

(II)

## PROMOTING AMPHIBIANS CONSERVATION THROUGH CLASSROOM EDUCATION - AN INDIAN SCENARIO

The oldest establishment date of Indian University listed by UGC (University Grand Commission, India) is 1857, shared by the University of Mumbai, the University of Madras and the University of Calcutta. Receiving higher education, once the nearly exclusive domain of the wealthy and privileged, since independence has become the aspiration of almost every student completing high school. In 1947 there were only 20 universities, 500 colleges and 0.211 million students; 1950-51 school year, there were some 0.360 million, lakh students enrolled in colleges and universities; by the 1990-91 there were 177 universities and university-level institutions (more than six times the number at the time of independence), some 500 teacher training colleges, and several thousand other colleges. School year, the number had risen to nearly 40.0 million, a more than tenfold increase in four decades. In 2013 India has 600+ universities (Central Universities 7%, State Universities 46%, state private universities 16%, deemed universities 21% and institutes of national importance 9%), 100+ institutions of National importance with 170.91 lakh students (UGC, 2013). In recent years, school education (10+ standard) also increases as many as 81 folds in India as compared to 1947 and total students enrolment at present is 407, 82347 of which boys are 246, 37332 and girls are 161,45015.

Now, India has the largest higher education system in the world, with 31,000+ institutes compared with 6,742 in USA and 4,297 in China. Besides several other causes involved in declines amphibian population globally, one of the major cause is sacrificing amphibian (toad) in the laboratory of 10+ standard schools, colleges and universities and majority of the senior teachers advocating for animal (fish, toad, reptiles, birds and mammals) dissection ignoring model chart or virtual laboratory. In India and in south-east Asia there is a general tendency to admit in science stream (more than 40% + students) rather than social science discipline. If estimated for India only, we will find that more than 29, 36, 32884 nos. of amphibians (10+ standard-2 + Graduation-3 and Post Graduation-3 i.e. each student sacrificing minimum 8 nos.) is being sacrificed every year for last few decades.

Alteration in global weather patterns can change breeding behaviour, affect reproductive success, decrease immune functions and increase their sensitivity to chemical contaminants. Researchers have found that

UV-B radiation can kill amphibians directly, and can cause sub-lethal effects, such as slowed growth rates and immune dysfunction (Realya, 2005). Following an extensive campaign by PETA India, scientists and other concerned people, the Ministry of Environment and Forests (MoEF) has issued guidelines to the Medical Council of India (MCI), Pharmacy Council of India (PCI) and University Grants Commission (UGC) to completely stop dissection and experimentation on animals for training both undergraduate and postgraduate students and to use non-animal methods of teaching. The Ministry of Environment and Forests agreed with PETA that animal experiments should be stopped when alternatives are available, according to section 17(d) of the Prevention of Cruelty to Animals Act, 1960 in India. In 2011 fifteen progressive universities—including Nalanda Open University, Madurai Kamraj University, Pondicherry University, Thiruvalluvar University, Bharathiar University, and Jamia Millia Islamia—have already ended animal dissection on their campuses or are in the process of phasing it out. The U.S. affiliate office has shown that dozens of studies have repeatedly proved that non-animal teaching methods are equivalent, and often superior to dissection in providing students with an understanding of anatomy and complex biological process. We the answerable civilians must be watchful about animal cruelty and loss of biodiversity. Audio-visual techniques are now being used to understand animal anatomy, digestive, and circulatory systems. Computer programmes such as VisiFrog, accessible from Ventura Educational Systems (910 Ramona Ave., Suite E, Grover Beach, CA 93433; 1-800-473-7383), can be used as either a lesson or a test. Operation Frog, prepared by Scholastic, Inc. (2931 E. McCarty St., P.O. Box 7502, Jefferson City, MO 65102; 1-800-541-5513), costs \$79.95 to \$99.95, depending on the type of software. It simulates an actual dissection on the computer. University of Virginia professor Mabel B. Kinzie compared students who used the interactive "frog" videodisc. She developed with those who cut up real frogs. She found that students using the computer programme learned anatomy just as thoroughly—in an environment that didn't smell of formaldehyde or require killing a living animal. The Animal Welfare Institute along with Digital Frog International is jointly offering a free full site license of the Digital Frog 2.5 software valued just \$884 for schools who agree to stop

toad dissection. We have to remember at least this issue is not a conflict between the academicians and the

activists. The only thing standing to be achieved in this tussle is our humanity.

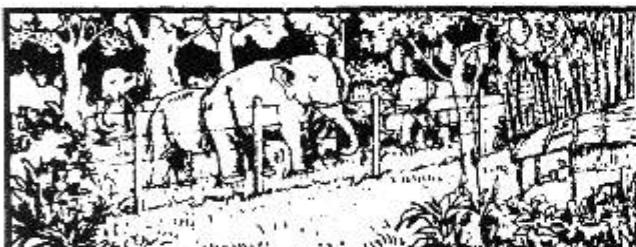
#### References

- U.G.C. (2013). List of universities in India last modified on 4 April 2013 at 16:34, University Grants Commission Act, (1956) Union Human Resource Development Ministry (Govt. of India).
- Realya, R.A., (2005) The lethal impact of insecticides and herbicides on biodiversity and productivity of aquatic communities. *Ecological Adaptations*, 15:1118-1124.

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