



International Council of Associations for Science Education

*Supporting and promoting science education internationally*  
**The ICASE Newsletter**

**JULY-SEPTEMBER 2013**

## Welcome to the ICASE July-September 2013 Newsletter !

The ICASE Newsletter is a regularly distributed publication containing current information about topics of interest in the field of science education. The table of contents for this issue is located in the right hand column.

The International Council of Associations for Science Education (ICASE) was established in 1973 to extend and improve science education for children and young people throughout the world. Today, ICASE is a network of science teacher education associations, institutions, foundations and companies, working together to promote science and technology education around the world. ICASE facilitates communication and cooperation at national, regional, and international levels.



International Council of Associations for Science Education

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Read or Submit a Manuscript to the ICASE Journal:  
Science Education International



For information please visit our Journal web page:  
<http://www.icaseonline.net/seiweb>

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## ICASE News



**Jack Holbrook**, ICASE Projects & Secondary Journal

### ICASE News

This newsletter focuses entirely on ICASE position papers, all of which will be a potential focus for the ICASE General Assembly to be held in Kuching, Malaysia, 29th September immediate prior to the ICASE World Conference (see page 13). The General Assembly is an occasion for member organisations to raise issues of interest. Actually it not only to raise issues, but to also have the opportunity to provide guidelines and make requests (even demands) to the ICASE Executive Committee on how ICASE should operate in the future for the benefit of the member organisations. These position papers can form a focus for this, while the General Assembly can also recognise other considerations such as the ICASE quarterly journal, SEI – Science Education International and issues on safety in science education

It is important that all member organisations are officially represented at the General Assembly. What does 'officially' mean? In this context, it means that the member organisation nominates a specific person to represent the organisation at the General Assembly who is authorised to put forward the point of view of the member organisation and to vote on matters raised. This is very important, of course, if ICASE is to function as per its constitution.

Alas, it is probably that some member organisations are unable to have a representative at the General Assembly. This is not a good situation, but clearly financial consideration are an important factor. The ICASE constitution, however, does allow for proxy representation and votes. Thus any member organisation can nominate anyone on the ICASE Executive Committee (see last pages of this newsletter), or an official representative of another ICASE member organisation to represent their organisation. There is no limit to the number of proxy representations any one person can hold, but obviously they must represent the wishes of the organisation and comment and vote accordingly.

ICASE does have, and has made these known in previous newsletters, its own vision for the future of ICASE and has its **own mission statement and future plans** which will be a highlight of the General Assembly. It is in this context that this newsletter draws attention to the ICASE position papers

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## **ICASE POSITION PAPERS**

### **ICASE Science and Technology Education Centres (ISTECs)**

#### **Rationale**

With the ICASE strategic plan calling for ICASE leadership in the field of science and technology education, especially geared to the role of science teachers and teacher educators, there is a clear need for ICASE to plan a more positive role than the hitherto trying to follow-up on initiatives proposed by its member organisations. While the leadership provided to ICASE by the member science teacher associations served ICASE well in the past, the ICASE role as coordinator and disseminator of developments has not been worked well in developing countries, or in regions where Science Teacher Associations have struggled to exist. The demise of voluntary organisations and the growth of professional centres offering support and guidance for teachers have eroded the functioning of STAs and with this the effectiveness of ICASE to function.

There is a need to review the way in which ICASE functions to serve science teacher organisations and, through them, the science teachers themselves. A stronger leadership role for ICASE as suggested by the new ICASE vision, requires a bold strategy to promote the ideas, strategies and operational functioning of new directions in science education in keeping with the changing vision of science and technology education today. This functioning can take place through ICASE Science and Technology Centres, on a regional and/or sub-regional basis.

#### **Operation and Procedures**

The establishment of ISTECs is via an ICASE Science and Technology Education Centres (ISTEC) Standing Committee. The committee approves ISTECs, based on specific criteria which will not exclude the idea of a virtual ISTEC. These centres form a network and maintain regular contact with the ISTECs standing committee. The standing committee will be the coordinating body.

An ISTEC can be a centre operating completely independently from other bodies within the country/region, or can function in conjunction with other organisations, or institutions, ISTECs can offer events and activities as the sole operator, and/or can function in conjunction with others as the major, equal, or minor partner. Events and activities can be ICASE derived and initiated, or can be those coming for other partners. Personnel running each ISTEC can be ICASE officers, members of the ISTECs standing committee, or personnel recognized by the ISTECs standing committee as suitable in ensuring quality leadership. Such personnel may have a dual function of serving both the ISTEC plus the institution(s) with which the ISTEC is co-operating for a particular event or activity.

