

11th INTERNATIONAL EDUCATIONAL TECHNOLOGY CONFERENCE

Proceedings Book (Volume I)

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Acknowledgement

Dear Guests...

Welcome to the 11th International Educational Technology Conference IETC-2011.

"The International Educational Technology Conference (IETC)" series is an international educational activity for academics, teachers and educators. This conference is now a well-known educational technology event and the number of paper submissions and attendees increase every year. It promotes the development and dissemination of theoretical knowledge, conceptual research, and professional knowledge through conference activities, the conference proceeding book, and the Turkish Online Journal of Educational Technology (TOJET). Its focus is to create and disseminate knowledge about the use of instructional technology for learning and teaching in education. This year, IETC-2011 received almost 500 applications. The conference academic advisory board accepted 350 applications.

The first of "The International Educational Technology Symposium (IETS)" and the second of "The International Educational Technology Symposium (IETS)" were held at Sakarya University in Turkey in 2001 and 2002. The third one was at Eastern Mediterranean University in the Turkish Republic of Northern Cyprus in 2003, and the fourth one at Sakarya University in Turkey in 2004. The fifth International Educational Technology Conference (IETC) was organized at Sakarya University in Turkey in 2005. The Sixth International Educational Technology conference was held in Turkish Republic of Northern Cyprus. In 2007, the seventh conference was organized at Near East University in the Turkish Republic of Northern Cyprus. After then The 8th International Educational Technology Conference was held at Anadolu University in Turkey in 2008. The 9th International Educational Technology Conference was organized at Hacettepe University in Turkey in 2009. IETC-2010 was organized at Bogazici University in 2010. IETC-2011 conference organized at Istanbul University in 2011. IETC-2012 will be organized at Tsinghua University, Beijing, China in 2012.

The International Educational Technology Conference aims to diffuse the knowledge and researches among academicians and lead to development in educational technology and instructional technologies.

Without the authors and participants, IETC-2012 would, of course, have been impossible. We would like to sincerely thank all of you for coming, presenting, and joining in the academic activities. We would also like to thank all of those who contributed to the reviewing process of the "IETC - 2012" conference papers, which will be also published in TOJET. And finally, we would like to thank Sakarya University, İstanbul University, organizing team and The Turkish Online Journal of Educational Technology (TOJET) for successfully organizing and hosting "IETC-2011" in Istanbul, Turkey.

We have lots of participants from 28 different countries. Should you have any enquiries regarding IETC conference, please do not hesitate to contact with us for any additional information you may require.

Finally, we would like to wish you all a pleasant stay in Istanbul-Turkey and safe return back home. I hope that IETC-2011 will be a meeting you will pleasantly remember.

I hope we will meet again at the 12th International Educational Technology Conference - IETC-2012.

Thank you...

Prof. Dr. Aytekin İŞMAN

General Coordinator & Founder of IETC

Editor in Chief of TOJET

May, 20 2011

ÖNSÖZ

Bilişim teknolojilerini, eğitimin her alanında özellikle de sınıf içerisinde etkin olarak kullanabilmek için yoğun bir çaba içinde olan Milli Eğitim Bakanlığı her türlü yenilik ve gelişmeyi, okul yöneticileriyle ve öğretmenlerle buluşturmayı amaç edinmiştir. Her çocuğun özgünlüğünü koruyarak, kendini geliştirmesi, kendisinin farkında olması, özgün ve lider bir kişi olarak yaşamını sürdürmesi hiç kuşkusuz verilen eğitimin niteliği ile yakından ilgilidir. Bakanlığımız, son yıllarda en değerli varlıklarımız olan çocuklarımıza sunulan eğitimin niteliğini en üst seviyeye çıkarmak için çok yönlü çalışmalarla birçok projeyi hayata geçirmeye devam etmektedir. Yürütülen bütün bu projelerin temel amacı; okullarımızı iyileştirmek/geliştirmek, öğretmen, okul ve eğitim yöneticilerinin etkililiğini artırmak ve çocuklara sunulan eğitim imkânlarını en üst noktaya çıkarmaktır. Bir başka ifade ile eğitimde yapılan her türlü reform ve çalışmaların temel amacı; çocuklarımızın kendilerini tanımaları, ifade etmeleri ve kendi potansiyellerini keşfetmelerinin zeminini oluşturan olanakları sağlamaktır.

Bakanlığımız, dünyadaki değişmelere paralel olarak daha iyi bir gelecek için bilişim teknolojilerini merkeze alan, e-Türkiye, e-meb e-toplum, e-eğitim, e-okul, e-gelecek kavramları altında, bilişim teknolojilerini bir amaç değil, milli eğitimimizin temel hedeflerine ulaşması için bir araç olarak görmektedir. Bu bağlamda bilişim teknolojilerinin eğitim ve okul yaşamının her alanında etkin olarak kullanılması temel amaçlarımızdandır.

