

Vol. 3  
No. 5  
September  
2011

I PART

ISSN: 2075-4124  
E-ISSN: 2075-7107

REFEREED JOURNAL

# International Journal of Academic Research

BEYNƏLXALQ ELMİ ARAŞDIRMALAR JURNALI

## FAMOUS AZERBAIJANI SCIENTISTS



### Acad. Omar Eldarov (1921)

**O**mar Hasan oglu Eldarov-Azerbaijani sculptor-monumentalist, Honoured Art Worker of Azerbaijan (1961), People's Painter of Azerbaijan (1982), full member of the National Academy of Sciences of Azerbaijan (2001), full member of the Russian Academy of Arts (1988), president of Azerbaijan State Academy of Fine Arts (2001), academician.

Omar Eldarov was born on December 21, 1927. From 1942 to 1945 studied at Azerbaijan State Art School named after Azim Azimzade. In 1951, graduated from the Institute of Painting, Sculpture and Architecture named after I.Y.Repin. Was the student of such great masters as A.T.Matveyev, M.A.Kerzin, V.B.Pinchuk.

In 1980, he was awarded the USSR State Prize for monument-ensemble to Sadriddin Ayni in Dushanbe (1979). Omar Eldarov is the holder of the "Order of the Badge of Honour". He was awarded the State Prize of the Azerbaijan SSR for the monument to P.A.Dzhaparidze in Baku (1980). The most famous works of the master are-monument to Fizuli in Baku (1962), with the sculptor Tokay Mammadov), for which he was awarded silver medal of the USSR Academy of Arts; monument to Natavan (1960), Baku, with architects E.Ismayilov and F.Leontyev); conductor Niyazi's portrait (1984); "Head of laughing worker" (1984); "Mahatma Gandhi" (1987); "Avicenna" (1980); Rabindranath Tagore (1987).

The author of Sattar Bahlulzade's portrait, Muslim Mogomayev's bust, monument to Huseyn Javid (1993), monument to Mammed Amin Rasulzade (1995), Azim Azimzade (2002), Rashid Behbudov's bas-relief (2002), Nizami Ganjavi's bust in Cheboksary (2004), gravestones of Zarifa Aliyeva, Haydar Aliyev, Sikhali Gurbanov, Tofiq Guliyev in the Alley of Honorable Burial in Baku, gravestone and bas-relief of Uzeyir Hajibeyov in Vienna (2005), Niyazi's bas-relief (2006), monument to Haydar Aliyev in Nakhchivan (2006), monument to Ihsan Doğramacı in Ankara (2003), memorial plaque of Tofiq Guliyev (2006), memorial plaques of Haydar Aliyev and academician Zarifa Aliyeva (2008).

Omar Eldarov was awarded "Gold medal" for the contribution and development of Azerbaijani visual arts during solemn ceremonies dedicated to 65th anniversary of the Azerbaijan Artists Union. He was awarded commemorative medal "For merits for Academy in honor of 250th anniversary", in the honor of 250th anniversary of the Russian Academy of Arts [2007].

From 1995 to 2000, Omar Eldarov was the deputy of parliament- the National Assembly of Azerbaijan. Married, has three children: daughters-Lala Eldarova (art critic), the Institute of Arts and Architecture of the National Academy of Sciences of Azerbaijan, Kamilla Eldarova (painter), son-Muslim Eldarov (sculptor, publisher of the State book of Azerbaijan-2002, magazine "Caspian").



*The nation's future success lies with science and education!*

**Heydar Aliyev**  
*National Leader of Azerbaijan*

# **INTERNATIONAL JOURNAL *of*** **ACADEMIC RESEARCH**

**Vol. 3. No. 5**

September 30, 2011

2 cildde- in 2 parts

**I HISSƏ – 1<sup>st</sup> PART**

**Daxil edildiyi elmi bazalar:  
Indexed by:**

**Master Journal List** (Thomson Reuters, USA),  
**Zentralblatt MATH** (Springer-Verlag, European Mathematical Society, Germany),  
**DOAJ** (Lund University, Sweden),  
**ULRICH's Web** (USA)  
**EBSCO-Academic Search Complete** (USA)  
**SCIRUS** (Elsevier, Netherlands),  
**IndexCopernicus International** (Poland), **JournalSeek** (USA)

**PROGRESS" IPS LLC**  
Baku, Azerbaijan, 2011



# INTERNATIONAL JOURNAL of ACADEMIC RESEARCH

Vol. 3, No. 5, Sept. 30, 2011, 1<sup>st</sup> Part

All rights reserved.  
No part of this journal may be reprinted or  
reproduced without permission in writing from  
the publisher, the "Progress IPS LLC"  
Publishing bimonthly  
Print ISSN: 2075-4124  
Online ISSN: 2075-7107  
National reg. No: 2996

## Editorial Board

### Head consultants:

**Acad. Isa Habibbayli**  
Rector of Nakchivan State University,  
Active member of Azerbaijan National  
Academy of Sciences

**Prof. Dr. Rasim Aliguliev**  
Corresp. member of Azerbaijan National  
Academy of Sciences

### Editor-in-Chief:

**Javid A. Jafarov**

### Regional Executive Editors:

**Prof. Dr. M.A.M. Ferreira**  
(Portugal)  
**Prof. Dr. M.S. Gaballah**  
(Egypt)  
**Prof. Dr. Sarwoko Mangkoedihardjo**  
(Indonesia)  
**Prof. Dr. Nadejda Savina**  
(Russia)  
**Prof. Dr. Nabi Bux Jumanl**  
(Pakistan)  
**Prof. Dr. Eugen Axinte**  
(Romania)  
**Prof. Dr. Ayshe Sagsoz**  
(Turkey)  
**Prof. Dr. Oliwer Osuagwu**  
(Nigeria)  
**Dr. Marek Smoluk**  
(Poland)  
**Dr. S. Georgoulas**  
(Greece)