The particular focus for each ISTEC will be two major functions: (a) provide **continuous professional development** to science teachers, and (b) initiate, coordinate and evaluate **ICASE projects**. In both aspects, the ISTEC will only promote activities and events in line with the ICASE strategic plan and will seek guidance and direction from the ISTECs standing committee. In turn, the ISTECs standing committee will seek guidance and direction from the ICASE Executive Committee, with policy matters being put to the ICASE Management.



Each ISTECS will be non-profit making, but self-financing and will be eligible to charge for its services. The ISTECS standing committee, in working with the ISTECS as a network, will be directly eligible to apply for GSEF funds under the auspices of ICASE to support ISTECS operations, including evaluation of the functioning of ISTECS. In fact, the GSEF is seen as crucial for the effective functioning of ISTECS in developing countries.

Initially the centres will be established in Thailand (Bangkok), China (Guilin), Estonia (Tartu), Ireland (Cork) and Turkey (Ismir), with each involving a member of the ISTECS standing committee. The initial CPD activities will be associated with initiating and running three ICASE projects - motivational approaches to education through science (education for sustainable development); incorporating engineering design within science lessons; raising the popularisation of science (*these are not the actual project names*). Each project will be nationwide within a country, with the potential to be regional; however the CPD and running of the projects will be undertaken as a network of ISTECS, with the expectation, where feasible, for common activities taking place across the ISTECS network, and even involving personnel from one ISTECS leading activities in another.

Where appropriate, each ISTECS will form a base for the ICASE STA member within that country and will be expected to strongly promote its leadership plans through the STA. Collaborative partner institutions will be ICASE associated university members, or similar.

#### **Aim of ISTECS**

The aim of ISTECS is to enable ICASE to better impact on STE worldwide. In striving towards this impact, the ISTECS standing committee intends to play its role in supporting the ICASE mission and strategic plans of ICASE and in particular, enhance the ICASE role of undertaking leadership in the STE arena, provide professional development opportunities for science teachers and educators and, by running projects, ensure ICASE is able to fulfill its desired goal of promoting excellence and global coordination in STE.

The ISTECS standing committee intends that each ISTECS meets this aim by:

- (i) identifying professional development needs and practices for teachers of science and science educators, with particular reference to updated views on 'education through science';
- (ii) undertaking professional development of teachers of science and science educators with a focus on the three ICASE/ISTECS projects;
- (iii) promote innovative science and technology teaching strategies and philosophical concepts, curriculum initiatives, developments and policies, advances in education systems including those of science education in informal settings, as well as materials and resources for science teaching geared to ICASE/ISTECS projects;
- (iv) disseminating coordinated research in STE, especially where this impacts on classroom science teaching and learning related to ICASE/ISTECS projects;
- (v) raising awareness of methods of exchange to maximising input, sharing, networking and continued communication in science education between ISTECS and others worldwide;
- (vi) initiate and run ICASE.ISTECS projects; and
- (vii) enact and promote further activities stemming from ICASE standing committees and ICASE regional representatives.



## **ICASE Projects**

### **Rationale**

Major developments are taking place in the field of science education and in the intentions, content and orientation of school science curricula and associated strategies around the world. In many countries the awareness and promoting of these are very much in the hands of non-specialist Ministry personnel with limited available of 'grassroots,' 'bottom-up' developments coming from the classroom practitioners. Though STAs are very much in the bottom-up category, their awareness is limited and their recognition of the need for new directions is often poor. ICASE, in its role as a promoter of excellence and wishing to play a leadership role in supporting STAs (see strategic plan) is well placed to be aware of and to promote development in science education and how these can be made to impact on classroom practices, particularly via enthusiastic teachers wishing to meet a challenge (as is the expectations of members of STAs). ICASE projects are seen as a valuable way for ICASE to meet its strategic plans and support its member organisations.

### **Operation and Procedures**

The projects are initially adaptations of existing projects, two taking place in Europe with the other having its roots in Thailand. These projects are (a) an ICASE project based on the European PROFILES project in which ICASE is a partner, (b) an ICASE project based on the European ENGINEER project in which ICASE is again a partner and (c) an ICASE project based on popularisation of science via school Science corners for which the chair of the ISTEC standing committee is a leading advocate.

