

Science Education Is Changing - Were You At The Debate? Attending Education Conferences.

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It is very important that zoo educators keep in touch with what is happening in the education world of schools and attendance at education, particularly science education, conferences is an excellent and enjoyable (and tiring!) means of doing this. Science education in many countries now focuses on standards - in England there is a national curriculum for all subjects and science is one of the three subjects tested nationally at four stages in a child's career. In the USA there are standards nationally with State Standards and local standards to which teachers have to teach and against which students are tested. Teachers are again teaching for the test and look for assistance in covering the topics required from out-of school institutions such as zoos. This need for assurance and assistance was very evident at the recent National Science Teachers Conventions (NSTA) held in Orlando, Florida at the beginning of April. Many, many sessions were about teaching to standards and assessment. Sessions ranged from using mealworms to larger vertebrates in the classroom. I can not recollect a session run by a zoo or by teachers about using zoos although some years they are presented.

There is a vast exhibition hall with hundreds of stands. They feature the latest textbooks (along with assessment packs and home-school materials, many of the teachers who attend are mandated to buy textbooks for their school or district and this can be big business for the firms). Likewise, equipment manufacturers are in great evidence trying to obtain orders. Even teachers not buying are able to familiarize themselves with developments in texts and equipment, including the latest in computers and software. Some stands are about facilities available for education elsewhere and SeaWorld® and The Bronx Zoo had stands at which teachers could discuss educational programs offered and how these could help the teacher deliver the curriculum requirements.

Science education is changing, there is a paradigm shift in the air. The science education community is increasingly recognizing (and also thus feeling rather threatened in many cases) that the science taught in schools, particularly in secondary or High Schools, is not appropriate for future citizens whom most of us are teaching - we rarely teach pupils who go on to be research scientists. Moreover, for the first time outside of my own writings (e.g. Tunnicliffe 1996 a & b) I heard researchers other than myself discussing the consumer/producer interface and problems of mismatch in expectations and aims between these two groups-the visitors and the management. At AERA (American Education Research Association Conference in New Orleans in late April) this interface was increasingly recognized as well as the understanding that the education obtained

during school years in the school context was but a mere fraction of a person's whole education which encompasses leisure opportunities, after school clubs and community learning for school-aged children as well as the various aspects of life-long learning.

Both AERA and NARST, the National Association in Science Teaching, held immediately after AERA in New Orleans, had many so called "informal" education sessions which were on the issues outlined in this article. AERA have Special Interest Group of SIG to which membership is \$5. The Membership secretary is Doris Ashe of the Exploratorium, San Francisco, USA. E-mail: dash@exploratorium.edu Members of this Informal Education SIG receive a regular newsletter about issues of interest to educators in informal or non-school classroom based settings.

The two research conferences-at which there were very few, if any, zoo educators also debated the issue of the term "informal education" which is felt to be a misnomer these days because of the paradigm shift in thinking about locations of learning.

If zoo education is to keep pace with the rest of the educational field it is of paramount importance that zoo educators are active members of the education and educational research communities and are at the forefront of these debates putting forward their point

of view for zoos and aquaria. Zoo education (along with to a lesser extent botanical gardens education) is notorious "out there" for being an introspective field. Come out - we do not want the science centre people in particular to set the agenda which will affect us. Try going to a conference of wider educational coverage than just zoo education! If you don't zoo education will become at the best fossilized and at worst extinct.

References

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