### Editorial office:

97/2, I.Qutqshinli str., Baku,  
Azerbaijan  
Web: [www.ijar.lit.az](http://www.ijar.lit.az)  
E-mail: [edit@ijar.lit.az](mailto:edit@ijar.lit.az)

© IJAR, 2011  
© "Proqres" IPS LLC  
© Lit.az -Science Portal

### Indexed by:

Master Journal List (Thomson  
Reuters), Zentralblatt MATH  
(Springer-Verlag), DOAJ, ULRICH,  
SCIRUS (Elsevier), EBSCO-  
Academic Search Complete,  
IndexCopernicus International,  
JournalSeek

### Honorary Editors:

**Acad. Arif Mekhtiev**

Chairman of the Higher Attestation  
Commission under the President  
of the Republic of Azerbaijan

**Acad. Mahmud Kerimov**

President of Azerbaijan  
National Academy  
of Sciences

### International Advisory and Editorial Board

**Prof. Dr. S.C. Weeber** (USA)  
**Prof. Dr. R. Raducanu** (Romania)  
**Prof. Dr. B. Barratt** (USA)  
**Prof. Dr. R.A. NeSmith** (USA)  
**Prof. Dr. M. Georgiev** (Bulgaria)  
**Prof. Dr. P.H. Siegel** (USA)  
**Prof. Dr. M. Shaughnessy** (USA)  
**Prof. Dr. I. Duyar** (USA)  
**Prof. Dr. M. Merzouki** (Morocco)  
**Prof. Dr. P.E. Kaldis** (Greece)  
**Prof. Dr. M.A. El-Tawil** (Egypt)  
**Prof. Dr. I. Alghazo** (UAE)  
**Prof. Dr. F. Tchier** (Saudi Arabia)  
**Prof. Dr. V. Balan** (Romania)  
**Prof. Dr. T. Aifa** (France)  
**Prof. Dr. D. Eckstein** (USA)  
**Prof. Dr. C. Tunc** (Turkey)  
**Prof. Dr. S. Mahmood** (Pakistan)  
**Prof. Dr. G. Bacik** (Turkey)  
**Prof. Dr. B.G. Nita** (USA)  
**Prof. Dr. A. Joarder** (Saudi Arabia)  
**Prof. Dr. O.M. Waldman** (USA)  
**Prof. Dr. S.J. Newman** (USA)  
**Prof. Dr. R.C. Sharma** (S.America)  
**Prof. Dr. K. Baffour** (S. Africa)  
**Prof. Dr. J.C.T. Oliveira** (Portugal)  
**Prof. Dr. M. Abdel-Aty** (Egypt)  
**Dr. M. Andrade** (Portugal)  
**Dr. M.J. Uddin** (USA)  
**Dr. E. Hewitt** (Spain)  
**Dr. M. Salehi** (Iran)  
**Dr. I. Kyaruzi** (England)  
**Dr. F.L. Reis** (Portugal)  
**Dr. S. Yilmaz** (Turkey)  
**Dr. M. Benhamou** (Marocco)  
**Dr. S.A. Musa** (UAE)  
**Dr. M. Karakuyu** (Turkey)  
**Dr. M. Alias** (Malaysia)  
**Dr. M. Mikulak** (USA)  
**Dr. C. Miller** (England)  
**Dr. A. Khanchobani** (Iran)  
**Dr. J. Penm** (Australia)  
**Dr. A. Al-Maghaireh** (UAE)  
**Dr. A. Mak** (Singapore)  
**Dr. F. M. Arain** (Canada)  
**Dr. A. Endong** (Cameroun)  
**Dr. R.K. Ojikutu** (Nigeria)  
**Dr. I. Kitowsky** (Poland)  
**Dr. D. DeTombe** (Netherlands)  
**Dr. Fazal-ur-Rahman** (Pakistan)  
**Dr. Samina Malik** (Pakistan)

### Beynəlxalq Elmi Araşdırmalar Jurnalı (BEAJ)

2009-cu il, Milli Mətbuat Günündə Azərbaycan Respublikası Ədliyyə Nazirliyi tərəfindən rəsmi Dövlət Qeydiyyatına alınıb (№ 2996). BEAJ Beynəlxalq ISSN Mərkəzində (Paris, Fransa) qeydiyyatdan keçərək mətbu orqan kimi ISSN 2075-4124, elektron jurnal kimi E-ISSN 2075-7107 nömrələri ilə beynəlxalq nəşr statusu qazanıb.

Jurnal dünyanın 63 ölkəsinə (universitet və kitabxanalar) paylanır. Jurnalın təsisçisi "Proqres" İnternet və Poliqrafiya Xidmətləri MMC-dir. BEAJ ildə 6 dəfə - Yanvar, Mart, May, İyul, Sentyabr və Noyabr aylarında dərc olunur. Redaksiyanın yazılı icazəsi olmadan materialların təkrar nəşri, tərcümə edilərək yayılması qadağandır. Məqalələr bir qayda olaraq Beynəlxalq Redaksiya Heyətinin yekun qərarı ilə dərc olunur. Məqalələrin elektron versiyası jurnalın İnternet səhifəsində yerləşdirilir və açıq şəkildə istifadəyə verilir (Elektron ISSN-2075-7107 məhz İnternet üzərindən müəllif hüquqlarının qorunmasına xidmət edir).

