

Strategies for Effective Two-Way Immersion (TWI) Programs: A Chinese American Perspective

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Mandarin Chinese is the most widely spoken language in the world, approximately 1,075,000,000 speakers according to Ethnologue, 13th Edition and other sources (Factmonster, 2003). In comparison, there are 514,000,000 English speakers and 425,000,000 Spanish speakers around the world.

In 2001, the U. S. Department of Education provided more funding aimed at promoting international education and under-studied foreign languages; Chinese is considered an understudied foreign language in the US. Chinese immersion and bilingual education programs are also under-utilized as an innovating alternative public school education program in the states.

Literature on TWI education presents essential criteria for a successful program (Howard & Christian, 2002; Lindholm, 1990). Briefly, the curriculum design and instruction within a TWI program needs to consider providing 4-6 years of bilingual instruction, providing students with access to the district's academic core curriculum, generating an enriched environment to learn through as well as about the target language, scheduling sufficient instructional time for target language, offering additive bilingual environment for both languages, enhancing positive interactions among peers, such as cooperative learning strategies as well as recruiting a balance of students from the target and English language backgrounds in all instructional activities.

There are ways to enhance advocating parents, teachers' and administrators' ability to incorporate such essential criteria to establish a successful TWI program with meaningful curriculum and instruction. In this article, I share the six strategies, which I have field-tested across various contexts involving teachers' professional development (Chang, 1999; 2001a; 2002a). Cross-language and cultural studies also highlight the six strategies and possess the features of universal design for learning in supporting a wide range of teachers and their students in various cross-cultural contexts. With each application of these six strategies, I gain new insights and confidence that these strategies are meaningful and robust for teaching transformation that is critical to yield the fruit of educational innovation.

To ground the six strategies to support TWI program, I incorporate my fieldwork and cross-cultural studies conducted among Chinese children and teachers in Northern California and Taiwan, as shown in Part I: Background Information. In Part Two, I present the six strategies contextualized for developing and sustaining dual language and literacy development for the TWI program, particularly for a new Chinese TWI program.

Background Information

Parents play an important role in promoting and supporting TWI education. San Francisco Parents for Immersion Education first recruited me in 1994 to develop assessment rubrics to align Chinese reading development for K-8 Chinese immersion programs. Back then, I was working closely with Mary Jew, who was then employed by San Francisco Unified School District and was a pioneer in the development of the immersion programs; she is now the Director of Instruction at Cupertino Union School District. Much of my approach to designing assessment rubrics and optimal reading-language arts instruction for Chinese immersion and bilingual programs were based on the cross-language reading research initiated in the late 1980s working with Drs. Robert Rueda, Ovid J. L. Tzeng and Daisy L. Hung when I studied Chinese-Mandarin speaking children's reading processes in Taiwan (Chang, Hung & Tzeng, 1992). I also conducted a reading study among Mandarin-English bilingual children in Singapore and worked with Dr. Lee Wei-ling to address bilingual reading issues (Chang, 1995; Hung, Tzeng, Lee, & Chang, 1994). Early Chinese reading development differs from the English alphabetic writing system up to the word recognition level due to orthographic effect (Hung and Tzeng, 1981). However, beyond word identification level, both groups of readers in Chinese and English writing systems engage in similar processes to construct meaning from print.

Through subsequent research projects funded by the U.S. Department of Education, I was able to study Cantonese-speaking children's reading and school performance in Northern California for several years. Through field observation and research, I concluded that there was a critical need to study school-based professional development activities to assist teachers in adopting innovative teaching-learning practices to address the needs of second language learners. I have since conducted cross-cultural professional development projects in Northern California and Taiwan to

facilitate teachers' transformation in teaching, learning, and assessing student performance impacted by educational reform. The six strategies I present in this article were first conceptualized and field-tested in my San Jose-based 3-year professional development project funded by the National Center for Research on Education, Diversity and Excellence (CREDE) (Chang, 2002b). The project design was again implemented in a multi-year project funded by the Ministry of Education in Taiwan to support four elementary and five junior high school teams between 1998-2001 (Chang, 1999; 2001b).

Six Strategies for Meaningful Curriculum and Instruction of TWI Programs

The birth of a Chinese TWI program is both exciting and challenging. It often originates from parents' initiative and persistence (Chang, Huang, Mao, Ma, & Montgomery, in press). Once a program is established it takes tremendous amounts of collaborative effort between parent groups and school administration to support the teachers and students of the fledging TWI program. To do so, the six strategies, supported by two theoretical frameworks, provide the tools to strengthen the joint effort to incorporate the three areas of essential criteria for a successful TWI program.

