

EDITORIAL

The publication of the *International Journal of Science and Mathematics Education (IJSME)* is a significant event in the science and mathematics communities. Birthed of international collaboration among organizations and academic scholars from around the globe, this journal is sponsored by the National Science Council of Taiwan, a branch organization of the central government overseeing science and technology affairs. As a global circulation with an editorial board consisting of science and mathematics education experts from fifteen countries, we welcome submissions from around the world to bring international quality to the *IJSME*.

CREATING A NEW FORUM

As an ambitious study of education, we endeavor to address and bring dialogue to issues largely overlooked by mainstream research. The *IJSME* aims to create a forum for the science education and mathematics education communities, between which there has previously been poor communication. In the course of facilitating this dialogue, our hope is to sharpen thinking, direct attention to contemporary issues, clarify problems, encourage debate and the exchange of views, and thereby deepen understanding, and enhance flexibility and adaptation to the changing world.

Daunting as the task may seem, the two education communities in fact share common research perspectives which may serve to bridge this communication gap. Recent trends in two communities have seen a blending of Vygotsky's social constructivism perspectives with Piaget's constructivism. Both sides also concur on such research perspectives as empiricism and quasi-empiricism, and learning strategies such as modeling and inquiry; other mutual perspectives span the spectrum of socio-cultural to semiotic theories of sociology. There is, however, a lack of communication between science and mathematics educators on how better to assist children integrate their learning experiences efficiently. It is our sincere intention that this journal can facilitate this essential dialogue to the benefit of learners.



INTERNATIONAL TRENDS IN SCIENCE AND MATHEMATICS
EDUCATION RESEARCH

The strength of any good journal arises from the academic perspectives represented by members of its editorial board. In preparation for the *International Trends in Science and Mathematics Education Research* conference, the workshop that initiated the *IJSME*, our senior editors reported some interesting phenomena in educational research around the world. Nations previously dormant on an international scene (e.g., Argentina, Brazil, Greece, Korea, Portugal, Taiwan, etc.) are increasing their English research output; nationals of non-English speaking countries are growing more amenable to writing and presenting papers in English.

We also noticed a domination of research primarily focused on children's understanding and learning of scientific phenomena over the past two decades. Despite the obvious importance of children's learning, we suggest this is too narrow a view of research. A more generous scope encompasses broader issues to include learning, teaching, educational technology, curriculum, learning environments, teacher education, assessment and evaluation, equity, history, philosophy of science, and mathematics education. Another disquieting observation was that the research methodology in the mathematics and science education research community is relatively limited in scope. Comparative studies are relatively rare, and there has been little discourse propounded on philosophical issues. Educators would do well to compare research findings in the Anglo-American community with research findings in other languages, as socio-cultural differences are oftentimes subtle. In resolution of these issues, *IJSME* encourages the search for more in-depth and comparative information.

With a growing presence of computers in classrooms around the world, much remains to be learned about technology's impact on teaching, and across various cultural settings. In facilitating science and mathematics learning, educators can examine the benefits to be gleaned from on-line resources, as well as problems that arise when teaching with computers. The science and mathematics education communities need to collaborate and incorporate technology into teaching.

Our emphasis is that the objectives of science and mathematics education stretch beyond perfunctory teaching and learning; a broader perception of its function ought to include social and cultural influences, among others. We need a greater understanding of the relationships between government policies on science education and its actual practice and a realistic expectation of what research can contribute. We also need to address and understand why working class and minority students are failing dispro-

portionately in mathematics and science across all cultures. How do we theorize this failure and what research can we do?

FEATURES OF THE *IJSME*

One of the goals of *IJSME* is to build a more critical, coherent, and cumulative research community occupied with important professional issues, through stringent reviews and research analyses. As we are a diverse global village that values our diversity as much as our commonality, this journal seeks to lend voice to its constituents, cross intellectual and national borders, and engage science and mathematics educators on issues of importance to a multicultural world. We welcome studies that explore science and mathematics education from different cultural perspectives.

The *IJSME* seeks to integrate the science and mathematics education communities by collating articles from both fields into one journal and encouraging a greater sharing of ideas between the two – ideas which have remained independent of each other via different histories and cultures. We also strive to help students integrate the educational experiences that they have. Lastly, we aim to integrate technology into education as aids in ‘situated cognition’ learning, essential citizenry knowledge, and basic abilities such as problem solving, decision making, and debating.

We welcome with keen enthusiasm articles written by authors whose first language is not English. Special arrangements are available for rewriting support where appropriate. First authors whose first language is not English may be eligible for one-time editorial assistance from a mentor assigned by the journal staff for a manuscript that is rejected but judged as being of sufficient research quality to be publishable with major revisions.

Faced with the unique challenges of integrating two scholarly communities from diverse cultures, of necessity, we construct new kinds of knowledge and schools of teaching which can rise to the challenges. It is along this vein of thought that we put forth this inter-disciplinary journal with a cross-cultural dimension.

With the launching of our new publication, we invite readers to use the *IJSME* as a forum for research, and welcome all articles which add to the improvement of science and mathematics education.

Fou-Lai Lin
Editor-in-Chief