Növbəti buraxılış tarixi: 30.11.2011  
Materiallar toplanıb: 25.07.2010-15.08.2011. Çapa imzalanıb: 10.06.2011.  
Format: 60x84 1/8. Şrift: Arial. Səhifələrin sayı: 218 f.ç.v. 28. Tiraj: 300



**1<sup>st</sup> PART**

**HUMANITIES AND SOCIAL SCIENCES**

**ECONOMICS, FINANCE**

**Alexandru Nedelea, Marilena-Oana Nedelea**  
ADMINISTRATIVE SYSTEMS OF THE INTER-WAR  
LEGISLATION IN UNITED STATES OF AMERICA AND EUROPE.....7

**Vitor João Pereira Domingues Martinho**  
AGGLOMERATION AND INTERREGIONAL MOBILITY OF LABOR IN PORTUGAL.....11

**Ishfaq Ahmed, Muhammad Ramzan, Saher Khushi Mohammad, Talat Islam**  
RELATIONSHIP BETWEEN PERCEIVED FAIRNESS IN PERFORMANCE  
APPRAISAL AND OCB; MEDIATING ROLE OF ORGANIZATIONAL COMMITMENT..... 15

**Vitor João Pereira Domingues Martinho**  
THE IMPORTANCE OF INCREASING RETURNS TO SCALE IN THE PROCESS  
OF AGGLOMERATION IN PORTUGAL: A NON LINEAR EMPIRICAL ANALYSIS.....21

**Muhammad Jawad Iqbal, Amran Rasli,  
Low Hock Heng, Huam Hon Tat, Mohamad Bin Bilal Ali, Ibne Hassan**  
KNOWLEDGE ECONOMY AND UNIVERSITY PERFORMANCE.....27

**Vitor João Pereira Domingues Martinho**  
SECTORAL CONVERGENCE IN OUTPUT  
PER WORKER BETWEEN PORTUGUESE REGIONS.....33

**Zafar Zaheer, Aliya Saeed, Arsalan Siraj Mir**  
DETERMINANTS OF CAPITAL STRUCTURE:  
*A Comprehensive Study of Textile Sector of Pakistan*.....38

**PHILOLOGY**

**Tamar Jangulashvili**  
COLIN WILSON: VARIATION OF CRITICAL VISION.....44

**Muhammad Asim Mahmood, Nasir Ali**  
CIRCUMSTANCE ADVERBIALS IN PAKISTANI ENGLISH  
A CORPUS-BASED COMPARATIVE ANALYSIS.....47

**PSYCHOLOGY**

**Daniel Eckstein**  
AN EXISTENTIAL COUNSELOR AT AGE EIGHTY:  
A DIALOGUE WITH CARLTON BECK.....52

**Sofoh H. Hassane**  
THE EMERGENCE AND EVOLUTION  
OF SCHOOL COUNSELING IN GHANA.....57



**SOSIOLOGY**

- Panagiotis Giavrimis, Efstratios Papanis, Myrsine Roumeliotou**  
SOCIAL NETWORKS AND TRUST OF IMMIGRANT STUDENTS  
IN GREEK PRELIMINARY SCHOOLS.....62

**EDUCATION**

- Amina Safdar, Muhammad Imran Yousuf,  
Qaisara Parveen, Malik Ghulam Behlol**  
EFFECTIVENESS OF INFORMATION AND COMMUNICATION  
TECHNOLOGY (ICT) IN TEACHING MATHEMATICS AT SECONDARY LEVEL.....67

- Javed Mustafa, Attaullah, Alam Khan, Liaqat Iqbal**  
HOW TO COMBAT THE TOBACCO USE FOR MAKING TOBACCO  
FREE SOCIETY? SOME SUGGESTIONS WITH EXAMPLES FOR  
ALL SCHOOL TEACHERS.....73

- Farah Shafiq, Aishah Siddiquah**  
EFFECT OF CLASSROOM QUIZZES ON GRADUATE  
STUDENTS' ACHIEVEMENT.....76

- Mushtaq Ahmad Malik, Muhammad Zafar Iqbal**  
EFFECTS OF PROBLEM SOLVING TEACHING STRATEGY  
ON PROBLEM SOLVING AND REASONING ABILITY OF 8<sup>th</sup> GRADERS.....80

- Steven Gerardi**  
FAMILY INCOME AND FATHERS' EDUCATION  
AS A FUNCTION OF HUMAN CAPITAL.....85

- Rukhsana Aziz, Rahmat Ullah Shah, Sareer Khan**  
A COMPARATIVE STUDY OF ATTITUDES OF RELIGIOUS SCHOLARS AND  
AFFECTED FAMILIES OF RURAL AND URBAN COMMUNITIES TOWARDS  
REPRODUCTIVE HEALTH EDUCATION.....90

**MATERIAL CULTURE**

- Fatmir Terziu**  
CROSS-CULTURAL DRESSING IN ISMAIL KADARE'S NOVEL:  
THE BEARER OF ILL TIDINGS-ISLAMO NOX.....93

**BUSINESS ADMINISTRATION, MANAGEMENT SCIENCES**

- Mumtaz Muhammad Khan,  
Suleman Aziz Lodhi, Muhammad Abdul Majid Makki**  
COG-SYNERGY: A MODEL FOR HIGH PERFORMANCE TEAMS.....102