The first framework is CREDE's sociocultural theory of education, informed by Vygotsky (1978). CREDE has proposed Five Standards for Effective Pedagogy (Dalton, 1998; Tharp, Estrada, Dalton, & Yamauchi, 2000) as vehicles to assist learners within their Zone of Professional Development (ZPD). The second framework, Howard Gardner's theory of multiple intelligences (Gardner, 1999a; 1999b), provides three approaches to teach for understanding, namely, meaningful entry points, metaphor/analogy, and multiple representations of core ideas to help students obtain in-depth understanding of big ideas.

The First through Fifth Strategies are based on CREDE's Five Standards for Effective Pedagogy, and the Sixth Strategy is informed by the theory of MI. I have used the metaphor of a graphic scaffold to show the relationship of the six strategies in assisting learner performance within his or her ZPD based on my previous research (Chang, 2001a; 2002a). However, without the background knowledge of Vygotsky's ideas about the ZPD, the graphically presented scaffold-as-a-metaphor (see Figure 1) will not make much sense to some readers; at least, this is what I learned from some of my students in credential programs.

To help explain the scaffold graphic presented in Figure 1, let's compare the function of a scaffold and a ladder to constructing a building in the community and assisting learner performance in school.

In reality, the ladder cannot construct a building alone; in the context of schooling, the ladder metaphor describes a traditional self-paced course of study using step-by-step programmed books or worksheets where the learners rarely participate in any interactions with their teachers or peers on a regular basis. Dual language-literacy development in a TWI program demands frequent interaction between teacher and students as well as among peers. Hence the scaffold metaphor is used to provide teachers with an image and reminder that there are at least six strategies, together offering solid support for student learning in daily teaching and learning practices.

Strategy 1: Engage in joint productive activities to realize TWI's common goals

CREDE Standard 1: Joint Productive Activity (JPA) is characterized by working together to produce a shared product that can be tangible and/or intangible. This strategy highlights the need for teachers to interact and work jointly to

yield tangible products, such as integrated learning units guided by the contents standards for language arts and social studies. JPAs may also yield intangible products, such as a respect for everyone's multiple abilities and contribution or a willingness to support each other. No one person or one group may achieve all such goals, so JPA is the foundation for effective TWI programs.

I have been invited by principals and teachers to convince Chinese parents that cooperative learning is one of the important instructional activities in their child's classroom. Repeatedly, many parents told me that they do not value cooperative learning activities because their child was often the only group member to complete a group project that would meet all the requirements. To help

teachers distinguish what constitutes a JPA, I used two metaphors, volleyball team vs. relay team, to differentiate a true JPA team from a loosely used term, cooperative learning activity. JPA is like a volleyball team because during the match everyone plays offense and defense as a team, touches the ball, and communicates with one another all through the game. In a relay race, team members run only part of the entire race and have little communication with one another during the race. When promoting peer interactions, JPA will produce a desirable tangible and/or intangible product.

There are ways to enhance advocating parents, teachers' and administrators' ability to incorporate such essential criteria to establish a successful TWI program with meaningful curriculum and instruction.

Strategy 2: Develop clarity and competency in dual languages and literacy across integrated curriculum for meaningful TWI Education

CREDE Standard 2: Language & Literacy Development Across the Curriculum (LLD) informs the community of teacher researchers about the importance of addressing professional language, terminologies, and jargon associated with TWI education. Strategy 2 also applies to specific effective pedagogy that promotes second language learning through active listening, modeling, probing, eliciting, restating, rephrasing, elaborating, and clarifying within appropriate contexts. It is important for teachers to connect student's language with content knowledge and literacy through daily listening, speaking, reading, and writing activities. Having a balanced ratio of children from both Chinese and English backgrounds will provide language models in dual languages. It is best achieved by building a JPA team with a common goal of generating peer interactions through meaningful JPA within and beyond the classroom.

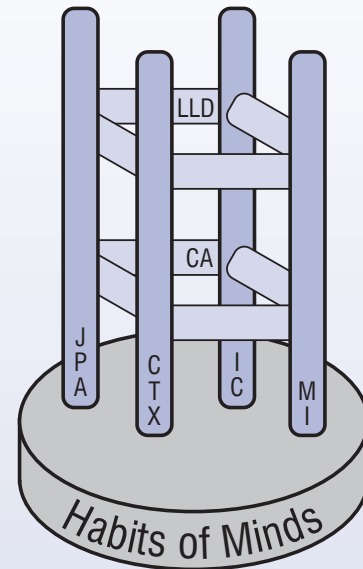
Strategy 3: Connect TWI curriculum and instruction to students and community's lives to promote dual language and literacy development

CREDE Standard 3: Contextualization (CTX) or making meaning, emphasizes the need for the community of teacher researchers to initiate meaningful entry points that are grounded in the lives of students and family. Contextualization also assists teachers in the meaning-making process by accessing students' schema; address knowledge gaps, if any, and helps them connect old with new knowledge. Strategy 3 plays an important role in the design of integrated social studies and language arts units, and a key component in the design of Chinese TWI curriculum. Concerned parents and administrators wanting to hire a curriculum developer/writer to create textbooks for Chinese TWI programs often approach us. No textbook can truly define an educational program, and no single set of textbooks can meet the needs of diverse groups of children in a TWI program. Together with Strategy 3, we will be able to design meaningful curriculum and instruction, even by inviting students into this curriculum-instruction development process.

