## Science Education Journals Zebrafish in the Classroom By Jennifer Liang

#### Journals that publish research on science education (not comprehensive, and not meant to be a list of recommended journals)

#### **From Science Perspective**

#### Zebrafish

Special issues on Zebrafish in Education and regular publication of educational articles in a special section of regular issues. http://www.liebertpub.com/overview/zebrafish/122/

#### **GSA Prep**

Launched in 2012, the Genetics Society of America Peer-Reviewed Education resource Portal (GSA PREP) is an online publication featuring peer-reviewed educational resources designed for immediate use in the classroom. GSA PREP resources promote the principles of inquiry-based, student centered learning based on core concepts and competencies in genetics. http://www.genetics-gsa.org/education/GSA PREP Resources.shtml

#### **Primers in GENETICS**

These Primers are a series of articles in the GSA Journal *GENETICS* designed to make current research articles useful in an undergraduate classroom or a senior seminar. Each **Research Primer** is tied to a current article, and lays out necessary background, explains the hypothesis or approach, describes the methodology, guides the readers through the results, and sums up the discussion. Each **Model Organism Primer** describes a genetic model system, including the organism's life cycle, history of use in the laboratory, available genetic and genomic tools, advantages of the system, discoveries made using the model organism, and more. Model Organism Primers would be especially useful for educators to assign to students along with a Research Primer featuring that model organism. They would also be quite useful for researchers in a new laboratory who would like to read up on their new study system. http://www.genetics-gsa.org/education/primers in genetics.shtml

#### **American Biology Teacher**

#### http://www.nabt.org/websites/institution/index.php?p=26

"*The American Biology Teacher* is an award winning and peer-refereed professional journal for K-16 biology teachers. Articles include topics such as modern biology content, biology teaching strategies for both the classroom and laboratory, field activities, and a wide range of assistance for application and professional development. Each issue features reviews of books, classroom technology products, and "Biology Today." Published 9 times a year, the journal also covers the social and ethical implications of biology and ways to incorporate such concerns into instructional programs."

#### **Advanced in Physiology Education**

#### http://advan.physiology.org/

*"Advances in Physiology Education* promotes and disseminates educational scholarship in order to enhance teaching and learning of physiology, neuroscience and pathophysiology. The journal publishes peer-reviewed descriptions of innovations that improve teaching in the classroom and laboratory, essays on education, and review articles based on our current understanding of physiological mechanisms. Submissions that evaluate new technologies for teaching and research, and educational pedagogy, are especially welcome. The audience for the journal includes educators at all levels: K-12, undergraduate, graduate, and professional programs."

### Life Science Teaching Resource Community

#### http://www.lifescitrc.org/

This site partners with many organizations, includeing the Genetic Society of American and the Society for Developmental Biology and many others to publish educational materials. Manuscripts submitted to this site are peer reviewed and will be open access if published. "Colleague-to-Colleague Resource Sharing: LifeSciTRC not only catalogues materials produced/published by partner organization but encourages individual educators to share the teaching materials they have developed through LifeSciTRC. Each item is reviewed, at minimum, for scientific accuracy and appropriate use of humans/animals in teaching (if applicable). Authors receive all reviewer comments and, after making any required modification, their materials are posted in LifeSciTRC. Authors retain copyright and have the option of publishing an abstract describing their LifeSciTRC contribution in the APS journal, Advances in Physiology Education. Authors can withdraw or update their LifeSciTRC submissions at any time. Many educators have found LifeSciTRC submission an excellent way to have their teaching materials peer reviewed by content experts. In addition, each resource has a rating and comments section where users can provided added feedback about the item."

#### **Science in School**

#### http://www.scienceinschool.org/

"Science in School is read by teachers of all science subjects, as well as others involved in science education. Articles therefore need to be accessible and interesting to an audience with a general science background, rather than targeting specialists in individual science subjects. Aim for an engaging, journalistic style. Remember that most of our readers are secondary-school science teachers, and that they should be able to use many of our articles in lessons, perhaps giving them to their students. Articles must be submitted in English, accompanied by the completed copyright form, and may not exceed the relevant word limit (see Types of articles). If we publish your article, we may also include translated versions on our website."