Three ISTE Centres are already involved in PROFILES and they will adapt this for ICASE and for nationwide dissemination and lead the way for the other Centres to take up the project, initially at a local but then national wide level. All will be in conjunction with partners and the national STAs. CPD materials will be further developed from the PROFILES and ENGINEER projects and translated so that the CPD offered is coordinated, but ran in accordance with the teacher needs. The classroom implementation will be through ICASE modules, adapted from PROFILES and ENGINEER and translated for local use. Evaluation will be through suitably devised instruments, created by the ISTEC standing committee. Research and dissemination stemming from the projects will also be handled by the ISTEC standing committee.

Project evaluation will be undertaken by an ICASE projects standing committee and will also play a major role in the dissemination. This standing committee will also initiate new projects in conjunction with ideas from the ICASE Executive Committee members

### **Aim**

The aim of ICASE projects is to promote more relevant STE worldwide to instigate progress. In striving towards this impact, ICASE projects will be at the forefront of supporting the mission and strategic plans of ICASE and in particular enhance the ICASE role of undertaking leadership in the STE arena, promote ways of exciting and informing science teachers, provide professional development opportunities for science teachers and educators and ensure ICASE is able to fulfill its desired goal of promoting excellence and global coordination in STE.



ICASE projects are intended to:

- i. promote innovative science and technology teaching strategies and philosophical concepts, advances in education systems including those of science education in non-formal settings, as well as materials and resources for science teaching;
- ii. maximise student engagement and motivation in science and technology education, developing partnerships, networks and contributing to the field of life-long learning, employment and responsible citizenship;
- iii. identify professional development needs and practices (both pre- and in-service) for teachers of science and science educators, as well as developments needed in student assessment, evaluation strategies, safety strategies and risk assessment;
- iv. disseminate coordinated outcomes in STE, especially where this positively impacts on classroom science teaching and learning;
- v. focus on clarifying the nature of science, the role of science and technology education in everyday life and future careers, social values, and responsible citizenry alongside the development of capabilities related to science conceptual and skills development;
- vi. promoting ICASE as a meaningful leader in science education related to excellence in science education associating with ideas stemming from ICASE standing committees and ICASE regional representatives.

**PROPOSED NEW ICASE INITIATED PROJECT called ICASE-SMILES**

This project aim is to introduce ***Student Motivational, Inquiry-based Learning with an Education through Science*** approach (hence SMILES). It is designed to be a support project for science teachers teaching at the junior and senior secondary level (grads 7 upwards). The proposal is that ICASE runs/guides the creation of

- a) **Professional Development programmes** that are geared at persons who will wish to be involved in running their own professional development for science teachers within an interested, ICASE member organisation
- b) **Exemplar Science Teaching Materials**, based on the SMILES philosophy and approach (seen as appropriate, with adaptation, for any science curriculum and operationalising 21<sup>st</sup> century skills and scientific literacy)

The major focus of the project is to offer ideas on a *Needs-Based* professional development approach to the following:

- i) Student Motivation and Context-based approaches that impact on intrinsic motivation
- ii) Inquiry-based Learning related to Student Centred Teaching
- iii) Goals of Science Education in a 21 Century and an Education for Sustainable Development focus
- iv) The Nature of Science and the changing Nature of Science Education
- v) Scientific and Technological Literacy (STL) - based on the long ICASE history in this area
- vi) Class Environment and Teacher Self-Reflection impacting on student extrinsic motivation
- vii) Interdisciplinary teaching befitting a context-based approach related to key competences
- viii) Educational Theoretical ideas such as Constructivism, Self-determination and self actualisation,
- ix) Student Assessment particular related to ongoing, educationally meaningful feedback

Also included are an introduction to the proven philosophy and guidance on the use of related Science Teaching Materials in the classroom situation and the self-creation of such materials, based on an interrelated 3-stage philosophy, taken from the science education literature.

Examples of such teaching materials are given after the introduction below.