- Zafar Zaheer, Arsalan Siraj Mir, Aliya Saeed**  
PERFORMANCE PERSISTENCE OF MUTUAL FUNDS IN PAKISTAN.....109

- Zafar Zaheer, Muhammad Irfan**  
PICTORIAL WARNINGSON CIGGARETTE PACKS AND  
THE CONSEQUENCES ON BRAND LOYALTY AND MARKET MONOPOLY.....117



- Usman Ghani, Zahid Mahmood**  
FACTORS INFLUENCING PERFORMANCE OF MICROFINANCE  
FIRMS IN PAKISTAN: FOCUS ON MARKET ORIENTATION.....125

## **NATURAL AND APPLIED SCIENCES**

### **AGRICULTURE, PLANT BIOLOGY**

- Retno Diah Puspitorini, Nurul Qomariah, Aminudin Afandi**  
EVALUATION OF TETRANYCHUS SP ON VARIOUS  
LEGUME CROPS FOR THEIR MASS REARING.....133

- Ahmad H. Al-Fraihat, Jalal A. Al-Tabbal**  
EFFECT OF PLANT GROWTH REGULATORS  
ON SOWING RATE OF SWEET MAIZE.....137

### **ENVIRONMENT, URBANISATION**

- Ari Pratiwi**  
FAMILY-BASED MULTILEVEL DEVELOPMENT OF EARLY  
CHILDHOOD RESILIENCE: AN EFFORT TO SUPPORT THE  
FRIENDLY CITY FOR CHILDREN.....142

- Junaidi, Sarwoko Mangkoedihardjo**  
EXTRACELLULAR POLYMERIC SUBSTANCES OF  
BIOLOGICAL SLUDGE FOR BIOSORPTION OF URANIUM IONS.....146

### **ASTRONOMY**

- S. Mohammad Mozaffari, Gh. Rahimi**  
HISTORICAL ANNULAR ECLIPSES.....153

### **COMPUTER SCIENCE**

- Javed Ahmed Mahar, Hidayatullah Shaikh, Abdul Rashid Sangi**  
COMPARATIVE ANALYSIS OF RULE BASED SYNTACTIC AND  
SEMANTIC SINDHI PARTS OF SPEECH TAGGING SYSTEMS.....157

- Saleem Iqbal, Khalid Iqbal**  
LUNGS SEGMENTATION FOR COMPUTER AIDED DIAGNOSIS.....161

### **MEDICINE, BIOLOGY**

- M. Al Mazroah, A. Refat**  
THE VALUE OF DRUG SCREENING BY ELECTONIC  
APPLICATION SYSTEM IN UNINTENTIONAL POISONING IN  
DAMMAM REGIONAL POISONING CONTROL CENTER-KSA.....167

- Hala El-Gindi, Samah Masseur, Maha H. Mahmoud, Hala M. Mokhtar**  
LIPOPROTEIN (A) LEVEL IN INFANTS WITH CHOLESTASIS.....175



**ELECTRICAL ENGINEERING,  
MECHANICAL ENGINEERING, MANUFACTURING**

**Aris Triwiyatno, Mohammad Nuh, Ari Santoso, I. Nyoman Sutantra**  
A NEW METHOD OF ROBUST FUZZY CONTROL: CASE STUDY  
OF ENGINE TORQUE CONTROL OF SPARK IGNITION ENGINE.....178

**Lu'mu**

DEVELOPMENT OF WEB-BASED LEARNING MODEL  
IN THE COURSE DIGITAL ELECTRONIC AT THE TECHNICAL  
DEPARTMENT, STATE UNIVERSITY OF MAKASSAR.....185

**M.C. Ndinechi, O.A. Ogungbenro, K.C. Okafor**  
DIGITAL METERING SYSTEM: A BETTER ALTERNATIVE  
FOR ELECTROMECHANICAL ENERGY METER IN NIGERIA.....189

**I.O. Arukalam, I.C. Madufor**  
EFFECTS OF FILLER LOADING ON SOME MECHANICA PROPERTIES  
OF CALCITE-FILLED LOW DENSITY POLYETHYLENE COMPOSITES.....195

**I.O. Arukalam, I.C. Madufor**  
THE INFLUENCE OF PENETRANT SIZE ON THE  
MOLECULAR TRANSPORT OF AROMATIC SOLVENTS THROUGH  
CALCITE-FILLED LOW DENSITY POLYETHYLENE COMPOSITES.....199

**Shahrokh Shahraki, Nooh Bin Abu Bakar**  
THE ROLE OF ERGONOMICS IN WORKFORCE  
PRODUCTIVITY IN SERVICES COMPANIES.....204

**NEURAL NETWORKS**

**Meisam Nikbakht, Vahid Mohammadzadeh Gharehbagh,  
Yaser Moghani, Azizeh Khanchobani Ahranjani**  
MODELING OF DOUBLE CSTR BY RBF & MLP NEURAL NETWORKS.....211



# DEVELOPMENT OF WEB-BASED LEARNING MODEL IN THE COURSE DIGITAL ELECTRONIC AT THE TECHNICAL DEPARTMENT, STATE UNIVERSITY OF MAKASSAR

Lu'mu

Department of Electronic Engineering, Faculty of Engineering, State University of Makassar (INDONESIA)  
lumu\_taris@yahoo.co.id

## ABSTRACT

The objective of this research was to develop web-based learning model for digital electronic based on the model of Brog and Gall. The results were validated through the class and resulted in increasing the students' competence on Digital Electronics Course at the Technical Department of Makassar State University. Learning packages comprised: 1) a computer based learning course in the form of software that can be downloaded through <http://www.tp-elkadigital.org/>, 2) guidelines for lecturers, and 3) guidelines for students.