## **From Education Research Perspective**

#### **CBE Life Sciences Education**

#### http://www.lifescied.org

CBE—Life Sciences Education (LSE) is an online, quarterly journal owned and published by the American Society for Cell Biology (ASCB) in editorial partnership with the Genetics Society of America. The journal publishes original, previously unpublished, peer-reviewed articles on research and evaluation related to life sciences education, as well as articles about evidence-based biology instruction at all levels. The ASCB believes that biology learning encompasses diverse fields, including math, chemistry, physics, engineering, and computer science, as well as the interdisciplinary intersections of biology with these fields. One goal of the journal is to encourage teachers and instructors to view teaching and learning the way scientists view their research, as an intellectual undertaking that is informed by systematic collection, analysis, and interpretation of data related to student learning. Target audiences include those involved in education in K–12 schools, two-year colleges, four-year colleges, science centers and museums, universities, and professional schools, including graduate students and postdoctoral researchers. All published articles are available freely online without subscription. In addition, published articles are indexed in PubMed and available through PubMed Central.

# African Journal of Research in Mathematics, Science and Technology Education <u>http://www.saarmste.org/journal</u>

"The editorial policy of the Journal is to disseminate, as widely as possible, high quality research findings and well written articles on theory and practice in science, mathematics and technology education. Articles that promote the understanding of curricular policy and diverse socio-cultural issues and those which stimulate epistemological and methodological debates are welcome. The focus is on the development of indigenous research capacity in Africa without compromising the requirements of high standards. The editorial board welcomes articles that will contribute to the overall development of science, mathematics and technology education in Africa."

#### **Bioscene: Journal of College Biology Teaching**

#### http://www.acube.org/bioscene/

"Bioscene: Journal of College Biology Teaching is a refereed quarterly publication of the Association of College and University Biology Educators (ACUBE). Submissions should reflect the interests of the membership of ACUBE. Appropriate submissions include:

• Articles: Laboratory and field studies that work, course and curriculum development, innovative and workable teaching strategies that include some type of evaluation of the approaches, and approaches to teaching some of the ethical, cultural, and historical impacts of biology.

• Reviews: Web site, software, and book reviews • Information: Technological advice, professional school advice, and funding sources • Letters to the Editor: Letters should deal with pedagogical issues facing college and university"

#### **Electronic Journal of Science Education**

#### http://ejse.southwestern.edu/

"The *Electronic Journal of Science Education* is a peer reviewed journal sponsored and published by Southwestern University. EJSE publishes manuscripts relating to science education/science teacher education issues from early childhood through the university level and informal science and environmental education. EJSE reviews original science education manuscripts that report meaningful research, present research methodology, develop theory, and explore new perspectives."

#### EURASIA journal of Mathematics, Science, and Technology Education

http://www.ejmste.com/aims and scope.htm

"The EURASIA journal publishes original articles in the areas of mathematics education, science education, and technology education. The Journal strictly adheres to the universal principles of the peer review process. The aim is to advance the scholarship and the scientific knowledge base in these three areas. Articles can take a variety of forms scholarly communication. We emphasize the importance of communication which have not been stressed adequately in the past such as interview/conversations with eminent scholars of the field and hence encourage authors to to get engaged in such activities and prepare manuscripts of this form. The Editorial Board also welcomes ideas and suggestions for special issues of the EURASIA Journal dedicated to a special theme."

#### The Interdisciplinary Journal of Problem-based Learning (IJPBL)

#### http://docs.lib.purdue.edu/ijpbl/

"The Interdisciplinary Journal of Problem-based Learning (IJPBL) publishes relevant, interesting, and challenging articles of research, analysis, or promising practice related to all aspects of implementing problem-based learning (PBL) in K–12 and post-secondary classrooms."