For more information contact:

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Or Dr Jack Holbrook, chair, ICASE ad-hoc committee for Projects (jack@ut.ee)





## **A Journal on Secondary Science Education (JSSS)**

### **Rationale**

While the ICASE journal Science Education International (SEI) has not yet been accepted by major international databases to be of major standing in the field of science education, steps are continuing to be taken in this direction. This has meant an increasing attention to high quality research articles. However, ICASE is committed to supporting its member organisations, in both the developed and developing world, and in this regard playing a role in promoting teacher awareness of developments and issues related to classroom teaching. Articles of value to teachers by having a classroom implementational focus, while informed by research, are unlikely to be acceptable for SEI, especially if they include actual teaching directions, experimentation, assessment strategies etc. It is with this in mind that a new journal is envisaged – the ICASE Journal of Secondary Science Education.

As there could be a degree of overlap with the current ICASE newsletter, the monthly newsletter would need to be redeveloped to ensure minimization of overlap.

### **Operation and Procedures**

The journal will be published as an open access, internet based publication carrying an ISSN number. It is envisaged to be a biannual (2 issues per year) publication carrying approximately 5 to 6 articles per issue (similar in this respect to SEI) and would be overseen by an editorial board and articles would undergo review to ensure suitability for the intended reader.

The journal would operate in the field of science education, seeing science education as a domain but recognizing other interdisciplinary links, especially in a pedagogical direction (e.g. 21<sup>st</sup> century skills, education for sustainable development), but would not exclude articles directed to such disciplines as the teaching of biology, chemistry, physics, earth science, astronomy, health, environment, etc. Other areas, such as ICT, robotics, engineering, technology, would also be included where they had a suitable interrelationship with the teaching of science subjects

The journal would target secondary school science teachers and teacher educators as the major audience. Secondary is loosely defined to relate to teachers specializing in the teaching of science subjects to students in grades 7 and above, but this loose definition is intended to be treated with discretion, noting the different interpretations of primary and secondary in countries around the world. Should a separate primary journal be envisaged by ICASE, this journal would interrelate, with a view to establishing a meaningful separation boundary that would be beneficial to teachers and teacher educators who are members of ICASE member organisations.

Submissions to the journal would follow a similar procedure as for SEI and seek electronic submissions to the editor/sub-editors. By and large, authors would be expected to submit camera ready material especially related to diagrams, but formatting would be undertaken to fit the 'house' design. There would not be a specific maximum number of words or diagrams, pictures etc. but it would be expected to be suitable for the teacher



readership and length would be more dependent on the number of diagrams, pictures, tables etc. rather than excessive words. Unlike in SEI, articles could be accepted without references (especially in early issues), although this would not be encouraged and later journal issues would be expected to reference material published in earlier issues of the journal.

The particular focus of this journal will be evidence-based teaching ideas and strategies, especially where they can be described as 'what research says to the science teacher,' or locally produced/related science teaching enabling student centred, inquiry based learning.

### **Journal Aims**

The aim of JSSS is to impact on the ICASE notion of excellence in science teaching worldwide. In striving towards this direction, it sees the role of the journal as proving teachers with new directions, more focus on seeing science more than a body of knowledge and guiding teachers to recognise that science education (the teaching of science subjects in school) is wider than guiding to students to learn content and explanations/interpretations or even patterns, and encompasses the gaining of creativity, reasoning, and the development of personal and social, skills. And in promoting such excellence, the vision of science teaching is that it is, for students, self-motivational, enjoyable, promoting a sense of wonder, and yet at the same time, appropriately challenging leading to a sense of being of positive value and providing satisfaction.

The journal intends to strive towards this direction by publishing articles that:

promoting the exchange of ideas, professional development of teachers of science and science educators, maximising cooperative links and student engagement in science and technology education, developing partnerships, networks and contributing to the field of life-long learning;

- (i) raising awareness of new activities in the classroom, laboratory, field trips, or for student projects;
- (ii) sharing proven, innovative science and technology teaching strategies, materials (especially local or student produced) and resources for science teaching for applicability in formal, informal (out of school) and non-formal settings;
- (iii) identifying teacher professional development needs and associated practices (both pre- & in-service);
- (iv) effective implementation of innovative strategies associated with student assessment, evaluation strategies, safety strategies, risk assessment and life-cycle analysis;
- (v) research outcomes where these are shown to have a positive impact on classroom science teaching and learning;
- (vi) networking with other science teachers on the exchange/common use of ideas/strategies/materials/activities at a local, regional, national or even at international level (especially where using ICT strategies eg internet, skype)
- (vii) promoting the establishment of the nature of science, the role of science and technology education in everyday life and future careers, social values interlinked to science teaching, and responsible citizenry alongside capabilities related to science conceptual and skills development;
- (viii) including activities/outcomes developed within ICASE promoted projects as well as developments promoted through ICASE Science and Technology Education Centres.





