

AGENDA ITEM: US Mental Math Federation, Inc. Application Overview

US Mental Math Federation, Inc. submitted an application for a new charter school on August 1, 2008.

- US Mental Math Federation is a 501c3 non-profit corporation that was founded in March 2006 with the purpose of promoting mental math education in the US.
- The name of the school is Aim High Institute and will be located in the East Valley of Metro Phoenix.
- The applicant will initially serve grades K-8 and have an enrollment cap of 72 in the first year and grow to 132 by year three while serving grades K-10.
- The applicant has not met all the substantive eligibility criteria as documented in the following pages and in the [attached scoring rubric](#).
- Fingerprint clearance cards and background information including credit, employment and education have been verified for all corporate principals.

| US Mental Math Federation, Inc. | |
|--|---|
| Instructional Program | |
| Mission | Aim High Institute is a K-12 charter school that offers excellence in academics – particularly math, science and technology – and character education; promotes bilingualism and cultural diversity, and offers a comprehensive and balanced program to enhance the learners’ potentials and skills to raise upright, tolerant and law-abiding lifelong learners to be leaders of the future. |
| Description of Community and Target Market | The applicant has identified South Tempe as the best location for the school. The applicant has identified this population as wanting excellence in education, in particular math, science and technology. Due to the languages being offered, the applicant also anticipates Chinese and Indo-Pakistani communities being attracted to the school. |
| Methods of Instruction | Most instruction will be partially direct instruction and partially student-led inquiry-based. Several subjects will require memorization achieved through songs, drills and spaced learning; a new method based on developments in neurophysiology. Additionally, the use of multiple senses will be encouraged to cater to diverse learners. |
| School Calendar | Extended 200 day Schedule starting on July 17, 2009 |
| Organizational Structure | |
| Corporate Principals | Rueyin Chiou, Dr. Fawzia Mai Tung, Dr. Jia-Long Horng |
| Governing Body | 2 Charter Organization Members <ul style="list-style-type: none"> • Dr. Fawzia Mai Tung, Reuyin Chiou 3 Other Members <ul style="list-style-type: none"> • To Be Determined |
| Site Information | |
| Location | Roughly, the area lying within McDowell Rd. on the north, Power Rd. on the east, Chandler Blvd. on the south and I-10 on the west. |
| Unsecured Facility | Roughly 10,000 sq. ft.: 5 classrooms (increasing to 6 by year 2); office/administration area; 2 bathrooms; playground/multi-purpose area |

| Year | Grades Served | # of Students | # of Sites |
|------|---------------|---------------|------------|
| 1 | K-8 | 72 | 1 |
| 2 | K-9 | 100 | 1 |
| 3 | K-10 | 132 | 1 |

The following information is being provided for consideration:

Applicant's Background Information:

1. The corporation has three members, with two serving on the governing board:
 - Dr. Fawzia Mai Tung will serve on the Governing Board for the charter, will be the Authorized Representative and will serve as the school principal. Dr. Tung was the principal for Arizona Cultural Academy, a private Islamic school, for five years. Dr. Tung's father was a diplomat and as a result, she attended 13 different schools in 5 countries and four languages before studying Medicine at the University of Jordan. Dr. Tung has an MBBS in Medicine and Surgery from the University of Jordan in Amman and an Advanced Diploma of Education from the University of London. Dr. Tung is currently an adjunct faculty member at Estrella Mountain Community College.
 - Rueyin Chiou will serve on the Governing Board for the charter and has experience operating IQ Abacus Math and Language School since 2004 as the lead teacher and Director in Tempe, Arizona. IQ Abacus is a private institute that offers afternoon and weekend courses in Abacus Mental Math, Scholastic Math, English (reading/writing) and Chinese. Ms. Chiou is a Ph.D. candidate in Environmental Sciences at Rutgers University. She currently has a Masters Degree in Environmental Sciences and a Bachelors Degree in Chemical Engineering from the National Taiwan University in Taipei. In addition to the work experience in education, Ms. Chiou has over 10 years experience in both Business Management and Information Technology.
 - Dr. Jia-Long Horng has over 15 years experience in utilizing computer technology in a variety of business/academic fields including medical instrumentation, centralizing medical information, on-line e-commerce, business logistics implementation, school data distribution and real-time signal processing. Dr. Horng is also the cofounder of IQ Abacus Math and Language School where he is the Director of the Scholastic Math program and is responsible for designing and developing e-learning programs in conjunction with Mental Math and Scholastic Math learning programs. Dr. Horng has a Ph.D. in Biomedical Engineering and Biomedical Sciences from Rutgers University, a Masters Degree in Biomedical Engineering from Texas A&M University and a BS in Biomedical Engineering from Chung Yuan University in Taiwan.