**Key words:** web-based instruction, digital electronics course, increasing competence, learning package

## 1. INTRODUCTION

The National Education System works to develop the ability and character forming the nation's dignity and civilization in the framework of the nation's intellectual life. UURI [1] Article 4, paragraphs 1 to 6 stated: 1) Education was held in a democratic and fair and not discriminatory to uphold human rights, religious values, cultural values, and diversity of the nation, 2) Education held as a single unit a systemic open system and multipurposes, 3) Education was held as a civilizing process and the empowerment of learners that lasts a lifetime, 4) Education organized by giving the example, will build and develop the creativity of learners in the learning process, 5) Education organized by developing the culture of reading, writing and numeracy for all members of society, and 6) Education organized by empowering all the components of the community through participation in the administration and quality control of education services. Learning should not be given by the lecturers, because the learning activities can be done by designers and developers of learning resources, such as a learning technologist or a team of experts consisting of media experts and expert materials or content of the material. Various learning approaches can be helpful in achieving learning goals, and accommodate student backgrounds and abilities. Learning activities should be determined based on student characteristics, course characteristics, and consider the various obstacles that may be encountered in the presentation of lecture material.

Education is a process that lasts a lifetime (long-life education). This principle if implemented consistently will be able to influence the curriculum quickly, which no longer contain the material and the tradition is to know, but cored on tools to develop knowledge and technology further. Education can take place anytime and anywhere, which is when and where appropriate to the circumstances and needs of students. Lu'mu [2] observed that one of the required students at Department of Education Electronics Engineering (PTA) Faculty of Engineering (FT), State University of Makassar (UNM) is the ability to digital electronics materials, which can be obtained through a variety of learning resources. But the reality facing today in the FT PTA Programs UNM shows that one source of learning is a web-based learning model. The lecturers believed that this web-based learning can help the success of the learning process with a good digital electronics (*interviews with Faculty and Chairman of the Department of PTA FT UNM, June 2009*).

Miarso [3] stated that learning is a deliberate effort, aims, and controlled so that others learn or change are relatively sedentary in others. Gagne and Briggs [4] argued that learning consisted of a set of events that affect students such that there is a process of learning. Learning undertaken by students in particular learning Digital Electronics can certainly improve their competence. Understanding of the model in this study refers to the definition expressed by Miarso [5] that the model is a representation of a process in graphical form and/or narrative, by showing the main elements and structure. Framework for Web-based learning model was developed based on the theoretical framework of learning Reigeluth and Merrill [6] who said that there are three main components that must be considered in developing learning models, namely: 1) learning conditions, 2) teaching methods, and 3) procedure of learning activities. Next Santrock [7] supported that the students who follow the web-based learning needs to have a learning principle of self regulation, which bring students and monitor their own thoughts, feelings, and behaviors to achieve a goal. Then Bloom [8] stated that a thorough study of theory and philosophy in membelajarkan and learning associated with learning strategies. David and Sorrell [9] advised through a thorough study of students learning to master the learning materials, standards of conduct so as to achieve the learning objectives previously defined, in accordance with the speed and way of learning.

Web-based learning model also adheres to the principle of networked learning. Nabbagh [10] showed the relationship between long-distance learning (distance learning), networked learning (online learning) and web-based learning. Then Miarso [3] said that education is open conceptually provides the opportunity for anyone, at any age, to obtain any education, than anything and anybody, whenever needed, anywhere, any way possible, as well as with various patterns that complement each other. Eggen and Kauchak [11] suggested the definition of



learning based on cognitive perspective, that is: learning is a change in mental structure that gives individuals the capacity to demonstrate change. Next Fosnot [12] suggested the definition of learning according to constructivist perspectives. Reigeluth [13] suggested that learning outcomes are observable behaviors that demonstrate the results of one's learning, and Gagne and Briggs [4] said that the results obtained by studying the ability of a person after he followed a specific learning process.

Definition of information systems according to Hall [14] is a series of formal procedure in which the data are grouped, processed into information, and distributed to users. According to Alter [15] it includes information technology hardware and software to implement one or a number of processing tasks such as data capture, transmit, store, retrieve, manipulate, or display the data. While Martin [16] defined information technology is not just limited to computer technology (hardware and software), but also includes communications technology to transmit information. Furthermore, Lucas [17] stated that information technology is any technology that is applied to process and transmit information in electronic form. Then Snelbecker [18] said that based on information theory in mind that the delivery of information from sender to receiver, put the concept of understanding and information processing operations are defined as sentences that can be understood. Website is a collection of Web pages associated with other files that are interrelated. According Santrock [7] the web is a hypermedia information retrieval system that connects various internet contents, including text and graphics. In a website there is a page known as the home page. Jhonsen [19] said that the home page is a page that was first seen when someone visits a website.

Digital Electronics is a vehicle and the development of calculators, computers, integrated circuits, the binary 0 and 1. Team Lecturers of UNM FT PTA [20] stated that the contents of the subject matter of digital electronics in the curriculum department FT PTA UNM broadly divided into eight sub-sections: 1) number system, 2) logic gate, 3) logic technology; 4) registers bistabil and slide, 5) counter and timer, 6) memory device, 7) password; and (8) analog and digital conversion. Richard [21] said that nearly everyone has been accustomed to use the decimal system, or denary, ie with a base 10 number system, which has 10 pieces of symbols, namely 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. Abdul Kadir and Terra CH. Triwahyuni [22] stated that the system used to encode the characters there are many macamk, namely ASCII and ANSI. Logic gates by Roger [23] is a two-state devices, ie zero volts which states logic 0 (or low) and a fixed voltage which states the logic 1 (or higher). Furthermore, Alan B. Marcovitz [24] said the basic logic gate consists of, AND, NAND, OR, NOR, NOT, XOR, EXNOR. The basic form of digital circuit blocks, and each is a logic gate. We will use logic gates to binary operations, which raised the term binary logic gates.