## **Sustainability / Environmental Education**

### **Rationale**

ICASE recognises the Earth and its atmosphere as a shared limited resource and that ecological services and biodiversity are critical to human survival. Ecological services provide more economic and survival value to humans than the entire global GDP (Gross Domestic Product).

There is a need to agree and promote an ethos and principles for the future of human habitation of the planet. There are opportunities in the United Nations (UN) Decade of Education for Sustainable Development (2005-2014) and were in 2010 with the International Year of Biodiversity and 2011 the International Year of Forests. Responses have been lukewarm to the global emergencies regarding excessive use, excessive pollution and attacks on biodiversity and ecosystems. In addition, there is inequitable sharing of the planet's limited resources, including previously renewable resources such as clean air, clean water and soil. During this critical time, children are being increasingly dislocated from real world environmental experiences. They spend more time in indoor environments in schools and homes than at any time in the past. There is a need for an urgent, comprehensive, multi-partnered approach to environmental issues, the most important of which is climate change.

ICASE can bring together science education associations around the world to address and take action on science-based sustainability / environmental education in schools, universities and communities. ICASE can also provide policy direction, curriculum reform and professional learning in science based on learning experiences in the natural environment. ICASE takes the environment seriously and is prepared to make sustainability / environmental education a major platform of its future planning and action. ICASE will promote sustainability and the value of global ecological services and biodiversity conservation as an essential component of science in all countries.

Globally there are movements to provide experiences for children in the natural environment and develop environmental values, concepts and hands-on skills. ICASE is part of this movement to contribute to the well-being of children and therefore of the planet. In view of the serious nature of the degradation of the world's environment and the issue of climate change, ICASE has elected to lead efforts in the development of sustainability and environmental education and environmental literacy. ICASE will showcase activities, commitment, ability, expertise and action in this field.

### **Curriculum areas for consideration:**

In terms of building environmental literacy and responding to the major issues facing humanity, it would be wise to address underpinning ideas, skills and values either in an integrated science approach or a discipline approach where these are essential:

- Biology - global threats to biodiversity, ecosystem services and consequent actions to be taken.
- Physics - environmentally appropriate technology choices especially in energy production, efficiency and use, choosing low energy options.
- Chemistry – environmentally appropriate cradle-to- cradle processing, use and disposal, and selection of materials (green chemistry). Minimising waste / pollution. Replacement of carbon-based with renewable, non-nuclear energy sources.
- Earth sciences – sustainability and ecological footprint in resource planning, development and use. Protection of assets – water, topsoil, bio and habitat diversity and reserves.



## **World Conferences on Science and Technology Education**

### **Rationale**

The World Conferences on Science and Technology Education are a high profile, high quality, premier event for ICASE to showcase the rich diversity of science and technology education in schools, university education faculties, in pre-school groups and in non-formal agencies world-wide. It provides opportunities for practitioners and other interested groups to collect and share experiences, skills and knowledge within a networked community. It enables this community of delegates to meet in good spirit and harmony.

### **Operation and procedures**

The Conference will occur approximately every three years and be associated with the ICASE General Assembly and Executive meetings and elections. The community of delegates will use time within discussion groups to develop a Conference Declaration on future directions in science and technology education and the environment and policy recommendations for ICASE and others interested in STE.

The conference will be for teachers of science in early childhood, primary and secondary schools, science educators in universities and external or non-formal agencies, scientists, curriculum and policy developers, school administrators, science education associations, student groups and laboratory technicians.

A wonderful social program of events will be provided throughout the conference along with pre- or post-conference tours. The Conference Dinner will be held early in the Conference so that participants can get to know each other. A highlight of the Conference will be the Chisman Oration and reception.

An evaluation will be conducted to provide feedback regarding highlights of the conference, what participants felt they had learned at the conference, what the participants were still thinking about and improvements that could be made. This information is passed on to the organising committee for the next World Conference.

The next World Conference will be open for Expressions of Interest and voted on by ICASE Executive at least 8 months before the current World Conference, so that the future Convenors can present information at the current Conference. For each conference ICASE will form a partnership with a host organization on the ground in the country of the conference.

