Alternative Assessment and the Teaching of Mandarin Chinese to Elementary School Students in Multilingual Singapore

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Abstract

This study examined the feasibility of introducing alternative assessment into the teaching of Mandarin Chinese as a quasi second language at the elementary school level in linguistically heterogeneous Singapore. Drawn upon the ideas from the communicative language teaching theory, the framework of authentic intellectual work, the revised Bloom’s taxonomy of knowledge, and the principles of alternative assessment, we developed five criteria for authentic intellectual quality. The criteria served as guidelines for the teachers to design and implement alternative assessments in Mandarin Chinese. The findings showed that the implementation of alternative assessment could result in improved students’ engagement and interest in learning as well as higher quality assessment tasks and student work. Moreover, teachers’ attitudes toward alternative assessment became more positive.
Objectives of Inquiry

Singapore is a small multilingual city nation in Southeast Asia which mainly consists of three major ethnic groups: Chinese (76.8%), Malays (13.9%), and Indians (7.9%). Ever since its independence in 1965, Singapore has been adopting a bilingual policy of “English (as the first language) and a mother tongue language (as a second language)”. The respective roles of the English language and the mother tongues languages (Mandarin Chinese, Malay, and Tamil) in Singapore multilingual society are well-defined in a speech given by Senior Minister Goh Chock Tong in 2004:

The Singapore Government has made the bilingual policy the cornerstone of our education policy. The objective is for our people to communicate with the world. English is our common and working language. It is also the language of commerce and international interaction. Learning the mother tongue is necessary to preserve our culture and retain our roots (Goh, 2004).

According to this policy, the mother tongue education aims to maintain the country’s traditional Asian value system and identity. With the emerging of regional economic powers such as China and India, the potential economic value has become another incentive for the government to encourage its younger generation to put more efforts in learning their mother tongue languages.

The English-dominant bilingual policy has contributed greatly to the economic wonders and social development in Singapore over the past two decades but it has also posed some problems for the learning of mother tongue languages. One of these problems is the overall low motivation in mother tongue language learning and the tendency of deterioration of mother tongue proficiency among its people. To improve this situation, continuous efforts have been made over the past four years. For example, the Chinese teaching curriculum for elementary school students has been revised by the Ministry of Education; new teaching materials have been introduced; and new pedagogies are being tried out. Nevertheless, the assessment system remains unchanged and teachers’ classroom assessment practices were driven by the high-stakes examination (Primary School Leaving Exam, PSLE) at grade 6.

Based on the analysis of 92 Chinese assessment tasks in grades 4 and 5 that we collected from 14 elementary schools over the 2005-2006 school year, we found that 76.4% of the item-types employed in the assessment tasks were for the purpose of assessing students’ discrete linguistic knowledge, that is, the command of Chinese characters, phrases, and sentence-making. In other words, the assessment tasks were basically form-focused. Broader features of discourse, sociolinguistic rules of appropriacy, and communication strategies (Savignon, 1991, p. 269) were absent from the assessment tasks. From the results, we can see the traces of behaviorist theory of learning in Singapore classrooms. The assessment and teaching of Mandarin Chinese emphasizes drill and practice of basic linguistic knowledge and principles. The assessment tasks seldom engaged students in higher-order thinking, real-world problem solving, and extensive communication. There was a lack of opportunity for students to be exposed to authentic language use in their learning of Mandarin Chinese.

The slow pace in assessment reform, to a certain extent, has undermined the effects of reforms in other aspects of mother tongue teaching as the reform in assessment is believed to be able to pull along the reforms in curriculum and pedagogy (Bernstein, 1990). Prior to assessment reform, teachers need to be empowered to change their assessment practices. It is of paramount importance to build teachers’ capacity to design and implement alternative assessments so that they can incorporate this new form of assessment into the teaching of
Mandarin Chinese. The use of alternative assessment is believed to provide students with more opportunities to engage in authentic language use. As a new initiative to change the teachers’ assessment practices in Singapore schools, the objectives of this study were twofold: (1) to examine the feasibility of introducing alternative assessment into the Mandarin Chinese teaching in elementary schools, and (2) to determine the effects of alternative assessment on the teaching and learning of Mandarin Chinese.

