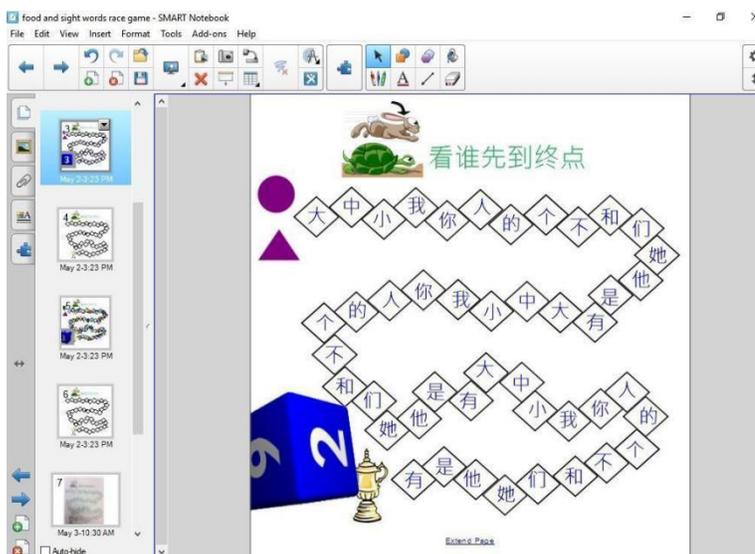
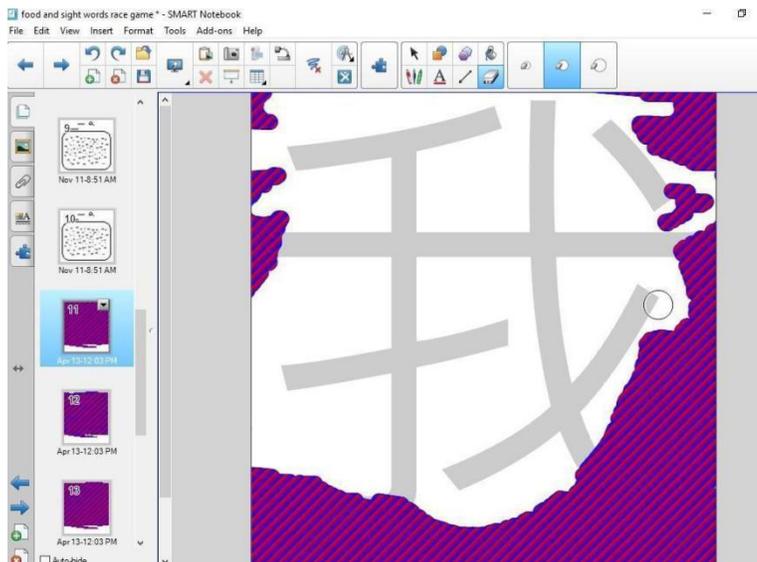


**APPENDIX B**

15 high Frequency words

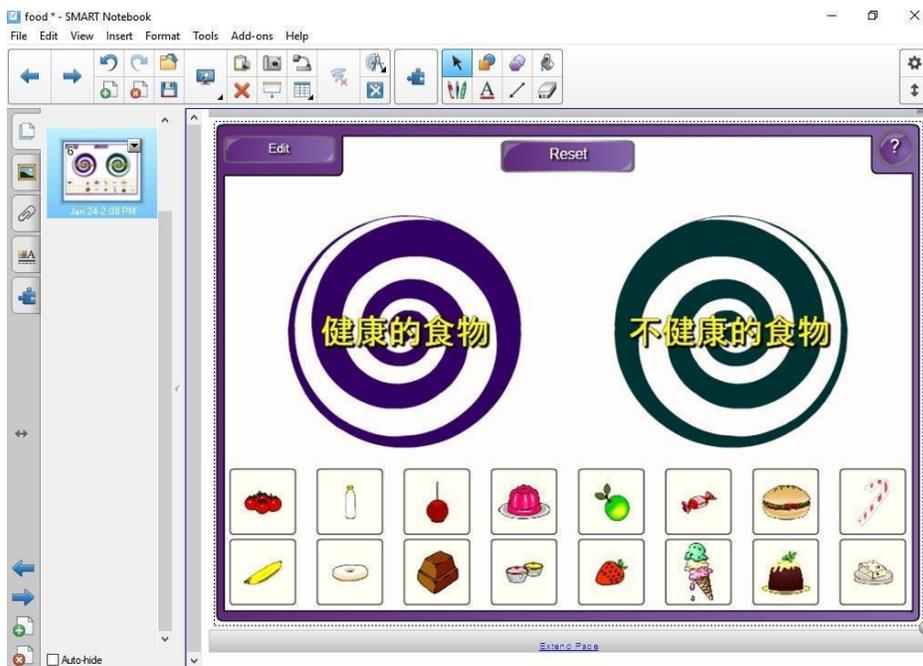
大	中	小	我	你	他	她	们	有	是	的	个	人	和	不
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## APPENDIX C



## APPENDIX D

### Healthy and Unhealthy Food SMART Board Activities



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