Bilişim teknolojilerinin eğitimde etkin kullanılması bağlamında önemli projelere ilham kaynağı olan ve gerekli kurumsal bilgileri sağlayan Bakanlığımız ile İstanbul Üniversitesi ve Sakarya Üniversitesi işbirliğinde 25-27 Mayıs 2011 tarihleri arasında İstanbul Üniversitesinde düzenlenen 11.Uluslararası Eğitim Teknolojileri Sempozyumudur. Bu bağlamda bilişim teknolojilerinin öğrenme ve öğretme süreçlerinde etkin kullanılması için akademisyenler ve öğretmenlerimiz tarafından bildiriler sunulmuştur.

Sempozyuma katkı veren, Bakanlığımız çalışanlarına, başta İstanbul Üniversitesi ve Sakarya Üniversitesinin akademisyenlerine, Sempozyum kurullarında yer alan herkese katkı ve katılımlarından dolayı teşekkür eder, başarılarının devamını dilerim.

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Keynotes

Date	Time	Topic	Keynote Speaker
25-05-2011	11:00 - 11:30	Distance Education in Istanbul University	Prof. Dr. Alper Cihan
25-05-2011	11:45 - 12:45	Mobile Learning: Reaching the Tipping Point	Prof. Dr. Terasa FRANKLIN
25-05-2011	14:15 - 15:15	Learner Continuum Model in Knowledge Construction	Prof. Dr. Rozhan M. IDRUS
26-05-2011	09:00 - 10:00	Digital Learning	Prof. Dr. Ian JUKES
26-05-2011	13:30 - 14:30	Shall I watch, listen, do or argue? A journey from page-turning to argumentation in ICT based settings	Prof. Dr. Yavuz AKPINAR
27-05-2011	09:00 - 10:00	Total Scenario Response Model for Digital Learning Playground	Prof. Dr. Gwo-Dong CHEN

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MODELING OF NEW IT STUDIES THROUGH DOZEN ASPECTS AND ISO/IEC STANDARDIZATION

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APSTRACT

This paper presents an original model $12 \times n$ (covering 12 aspects in the n dimensions): 12 goals, 12 processes of curriculum activities, 12 expected resulting competencies of students etc. According to the presented model is shown the comparative analysis of the modified IT curriculum, including all the key principles and ACM/IEEE recommendations, as well as compliance with international programs with other universities in the region and the EU. Results of the model application are presented in the curriculum changes for IT, as complex process with many participants, and viewed through the prism of ISO/IEC standardization of IT through 12 segments.

Keywords: *IT, modeling, curriculum, standardization*

INTRODUCTION

Information technology (IT in further reading) are an enormously vibrant field that emerged in the middle of the last century as our society experienced a fundamental change from an industrial society to an information society, and in the end of the 20th century IT became a key element of the knowledge society.

IT are not just technology for the processing and use of information, and they have become an integral component of the curriculum as the new programs at the interdisciplinary, multidisciplinary, transdisciplinary (IMT in further reading) studies and similar directions in other areas/fields, providing a basis for effective and creative use of knowledge as key factors in the development of society. Therefore, the education and training of young people must not be left out of IT.

The aim of inovating IT curriculum is to produce a new model curriculum that could serve as a model for the IT basic academic studies and recommend ways of integrating curriculum with research and with professional practice. The curriculum model should incorporate innovations, best practices, continuous monitoring of news in the standardization, but need not be constrained by traditions that no longer make sense.

The IT field has been maturing rapidly and intensively, and from a set of technology-oriented, autonomous disciplines it has become a profession. The specialties of the profession are many (over three dozen) and can be "placed" in the 12 ISO/IEC standardized fields or be grouped into three sets (Denning J. P., Athale R., Dabbagh N., Menascé D., Offutt J., Pullen M., Ruth S.(2000)) :

1 The IT specialties are concerned with aspects of computing and networking technology itself (Artificial intelligence, Computer science, Computer engineering, Computational science, Database engineering, Graphics, Human computer interaction, Network engineering, Operating systems, Performance engineering, Robotics, Scientific computing, Software architecture, Software engineering, System security);

2. IT-Intensive disciplines (Bioinformatics, Cognitive science, Digital library science, E-commerce, Genetic engineering, Information science, Information systems, InfoSec and Privacy, Instructional design, Knowledge engineering, Management information systems, Multimedia design, Telecommunications); and

3. IT infrastructure areas are staffed by professionals who implement, maintain, operate, and repair IT (Computer technician, Help desk technician, Network technician, Professional IT trainer, System administrator, Web services designer, Web identity designer).

The IT field is thus much more complex in character than computer science and presents completely new challenge to educators. Because the IT field is dominated by professional specialties, not just intellectual disciplines, its students need to be immersed in practice as much as in a study of concepts and principles. They need to learn to be professionals, which means they need to learn and embody their specialty's body of knowledge, its standards of practice, and its ethical codes of conduct.