**Theoretical Framework**

The theoretical framework for this study is drawn upon the communicative language teaching (CLT) theory, the “authentic intellectual work” framework (Newmann & Associates, 1996), the revised Bloom’s knowledge taxonomy (Anderson & Krathwohl, 2001), and the principles of alternative assessment.

According to CLT, the ultimate goal of language teaching is to develop learners’ “communicative competence” (a term coined by Dell Hymes), which consists of four components: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence (Canale & Swain, 1980). Although the definition of communicative competence has later been developed by scholars such as Bachman (1991), the main idea is still that grammatical knowledge (or competence) is a necessary but not sufficient criterion for learners to acquire authentic communication skills. Hence, language assessment should not focus on only the assessment of learners’ discrete grammatical knowledge. The focus needs to be also on assessing authentic use of language through complex, higher-order, and real-world tasks.

To fully develop learners’ communicative competence, teachers need to use supplementary assessment methods. That is when alternative assessment comes into play. Despite the various definitions of alternative assessment, the core idea is that teachers need to move away from multiple-choice items or standardized tests and move toward learner-centered assessments that rely on student-generated responses (Veronesi, 1997). Brown and Hudson (1998) have made a comprehensive list of the features of alternative assessments based on their review of language assessment literature. The four most salient features are: (1) to emphasize the concept of “use” and students should perform, create, produce, or do something, (2) to emphasize the connection between classroom learning and the real-world contexts, (3) to emphasize intellectual challenge or higher-order thinking skills and problem-solving skills, and (4) to advocate for teachers to assume new instructional and assessment roles.

Following the Newmann framework of “authentic intellectual work”, we contend that teachers’ assessment tasks should give students opportunities to demonstrate their higher-order thinking, real-world problem solving, and communication skills. In this study, five criteria for authentic intellectual quality were used to guide teachers design their alternative assessments in Mandarin Chinese. The five criteria were depth of knowledge, knowledge criticism, knowledge manipulation, sustained writing, and connections to the real world beyond the classroom.

Under depth of knowledge, we conceptualized three types of knowledge: factual knowledge, procedural knowledge, and advanced concepts based on the revised Bloom’s knowledge taxonomy (Anderson & Krathwohl, 2001). Higher-order thinking is captured by two criteria, namely knowledge criticism and knowledge manipulation. Knowledge criticism is
exemplified by tasks that ask students to compare and contrast different sources of information and to critique knowledge whereas knowledge manipulation is exemplified by tasks that demand students to organize, analyze, interpret, synthesize, and evaluate information; to apply knowledge and skills; and to construct new meaning or knowledge. In line with Newmann et al.’s “authentic intellectual work” framework, sustained writing and connections to the real world beyond the classroom were also included.

Methods
In 2006, we started a two-year longitudinal intervention project on introducing alternative assessment into the Mandarin Chinese teaching in two elementary schools. The participants involved 12 Chinese teachers and 397 fourth grade students who came from Chinese-speaking families or who chose to learn Mandarin Chinese as their second language. The intervention has four phases, each lasts for one semester (about five months). Our intervention follows a model which is similar to what Guskey (2002) has proposed for teacher change through professional development. For each phase of the intervention, three procedures were followed: (1) we taught the teachers the principles of alternative assessment as well as the criteria for authentic intellectual quality and rubric design, (2) we helped the teachers design their own alternative assessment tasks and rubrics, with feedback given by the assessment specialists and content experts, and (3) we asked the teachers to review their assessment tasks and rubrics prior to the implementation of the assessment. The problems arising out of the implementation were addressed by the researchers and teachers during the monthly professional learning community meetings at the schools.