The World Conference will be budgeted and financed separately from other ICASE accounts, audited and have its own website.

It is hoped that holding the World Conference regularly will not diminish in any way the level of ICASE activities at the Regional level.



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## **Aims**

The aims of ICASE World Conferences on Science and Technology Education are:

- (i) promoting the exchange of ideas, professional development of teachers of science and science educators, maximising participation and engagement in science and technology and its education, developing partnerships and networks and contributing to life long learning;
- (ii) sharing latest science and technology, teaching strategies, concepts, and thinking, curriculum, policies, education systems, materials, resources, teacher training practices, assessment and evaluation strategies
- (iii) use of innovative activities, workshops, Keynotes and other presentations, field trips, delegate led discussions, multi-media sessions;
- (iv) use of methods of exchange to maximize input, sharing, and continued communication in science education between delegates and others worldwide;
- (v) promoting social values, the values of science and responsible decision making alongside science conceptual and skills development;
- (vi) co-construction of a Conference Declaration for the future directions of science and technology education and promotion of science education and the environment;

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## Calendar of Events



Sunday 29 September - Thursday 3 October, 2013.

See: <http://www.worldste2013.org/>

At UNIMAS Sarawak

The University of Malaysia Sarawak campus

The theme of the conference, ***'Live Science, Love Learning, Create Change'***, addresses contemporary issues of importance to Science Teacher Associations, Science Centres, science teacher educators as well as both students and teachers as we move into the second decade after the millennium.

***"Live Science"*** – encourages ICASE member Science Teacher Associations and Science and Technology Education Centres to recognize that science is more than just a subject at school, to impact knowledge and skills adopted from yesterday's approaches. The promotion of science education as interdisciplinary learning is a vital step toward promoting students' acquisition of 21<sup>st</sup> Century skills not only for sustainable and responsibly citizenship but for a career in an increasing science and technology driven world society.

***"Love Learning"*** – focusses on the role of the teacher, and hence considerations for Science Teacher Associations and Science and Technology Education Centres, not only to guide students to want to participate and acquire the knowledge and skills for tomorrow's society, but that students' own self-motivation is a necessary and key factor in embracing science education as a crucial component of learning.

***"Create Change"*** - deals with the role of Science Teacher Associations, Science and Technology Education Centres as well as teachers themselves in using science education at every level as a way of shifting the mindset on meaningful sustainability, from merely 'talking about' best pedagogical practices to 'undertaking' them, creating a generational change in student attitudes and values towards science and school and the role of learning through science lessons in shaping their future lives.

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## **IOSTE EURASIAN REGIONAL SYMPOSIUM AND BROKERAGE EVENT HORIZON 2020**



October, 30 – November 1, 2013 – Antalya-Turkey

[www.ioste2013.org](http://www.ioste2013.org) Titanic Beach Resort Hotel, Antalya, Turkey

The International Organization for Science and Technology Education (IOSTE) was established to advance the cause of education in science and technology as a vital part of the general education of the peoples of all countries and to provide scholarly exchange and discussion in the field of science and technology education. Consistent with our mission to encourage the peaceful and ethical use of science and technology in the service of humankind, IOSTE opposes the use of science and technology by government or other organizations for military purposes against civilians. Its origins can be traced to a Symposium on World Trends in Science Education convened in August 1979 in Halifax, Nova Scotia, Canada. At the third symposium, held in Brisbane (Australia) in 1984, the informal circuit of 'World Trends' was transformed into a formal organization with members from over sixty countries.

Today, IOSTE has members from about eighty countries, and is officially recognized by UNESCO as a non-governmental organization. Membership of the International Organization for Science and Technology Education is open to all who subscribe to its Constitution. We are looking forward to seeing educators, teachers, researchers, and policy makers from around the world at the IOSTE Eurasia Regional Symposium and Brokerage Event Horizon 2020-EU Framework Programme for Research and Innovation, which will be held in Antalya, Turkey. The aim of the brokerage event is to provide information about Horizon 2020 calls for proposals related to science, technology, engineering and mathematics (STEM) education and bring all stakeholders together (universities, research institutions, civil society organisations, SMEs, public bodies, science centres etc.) to promote partnerships among potential coordinators and partners in a fruitful networking environment.