Presentation strategy learning is web-based digital electronics means or effort to achieve a goal of learning. Web-based learning is the result of integration of information technology into education, therefore, the students will interact with friends, and lecturers in various ways based on the nature of the task and preferred learning styles are different for each individual. This can be done with a web-based learning model. The concept of web-based learning in the Digital Electronics Course in line with the opinions Miarso [3] about the education which is open conceptually provides the opportunity for anyone, at any age, to obtain any education, than anything and anybody, whenever needed, in anywhere, any way possible, and with various patterns that complement each other. Therefore it is very important to develop a web-based learning model in Digital Electronics Course.

## 2. MATERIALS AND METHODS

This study aimed to develop a web-based learning model in the Digital Electronics course, conducted in the Department of UNM FT PTA for six months from January to July 2009. The object of this study was a Web-based learning model is designed for learning digital electronics. The subjects of this study were students who follow courses of digital electronics.

There were two types of instruments used in research and development of learning models of this Web-based digital electronics, namely: 1) grains of questions for the observation and interview, 2) grains of questions and statements as outlined in the questionnaire include: a) to test the preliminary research instruments; b) for preliminary research, c) for formative evaluation, including: evaluation of peers, evaluation experts, and evaluation of a limited scale.

Data collected in this study were qualitative and quantitative data. Source data were students, professors, laboratory assistants, laboratory chief, and chairman of UNM's Department of PTA FT. To capture data obtained from students related to web-based learning model in the course of digital electronics, developed the research instrument that was adopted from an instrument in his dissertation research Rinderiyana "Development of Virtual Models in the Framework of Mastery Learning Writing for Teachers Popular Trustees" in 2009 and Laksmi Nurharini in his dissertation "Development of a Model Course in Marketing Management Tutorial for Students Open University (UT)" in 2006. Instrument is used as a reference in the development of the observation sheet, interview guidelines and questionnaires in this study.

Qualitative data analysis described in the form: narrative text and images. Data analysis techniques trial results in the development of web-learning model were descriptive. Data obtained using the formula described by the following percentages: the percentage of answers =  $f / nx 100\%$ .  $f$  = frequency of subjects who chose alternative;  $n$  = total number of subjects.

## 3. RESULTS AND DISCUSSION

### 3.1. Conceptual Model

Conceptual model is a manifestation of the conceptualization of the theories and principles underlying the design of web-based learning in the Digital Electronics course, described as an algorithm. Conceptual model in the



design of this learning system is to use a model Addie namely Analysis, Design, Development, Implementation, and Evaluation. Stages are:

The first step, the analysis of performance analysis and needs analysis or needs assessment. The second step is necessary to clarify the learning program designed so that the program can achieve the goal of learning as expected. The third step, namely the development activities include make, buy, and modify teaching materials or learning materials to achieve the learning objectives that have been determined. The fourth step, implementation is the realization of the design and development of learning models, whose main purpose is to guide students to achieve learning objectives or competencies. The fifth step, evaluation of knowing: 1) student attitudes towards learning activities as a whole, 2) an increase in self-competence is the impact of student participation in learning programs, and 3) the perceived benefits by the College as a result of increased student competence after following the program of learning.

### 3.2. Procedural Model

This model embodies the seven stages of design and development of web-based learning in the course Digital Electronics.

### 3.3. Physical model

Physical model of the physical form of a web-based learning products in the digital electronics course that can didownload on <http://www.tp-elkadigital.org/> address, consisting of: 1) teaching materials that can be downloaded; and 2) to guide faculty and students.

### 3.4. Results Evaluation and Revision Products

Evaluation of the field of peers Digital Electronic Materials, Information Technology (IT), and Technology Education which takes place during the design model of learning takes place. They advise the look and layout. Furthermore, the response of the Expert Content: Very feasible, an alternative learning alongside face-to-face lectures. Experts TP: It meets the learning needs of students regarding both the goals, presentation and follow-up from the description presented. And expert IT: learning is very effective, efficient and attractive. Effective because of the self-learning and anytime, free learning, providing ample opportunity in an attempt to understand learning with the target completely. Efficient in terms of time and interest in learning is also felt to look when we access this learning. After getting feedback from peers and experts, will be revised product.

### 3.5. Trial Results

Implementation stages of product development learning model of web-based Digital Electronics course, is the stage of field trials. To collect data that can be used as a reference in determining the level of effectiveness, efficiency, and appeal of Web-based learning model the digital electronics course. Implementation of field trials was conducted in two phases, namely the limited scale of the first stage of evaluation by 10 respondents, conducted on June 30, 2010. The result is 1) Students can quickly access the web learning digital electronics through [www.tp-elkadigital.org](http://www.tp-elkadigital.org), 2) Students are easy to find material in digital electronics online learning, and 3) In general, the technical problems that students perceived little such as logging slow because password is incorrectly entered, the Internet network disconnected. And the limited scale of the second stage of evaluation by 25 respondents, conducted on July 2, 2010. The result is (a) Students can quickly access the web learning digital electronics through [www.tp-elkadigital.org](http://www.tp-elkadigital.org); (b) Students are easy to find material in digital electronics online learning, (c) In general, the technical problems which students felt just a little bit like login is slow due to enter the wrong password, an internet connection is lost, (d) The purpose of learning is presented to help students, (e) Guidance lecturers help students, (f) Lecturer of the time to chat with students, (g) Lecturer proofread and provide feedback as soon as possible (h) Facilities discussion forum can be used by students, and (i) facilities can be utilized chats between students.