New Charter Application Background:

Comprehensive Program of Instruction/Curriculum

Short description:

The founders of US Mental Math Federation envision an educational institution where an international standard for math, science and technology education can be combined with bilingualism (Mandarin Chinese); where excellence in education is the norm and character education is integrated into the culture. Most instruction will be direct instruction and student led inquiry-based.

The school will use a combination of curricula including Singapore Math, Singapore Science, a Pro-Active Youth Development (PAYD) Character Education model and Spalding Language Arts. In addition to the above curricula, the school intends on offering a variety of foreign languages including Chinese and Arabic as well as offering a music and art program.

The application fails to meet the minimum requirements in the following areas of the curriculum samples provided:

1. Area 1.2b: K-8 Strategic Plan
 - The revised application does not sufficiently describe how progress will be monitored other than mentioning the use of report cards and other statistics. The revised

application does not provide a clear process for the evaluation, revision and addition of new goals over time.

2. Area 1.3b: Instruction

- The revised application did not address the TRP's concern that POs were being assessed that had not been taught earlier in the unit. This comment applies to the writing sample in 2nd and 4th Grade.

3. Area 1.3.3e: 3rd Grade Scoring Rubric

- Reading and Writing: Criteria required to demonstrate mastery is not provided. Additionally, in writing, there is no description of how a student would earn various proficiency scores (i.e. a 4 versus a 5). Math: The mastery level identified is not consistent with the level described in the narrative. Although the revised application addresses the writing concern, the application did not address the reading and math concerns.

4. Area 1.3.7e: 7th Grade Scoring Rubric

- Writing: No criteria provided to demonstrate Mastery. Math: No rubric provided to identify the criteria needed for Mastery. Unclear how the oral portion will factor into the grade. The revised application provides an insufficient mastery level for the writing assessment that is below the level identified for promotion in the narrative. The revised application addresses the math concerns.

Business Plan/Budget

Short description:

The US Mental Math Federation is promoting mental math education in the US. The corporation has sponsored Speedy Math Competitions, developed criteria for certification tests and is in the process of developing membership criteria. The corporation intends on sub-contracting the management of Aim High Institute to an LLC named "Aim High Institute, LLC.

The application describes three phases of operation. The first phase will start out with low student ratios and will increase enrollment through managed growth. The initial phase will start in a small commercial building with the goals of putting a payment down on a new facility starting in phase 2 (years 4-6).

The operational budget is based on 103% of the projected enrollment. Should the charter be granted, the applicant would need to increase their enrollment cap. The application indicates having a budget balance of \$3291.20 at the end of year 1 of operation.

The business section has three areas that do not meet the scoring criteria. The following areas remain deficient:

1. Area 2.8d: Compensation Plan

- The revised application does not provide a compensation plan that supports the qualifications of the personnel.

2. Area 2.9g: Operating Budget Reflects Growth

- Although the revised application addresses the above concern in the Operational Budget, the applicant did alter the number of students and is now using a budget that is based on more students than the enrollment cap would allow.

3. Area 2.9o: First Year Month-by-Month Cash Flow Budget

- The revised application provides a First Year Month-by-Month Cash Flow Budget that is inconsistent with the Operational Budget.

Motion Notes for US Mental Math Federation, Inc.:

- The application includes all required curriculum samples to operate a K-8 program.
- The application failed to meet the scoring criteria in the program of instruction section.
 - In the program of instruction section, 5 out of 63 areas received a score of "Approaching."
- The revised application was Administratively Incomplete as The Application Checklist (Attachment L) was not filled in with page numbers.
- Overall, the application failed to meet the 95% test.