## International Journal of Biology Education (published first issue in 2011) http://www.ijobed.com/

"International Journal of Biology Education (IJOBED) is an international, non-profit journal that considers and publishes original research regarding to biology education at all levels of educational life. The purpose of the IJOBED is to provide an opportunity to publish findings of specialists on biology education and to inform researchers, junior researhers, teachers, pre-service teachers, legislators and curriculum developers about recent findings on biology education research. The content of the IJOBED consists of papers on teaching approaches, strategies, methods and techniques, measurement and evaluation, curriculum studies, learning environment, history, philosophy and nature of biology, exceptional students and teachers in biology education, biological literacy, science process skills, higherorder thinking abilities in biology learning and social and cultural studies in biology teaching. The IJOBED is published on-line for two times in a year (October and May). Language of the journal is English. It is expected that the IJOBED will be an encouraging journal to produce high quality research that will lead to more effective practices, to provide detailed information about biology teaching and learning, and to contribute to curriculum development studies in biology education."

#### International Journal of Environmental and Science Education

#### http://www.ijese.com/

"The International Journal of Environmental and Science Education (IJESE) publishes original research from throughout the world dealing with environmental education and science education. It publishes articles on psychological, sociological, economic and organizational aspects of environment and science education, as well as evaluation studies of curriculum development in these fields. Its main aim is to allow specialists working in these areas the opportunity of publishing their findings for the benefit of institutions, teachers, and students. It is hoped that the journal will encourage high quality research that will lead to more effective practices, behaviours and curricula in environment and science education."

#### **International Journal of Science and Mathematics Education**

http://www.springer.com/education+%26+language/mathematics+education/journal/10763

"The objective of this journal is to publish original, fully peer-reviewed articles on a variety of topics and research methods in both science and mathematics education. The journal welcomes articles that address common issues in mathematics and science education and cross-curricular dimensions more widely. Specific attention will be paid to manuscripts written by authors whose native language is not English and the editors have made arrangements for support in re-writing where appropriate.

Contemporary educators highlight the importance of viewing knowledge as context-oriented and not limited to one domain. This concurs with current curriculum reforms worldwide for interdisciplinary and integrated curricula. Modern educational practice also focuses on the use of new technology in assisting instruction which may be easily implemented into such an integrated curriculum. The journal welcomes studies that explore science and mathematics education from different cultural perspectives."

#### **International Journal of Science Education**

<u>http://www.tandfonline.com/loi/.VArcNEv4pZc</u>"The *International Journal of Science Education* is firmly established as the authoritative voice in the world of science education. It bridges the gap between research and practice, providing information, ideas and opinion. It serves as a medium for the publication of definitive research findings. Special emphasis is placed on applicable research relevant to educational practice, guided by educational realities in systems, schools, colleges and universities.

The journal comprises peer-reviewed general articles, papers on innovations and developments, research reports and book reviews. Each volume contains a Special Issue devoted to a topic of major interest and importance, guest-edited by an acknowledged expert. Recent Special Issues have featured environmental education and policy and practice in science education."

#### Journal of Science Education and Technology

"The Journal of Science Education and Technology is an international and interdisciplinary forum for both invited and contributed peer reviewed articles that advance science education at all levels." http://www.springerlink.com/content/102587/?MUD=MP

#### Journal of Baltic Science Education

#### http://www.jbse.webinfo.lt/journal.htm

"A scientific journal JBSE issued by the SMC "Scientia Educologica", Lithuania, emphasizes theoretical, experimental and methodical studies in the field of science education and related areas. JBSE is an international academic journal. In order to maintain the high standards appropriate to such a journal, all contributions received are submitted for anonymous review by two experts, additionally to review by the Editor. The decision of the Editor on the acceptance of articles is final and no correspondence can be entered into on reasons for rejection of a submitted contribution."