Strategy 4: Design meaningful and challenging activities to foster higher order thinking skills (HOTS) to strengthen dual language and literacy development

CREDE Standard 4: Challenging Activities (CA): Teaching Complex Thinking helps the community of teacher researchers monitor closely their daily lessons to always advance students' understanding to a higher cognitive level. This strategy should be a trademark of Chinese TWI education in this country because much of the traditional schooling in Taiwan and China tend to emphasize the rote learning of facts that can be regurgitated and tested through written examinations. To help teachers fully master Strategy 4, I have immersed them in using and developing the sixteen habits of mind (Costa & Kallick, 2000); that is a set of intelligent behaviors that will help individuals address uncertainty and solve problems effectively, such as persisting, taking reasonable risk, thinking interdependently and flexibly, or applying old knowledge in new situations, etc. Throughout the last

Figure 1:
Habits of mind as the foundation for teachers' use of Six Strategies



few years, we have also introduced such concepts and practices to teachers in Taiwan (Chang, 2001c). Based on field work, I learned that for teachers to apply the six strategies in their daily practices, they need to first apply productive habits of mind in solving problems, addressing challenges, and engaging in JPA teams, etc. Therefore, I inserted a foundation below the scaffold graphic (See Figure 1) to remind teachers that only through a careful monitoring of the set of habits of mind will we be able to guide our effort to incorporate the six strategies in our daily work.

Strategy 5: Conduct small group-based instructional conversations to assist second language learners within their ZPD for dual language and literacy development

CREDE Standard 5: Instructional Conversation (IC) is CREDE's signature pedagogy to remind the community of teacher researchers that they must engage each other in respectful two-way or multi-way conversations within small-group based JPA to reach a shared understanding about specific topics, practices, and expected outcome as well as to facilitate professional development. In a TWI classroom, everyone is likely learning a second language, so teachers must always be cognizant about the different functions of teacher-led whole class discussion and small group based IC. Reaching a shared understanding about the role of IC in dual language and literacy development among TWI teachers is important.

Among CREDE researchers, we also discuss and share each other's perspective on the role of IC in reading comprehension and professional development. In a series of recent email discussion, CREDE Director Roland Tharp stated that while a whole class discussion can be personally gratifying for teachers or meeting some instructional needs, such

discussion rarely enable teachers to "work[ing] sensitively in the ZPD for each student, offering opportunities for participation, assessment, and assistance...Whole group has an entirely different agenda from IC. The theory is clear, the research is clear: IC adds the responsive assistance that rouses the minds of students to life. It happens like that in families, and it can happen in classrooms..." (R. Tharp, email message, June 10, 2003). Strategy 5 is the key for teachers to rouse students' minds to develop dual language-literacy competency.

Strategy 6: Use the theory of MI as tools to foster teaching for in-depth understanding for dual language and literacy development

The concept of using MI as tools was grounded on two sources. The first is the study of 41 schools using MI, led by Kornhaber and her associates at Project Zero (Kornhaber, Fierros, & Veenema, 1998). Using MI as tools to achieve educational goals was one of the common characteristics among all these schools. The second source is Gardner's (1999a) own proposal to direct educators and teachers in using three approaches to enhance teaching for understanding. The theory of MI has also attracted attention of teachers, administrators and professors in Taiwan like wildfire in recent years (Chang, 2000b; 2000c). However, I learned from teachers' reflections that one of the perceived obstacles for MI-informed assessment and instruction practices is the habitual need to adhere to grade-level unifying examinations to rank students and classrooms among many teachers, administrators, and parents in Taiwan. Hence, JPA and habits of mind are critical in providing students with opportunities to immerse in multiple pathways and multiple expressions to develop dual language and literacy.

In conclusion, promoting teaching effectiveness within a TWI program requires ongoing professional development as well as seamless administrative, collegial, and parental support and understanding because the inherited challenges more than regular education programs (Howard & Christian (2000). Although challenges abound having compassion and collegial support are crucial to the success of any program. The six strategies proposed here will help yield such sustained support for teachers and students in a TWI program. ●

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