### Student Learning Outcomes through the Web-Based Learning Digital Electronics Course (Effectiveness, Efficiency, and Fascination)

Score respondents' assessment of learning results showed that the average score of 3, meaning easy to understand and motivate more students than before to follow web-based learning courses of digital electronics. Data from pre-test and post-test respondents showed an average pre-test web-based learning in a digital electronics course at 9.317, with a standard deviation of 1.535, average post-test web-based learning in the course of digital electronics with a standard deviation of 6.715 of 2.658. It can be stated that there are significant differences between pre test and post test learning web-based digital electronics. Thus, the model of learning was effective by web-based digital electronics. Efficient trial results in this study demonstrated the students accessed to learning digital electronics over the web anywhere and anytime as their respective conditions, which are known from observations through the logs and work about post-test. While the appeal, judging from the tendency of students to open a web learning [www.tp-elkadigital.org](http://www.tp-elkadigital.org) digital electronics, and continued to read the material, do the tasks independently, and test competence, especially in the interest of student learning.

## 4. CONCLUSION

Process design and development of web-based learning model in the Digital Electronics course was effective using research and development. Lecturers can design and develop web-based learning models. In the digital electronics course one can follow the following 3 steps. First, the conceptual model used five stages, namely analysis design, development, implementation, and evaluation. Second, procedural model used



procedure Borg and Gall, with seven steps. Third, physical model of the web-based learning products in the digital electronics course can be downloaded on <http://www.tp-elkadigital.org/>.

## REFERENCES

1. UURI, Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional. Jakarta: Departemen Pendidikan Nasional Republik Indonesia, 2005.
2. Lu'mu, Pengembangan Model Pembelajaran Berbasis Web dalam Matakuliah Elektronika Digital, Disertasi. Jakarta: Program Pascasarjana Universitas Negeri Jakarta, 2010.
3. Miarso, Yusufhadi. Menyemai Benih Teknologi Pendidikan, Jakarta: Prenada Media, 2004.
4. Gagne, Rober M. dan Briggs, Leslie J. Principles of Instructional Design. New York: Holt Renehart and Winston, 1979.
5. Miarso. "Survei Model Pengembangan Instruksional", dalam makalah di Pascasarjana Universitas Negeri Jakarta, 2007.
6. Reigeluth, Charles M. & Merrill (Ed), Instructional Design, Theories and Models: An Overview of Their Current Status. New Jersey: Lawrence Erlbaum Associates Publishers, 1983.
7. Santrock, John W. Educational Psychology. Texas: McGraw-Hill Company, Inc, 2004.
8. Bloom, Benjamin S. Taxonomy of Objectives: The Classification of Educational Goals, New York: Longman Inc, 1956.
9. David dan Sorrel, Mastery Learning. <http://chiron.valdosta.edu/>, diakses tanggal 1 Pebruari 2009.
10. Nabbagh, Nada dan Brenda Bannan-Ritland. Onlien Learning: Concepts, Strategies, and Aplication. New Jersey: Pearson Education, Inc. 2005.
11. [Eggen, Paul dan Kauchak, Don. Educational Psychology Windows on Classrooms, Third Edition. USA: Prentice Hall Inc., 1997.
12. Fosnot, Catherine T., Constructivism Theory, Perspectives, and Practice. New York: Teachers College, Columbia University, 1996.
13. Reigeluth, Charles M. Instruction Design Teories and Models Vol.II A New Paradigme of Instructional Theory. London: Lawrence Erlbaum Associates, Publishers Inc., 1999
14. Hall, Kriteria dari sistem informasi, <http://www.google.com/search> tanggal 3 Pebruari 2009
15. Alter. Information Systems: A Management Perspective. The Benjamin / Cummings Publishing Company, Inc., 1992.
16. Martin Dougiamas dan Peter Taylor, contributed towards the development of Moodle - a popular open-source course management system (moodle.org). <http://www.editlib.org/noaccess/13739>, diakses tanggal 17 Juli 2010.
17. Lucas, Henry J. Information Technology for Management, New York: McGraw-Hill, 2000.
18. Snelbecker, Glenn E. Learning Theory, Instructional Theory, and Psychoeducational Design, New York: McGrow Hill Book Company, 1974.
19. Jhonsen. Panduan Lengkap menjadi Web Designer. Jakarta: Pt. Elex Media, 2004.
20. Tim Dosen, Garis Besar Program Pengajaran. Makassar: Jurusan Pendidikan Teknik Elektronika Fakultas Tenik Uniersitas Negeri Makassar, 2007.
21. Richard S., Sandige. Digital Design Essentials. United State of America: Prentice-Hall, 2002.
22. Abdul Kadir dan Terra CH. Triwahyuni. Pengenalan Sistem Informasi. Yogyakarta: Andi Ofset, 2003.
23. Roger, Tokeim L. Elektronika Digital. Bandung: Erlangga, 2005.
24. Alan B.Marcovitz. Introduction to Logic Design, New York: McGraw-Hill, 2005.