In order to examine the effects of the alternative assessment on students’ engagement and interest in learning Mandarin Chinese, we administered a pre-questionnaire before the intervention and a post-questionnaire after the intervention. Likewise, changes in teachers’ assessment practices and their attitudes towards alternative assessment were investigated by administering a pre-questionnaire before the intervention and a post-questionnaire after the intervention. Artifacts of conventional assessment tasks used by the teachers before the intervention and those of the alternative assessment tasks designed and implemented by the same teachers during and after the intervention and the corresponding student work samples were collected and scored using the authentic intellectual quality (AIQ) criteria. All criteria were scored on 4-point scales (ranging from 1 = no requirement/no demonstration to 4 = high requirement/high level).

Results and Discussion
Our preliminary analysis of the data shows encouraging results in terms of the improvement of students’ engagement and interest in learning Mandarin Chinese. Due to the implementation of alternative assessment, students were found to be more engaged in the learning of Mandarin Chinese and were more confident to make presentations in front of an audience. Students completed their work more carefully due to the interest in the assessment tasks as well as the competition spirit embedded in the new tasks. They also reported that they learned more about the Chinese culture.

After a year of participation in the project, the teachers reported that they have obtained a better understanding of alternative assessment practices. An analysis of the quality of their assessment tasks before and after the intervention reveals that the assessment tasks designed by the teachers after the intervention focus less on factual knowledge and knowledge
reproduction. Rather, they have increased authentic intellectual demands by designing assessment tasks that required students to demonstrate their understanding of advanced concepts through the authentic use of language in the contexts that mirror the real-world problems (e.g., making presentations to an audience). The assessment tasks were more relevant to students’ real life experiences. Students were given more opportunities to engage in the application of linguistic knowledge, higher-order thinking, and authentic communication. The mean scores on the following authentic intellectual quality criteria have increased after the intervention: advanced concepts, knowledge critique and application, construction of new knowledge, sustained writing, and making connections to the real world (see Appendix 1). In other words, the teachers have made considerable progress in designing and implementing alternative assessments in Mandarin Chinese.

The student work samples demonstrated better authentic intellectual quality after the intervention. The mean scores of the following AIQ criteria have increased: advanced concepts, knowledge critique and application, construction of new knowledge, sustained writing, and making connections to the real world (see Appendix 2).

One thing worthy of particular mention here is the change in teachers’ attitudes. At the very beginning of the project, most of the teachers involved were very doubtful about the relevance of alternative assessment to their daily teaching practices. They were very concerned about the possible negative effects of alternative assessment on students’ performance in the school exams. By the end of the second phase of the intervention, however, they began to show greater interest in alternative assessment. They realized that alternative assessment can achieve what conventional assessment cannot easily achieve. More importantly, they began to conduct critical reflections on their own daily assessment and teaching practices.

**Educational Importance**

The findings of this study indicate that introducing alternative assessment into the teaching of Mandarin Chinese is feasible at the elementary school level in linguistically heterogeneous Singapore. It can achieve what conventional assessment cannot achieve in terms of enhancing learner engagement and interest as well as offering opportunities for students to use the language for authentic purposes. More importantly, through designing and implementing alternative assessments, teachers will have a greater opportunity to reflect on their own teaching and assessment practices. The implementation of alternative assessment yields higher authentic intellectual quality for both teachers’ assessment tasks and student work. The findings we have reported here, though preliminary, may give insights into the teaching of Mandarin Chinese (or other mother tongue languages) as a second language in a context which is similar to that of Singapore.
References


Appendix 1

![Bar chart](chart1.png)

**Figure 1a.** Comparison of AIQ Mean Scores of Assessment Tasks

![Bar chart](chart2.png)

**Figure 1b.** Comparison of AIQ Mean Scores of Assessment Tasks
Appendix 2

Figure 2a. Comparison of AIQ Mean Scores of Student Work

Figure 2b. Comparison of AIQ Mean Scores of Student Work