

# **PROPOSAL**

## **Discussions on the Future and Needed Supports for Teaching Mathematics in Chinese Bilingual Programs In Alberta**

Submitted by:  
Confucius Institute in Edmonton

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## **Rationale:**

This proposal is designed to provide an opportunity for teachers and administrators to discuss the present situation of teaching Mathematics in Chinese, in the Chinese bilingual programs in Calgary and Edmonton. The discussion will identify issues and provide for direction in the creation of strategies to improve the implementation, as well as to identify and address other concerns associated with this instruction.

## **Background:**

Elaine Schmidt of CBE, raised the need to have a group of teachers and administrators discuss the current practice involving teaching mathematics in Chinese in Chinese Bilingual programs.

This practice has been implemented in EPSB and CBE for several years. In Edmonton Public Schools it is carried on in the five elementary schools offering Chinese Bilingual programming and one junior high in Edmonton currently uses this approach.

In CBE it is intended that all elementary and junior high schools offering Chinese Bilingual education, will be consistent in the program offering and thus will all engage in teaching Mathematics in Chinese. This ensures instructional time in the language and also provides assured opportunity for students to learn in the language as opposed to just learning the language.

The practice of using mathematics as a target subject for expanding time in the language was started only after considerable research and consultation with the language Research Centre of the University of Calgary.

To date students who are learning mathematics in Chinese continue to score well above the provincial and district averages on Provincial Achievement Tests in mathematics, demonstrating no negative impact from the practice in terms of mathematical achievement.

## **Issues that have been expressed that are in need of being addressed:**

The implementation of mathematics continues to be associated with some challenges that have been identified:

1. **Parent perception:** Some parents continue to express the view that they do not feel students learning mathematics in Chinese are properly learning the math skills and math vocabulary they will need in later years. This causes some to be concerned and others to desire to withdraw students from the Bilingual program at the end of grade 6.
2. **Teacher acceptance:** There remain some among the teachers of Chinese who feel the approach is not appropriate, and do not see the need for mathematics to be the subject for teaching Chinese as opposed to other subjects. This despite the large

amount of research that was provided showing that neurolinguistic research supports this approach.

3. **Teaching strategies:** There appears to be concerns that some teachers are in need of training or professional development in learning new approaches for teaching mathematics and /or teaching mathematics in the bilingual target language.
4. **Teaching Resources:** Resources that can support the teaching of mathematics in Chinese exist in the elementary program, although they are not widely applied, or felt to be the most useful. In junior high there have been no suitable resources identified, and teachers are making up their own supports.
5. **Should mathematics continue to be a subject of the target language in Division III and IV?** To this end there are issues of teacher training and capacity, as not all current teachers of Chinese feel adequate to teach mathematics in the secondary level. Schools are not staffed so as to provide for Chinese speaking teachers with this expertise.

### **Proposal:**

The Confucius Institute in Edmonton submits for discussion the following proposal which would be used first to:

1. Better define and identify the issues common to the Chinese Bilingual programs of Edmonton and Calgary related to the teaching of mathematics in Chinese.
2. To suggest initiatives or strategies that could be designed into a project(s) to best address the most pressing concerns.

The Confucius Institute would design a budget request to Confucius Institute Headquarters with the purpose of providing support to enable the above to transpire.

Subsequently, the Confucius Institute in Edmonton, assuming agreement of the Consortium, would submit a budget request to Confucius Institute Headquarters that would contribute to a project(s) to implement possible actions as identified by the aforementioned committee.

Reports and drafts will be compiled by the Confucius Institute for sharing and input from the committee and the Consortium members.

## **Structure and Costs:**

Two ½ day committee meetings which would occur at the CIE and would allow for:

- One representative from each school currently teaching mathematics in Chinese
- One school based administrator from each of the two school districts
- One language consultant from each of the two school districts involved.
- One representative for the language Research Centre at U of C

Video conferencing or oovoo may be used to reduce travel and substitute costs for those in different cities.

One after school meeting to review and amend drafts created as a result of the two meetings.

## **Costs:**

-Teacher substitute costs: ½ day x 9 x2 (apx = \$3 600)

-Costs of coffee, tea, lunch 12 x \$12/da x 2da = \$ 288

-Lunch cost for third meeting 12 x \$15 x 1 da = \$ 180

-Secretarial costs and translations = \$ 500

**Estimated cost: \$4 851**

## **Proposed date of Meetings:**

Meeting 1: (Monday) January 20 9 am to noon

Meeting 2 (Monday) February 24 9 am to noon

Meeting 3 (Monday) March 10 4:30 to 6:30 pm