## 20% of the territory of Azerbaijan, is still under occupation of Armenia

*During 1993 the UN Security Council adopted four resolutions 822, 853, 874 and 884 on the Armenian-Azerbaijan conflict. Each of the abovementioned resolutions was adopted following the subsequent occupation of Nagorny Karabakh region and other territories of the Republic of Azerbaijan by the Armenian armed forces. These resolutions reaffirmed the territorial integrity of Azerbaijan, demanded immediate cease-fire, suspension of hostilities and withdrawal of all occupying forces from the territory of the Republic of Azerbaijan. Regrettably, the provisions of the resolutions have still not been implemented.*

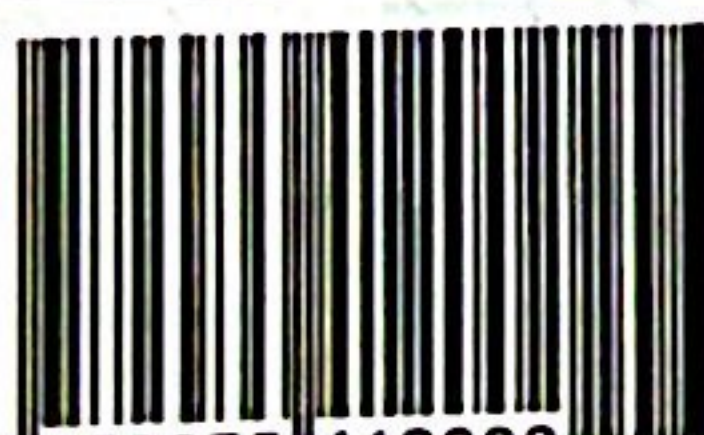
### RESOLUTION 884 (1993)

Adopted by the Security Council at its 3313th meeting,  
on 12 November 1993

The Security Council,

Reaffirming its resolutions 822 (1993) of 30 April 1993, 853 (1993) of 29 July 1993 and 874 (1993) of 14 October 1993, Reaffirming its full support for the peace process being pursued within the framework of the Conference on Security and Cooperation in Europe (CSCE), and for the tireless efforts of the CSCE Minsk Group, Taking note of the letter dated 9 November 1993 from the Chairman-in-Office of the Minsk Conference on Nagorny Karabakh addressed to the President of the Security Council and its enclosures (S/26718, annex), Expressing its serious concern that a continuation of the conflict in and around the Nagorny Karabakh region of the Azerbaijani Republic, and of the tensions between the Republic of Armenia and the Azerbaijani Republic, would endanger peace and security in the region, Noting with alarm the escalation in armed hostilities as consequence of the violations of the cease-fire and excesses in the use of force in response to those violations, in particular the occupation of the Zangelan district and the city of Goradiz in the Azerbaijani Republic, Reaffirming the sovereignty and territorial integrity of the Azerbaijani Republic and of all other States in the region, Reaffirming also the inviolability of international borders and the inadmissibility of the use of force for the acquisition of territory, Expressing grave concern at the latest displacement of a large number of civilians and the humanitarian emergency in the Zangelan district and the city of Goradiz and on Azerbaijan's southern frontier,

1. Condemns the recent violations of the cease-fire established between the parties, which resulted in a resumption of hostilities, and particularly condemns the occupation of the Zangelan district and the city of Goradiz, attacks on civilians and bombardments of the territory of the Azerbaijani Republic;
2. Calls upon the Government of Armenia to use its influence to achieve compliance by the Armenians of the Nagorny Karabakh region of the Azerbaijani Republic with resolutions 822 (1993), 853 (1993) and 874 (1993), and to ensure that the forces involved are not provided with the means to extend their military campaign further;
3. Welcomes the Declaration of 4 November 1993 of the nine members of the CSCE Minsk Group (S/26718) and commends the proposals contained therein for unilateral cease-fire declarations;
4. Demands from the parties concerned the immediate cessation of armed hostilities and hostile acts, the unilateral withdrawal of occupying forces from the Zangelan district and the city of Goradiz, and the withdrawal of occupying forces from other recently occupied areas of the Azerbaijani Republic in accordance with the "Adjusted timetable of urgent steps to implement Security Council resolutions 822 (1993) and 853 (1993)" (S/26522, appendix) as amended by the CSCE Minsk Group meeting in Vienna of 2 to 8 November 1993;
5. Strongly urges the parties concerned to resume promptly and to make effective and permanent the cease-fire established as a result of the direct contacts undertaken with the assistance of the Government of the Russian Federation in support of the CSCE Minsk Group, and to continue to seek a negotiated settlement of the conflict within the context of the CSCE Minsk process and the "Adjusted timetable" as amended by the CSCE Minsk Group meeting in Vienna of 2 to 8 November 1993;
6. Urges again all States in the region to refrain from any hostile acts and from any interference or intervention, which would lead to the widening of the conflict and undermine peace and security in the region;
7. Requests the Secretary-General and relevant international agencies to provide urgent humanitarian assistance to the affected civilian population, including that in the Zangelan district and the city of Goradiz and on Azerbaijan's southern frontier, and to assist refugees and displaced persons to return to their homes in security and dignity;
8. Reiterates its request that the Secretary-General, the Chairman-in-Office of the CSCE and the Chairman of the CSCE Minsk Conference continue to report to the Council on the progress of the Minsk process and on all aspects of the situation on the ground, in particular on the implementation of its relevant resolutions, and on present and future cooperation between the CSCE and the United Nations in this regard;
9. Decides to remain actively seized of the matter.



9 772075 412002