Kind regards,

Bulent Cavas, Dokuz Eylul University, Turkey

Pierre Clement, Université Lyon, France

Gultekin Cakmakci, Hacettepe University, Turkey

### **IMPORTANT DATES**

Abstract Submission Deadline: 16 July, 2013

Abstract Review Announcement: 16 August, 2013

Early Bird Registration Deadline: 18 September, 2013

Conference Dates: 30 October- 1 November, 2013

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## Call for Chapters: *Science Education for the Gifted*

**Dr Manabu Sumida** (Associate Professor, Ehime University, Japan) and  
**Dr Keith S. Taber** (Reader in Science Education, University of Cambridge, England)  
are editing materials on *science education for gifted learners* for an international project for a major publisher (Routledge). We are seeking additional contributions from those working in the area of science education for gifted learners for two books to be published by Routledge. Both books will draw upon a wide range of educational contexts. In particular we are currently working on

- \* one book that will focus on ***perspectives that can inform the provision of science education for gifted learners***;
- one book that will report on ***policy and practice from a range of national contexts***

Both books will be in English.

The editors are open to suggestions for themes for scholarly contributions, but the following list is indicative of the range of potential topics:

- the use of ICT in science provision for the gifted
- family influence on gifted science learners
- mentorship for gifted science learners
- university outreach programmes to support gifted learners (especially if from disadvantaged backgrounds)
- giftedness in science and cultural diversity
- case studies of gifted scientists
- the role of museums and science centres in supporting gifted science learners
- studies of the experiences of being identified as a gifted learner in science
- history / philosophy of science education for the gifted

We welcome proposals for contributions from colleagues working in diverse national and institutional contexts. We are also seeking additional scholarly accounts of policy and practice relating to gifted education in science from national contexts, and *in particular* we would be keen to hear from potential authors working in countries in:

- Africa;
- Latin America;
- Europe, especially Scandinavia and Eastern Europe including Russia
- Middle East

We would also be interested in hearing from colleagues who are working in particular in the area of

- \* teacher training /teacher development to support science education for the gifted

Colleagues who are interested in being part of this project should send

by email (to [msumida@ed.ehime-u.ac.jp](mailto:msumida@ed.ehime-u.ac.jp))

a chapter proposal including:

**Provisional title**

**Author list** (names and affiliations)

**Provisional abstract** outlining the intended content of the chapter. This should include:

- if the chapter focuses on a particular programme: something about the context of the work reported, e.g. age range; formal (e.g. in school) or informal (e.g. voluntary club); selectivity (open to all interested, only to those recommended by teachers, or...?); what area(s) of science are included; etc.
- something about the theoretical perspectives and/or conceptual frameworks drawn upon - e.g. sociocultural theory; Bloom's taxonomy; etc.,

We are ideally looking for chapter proposals by the **end of September 2013**, and we intend to respond to these proposals by the end of October 2014, asking for full chapter drafts by the end of March 2014.





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## **Science Education Research and Education for Sustainable Development (ESD)**

22<sup>nd</sup> Symposium on Chemistry and  
Science Education  
to be held at the University of  
Bremen, June 19-21, 2014

(First Announcement)  
[www.chemiedidaktik.uni-bremen.de/symp2014/](http://www.chemiedidaktik.uni-bremen.de/symp2014/)

**Conference dates:** June 19 - 21, 2014

**Conference language:** English

**Venue:** University of Bremen, Dept. of Biology  
and Chemistry building, Leobener Str. NW 2,  
28334 Bremen, Germany

**Conference fees:**

None. Travel costs, accommodation and social  
events are the responsibility of the  
participants.

**Conference chairs:**

Prof. Dr. Ingo Eilks, Department of Biology and  
Chemistry, Institute for Science Education,  
University of Bremen, Leobener Str. NW 2, D-  
28334 Bremen, Germany,  
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**Further information:**

Current information will be published at  
[www.chemiedidaktik.uni-bremen.de/symp2014/](http://www.chemiedidaktik.uni-bremen.de/symp2014/)  
from January 2013.

A 2<sup>nd</sup> announcement will follow in Autumn  
2013.

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The ICASE Executive Committee is persons who make decisions on behalf of the ICASE Governing Body. The ICASE Governing Body is the **ICASE member organisations**.



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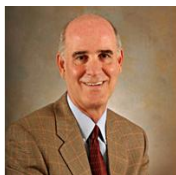
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