#### **Research in Science Education**

http://www.springer.com/education+%26+language/science+education/journal/11165

*"Research in Science Education* is an international journal which publishes scholarly science education research of interest to researchers, practitioners and others interested in science education. Articles are published relating to early childhood, primary, secondary, tertiary, workplace and informal learning contexts as they relate to science education. The aim of the journal is to promote scholarly science education research in these contexts and to bring the publication of this research to the professional research community, to practitioners in those various contexts, and to others interested in science education. The scope of the journal is wide-ranging in both content and type of articles. Articles representing a range of qualitative, quantitative and mixed research methods are invited. The journal welcomes papers based on innovative methods. The content of the articles relates to science education generally and includes, for example, relevant aspects of information technology education and design technology education. Scholarly reports of research, major review articles and position papers, comments and criticism on recently published papers in the journal or issues of general interest to science Educators are published. *Research in Science Education* is the official journal of the Australasian Science Education Research Association."

#### **Research in Science & Technological Education**

#### http://www.tandfonline.com/toc/crst20/.VArdWEv4pZc

*"Research in Science & Technological Education* publishes original research from throughout the world dealing with science education and/or technological education. It publishes articles on psychological, sociological, economic and organisational aspects of science and technological education, as well as evaluation studies of curriculum development in these fields. Its main aim is to allow specialists working in these areas the opportunity of publishing their findings for the benefit of institutions, teachers and students. It is hoped that the journal will encourage high quality research that will lead to more effective practices, behaviours and curricula in science and technology within educational establishments."

#### **School Science Review**

#### http://www.ase.org.uk/journals/school-science-review/

"School Science Review (SSR) is a highly regarded periodical, sent to all secondary members of ASE on a quarterly basis. It is also sent to university libraries and education centres and is read worldwide. Contributions may be requested or unsolicited and come from a wide range of people with an interest in science education for ages 11-19, including teachers, academics and scientists. All contributions are peer reviewed.

SSR is an important source for professional and curriculum development. Reading SSR is a form of ASE activism and members can communicate professional ideas by being either authors or readers. SSR aims to:

1. Inform readers of innovations and developments in science education

- 2. Develop readers' knowledge of and practice in science education
- 3. Provide useful and innovative practical ideas for teaching science in secondary schools

Disseminate research and scholarship relevant to readers' subject and pedagogic knowledge in and about science education"

#### **School Science and Mathematics**

#### http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1949-

**8594/homepage/ProductInformation.html** "School Science and Mathematics (SSM) is the official journal of the School Science and Mathematics Association, founded 1901. SSM is an international journal which is published monthly, October through May, emphasizing research on issues, concerns, and lessons within and between the disciplines of science and mathematics in the classroom. Members are encouraged to submit articles to the editor for publication.

#### SCIENCE EDUCATION INTERNATIONAL

#### http://www.icaseonline.net/seiweb/

"Science Education International is the quarterly journal of the International Council of Associations for Science Education (ICASE). ICASE was established in 1973 to extend and improve education in science for all children and youth by assisting member associations throughout the world. This journal provides a means for associations, institutions, centres, foundations, companies, and individuals concerned with science education to share perspectives, concerns, ideas, and information that will foster cooperative efforts to improve science education, and which will serve as a chronicle of the advancement of science education throughout the world"

#### **Science Educator**

http://www.nsela.org/publications/science-educator-journal "The Science Educator is a peerreviewed journal focusing primarily on K-16 STEM issues. Topics dealing with all aspects of science and engineering education reform, outreach to schools, and the professional development of K-16 teachers are welcomed and encouraged. We are particularly interested in research articles whose results have practical implications for teachers, science education supervisors, science education policy, and/or science teacher educators. The Journal welcomes both qualitative and quantitative research articles as well as reviews articles, descriptions of successful programs, and well-crafted essays on provocative or controversial topics of interest to science educators."

"zebrafish" search 0 articles

#### **Online lists of Science Education Journals**

A. Science Education Journals <u>http://homepages.wmich.edu/~rudged/journals.html</u> http://www.csun.edu/science/ref/professional development/sci ed journals.html

B. Undergraduate Research Journals <a href="http://www.cur.org/ugjournal.html">http://www.cur.org/ugjournal.html</a>