

The Online Journal of Quality in Higher Education

Volume 1 Issue 3
July 2014

Prof. Dr. Muzaffer ELMAS

Editors

Prof. Dr. Mehmet Ali YALÇIN, Sakarya University, Turkey

Prof. Dr. Aytekin İŞMAN, Sakarya Univeriy, Turkey

Prof. Dr. Colleen SEXTON, Governors State University, USA

Prof. Dr. Deborah BORDELON, Governors State University, USA

Prof. Dr. Teresa Franklin Ohio University, USA

Prof. Dr. Douglas Franklin Ohio University, USA

Associate Editors

Assoc. Prof. Dr. Ahmet ESKİCUMALU, Sakarya Univeriy, Turkey

Assoc. Prof. Fatoş SİLMAN, Near Esat University, TRNC

Technical Editors

Assist. Prof. Dr. İrfan ŞİMŞEK, Istanbul University, Turkey



Copyright © 2014 - THE ONLINE JOURNAL OF QUALITY IN HIGHER EDUCATION

All rights reserved. No part of TOJQIH's articles may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Contact Address:

Prof. Dr. Aytakin İŞMAN
TOJQIH, Editor
Sakarya-Turkey

Published in TURKEY

Message from the Editors

Dear Colleagues,

The Online Journal of Quality in Higher Education (TOJQIH) is a refereed international online journal sponsored by Sakarya University and other international universities (Ohio University, Governor State University, Georgia State University and others). The main mission of TOJQIH is to diffuse quality in higher education all over the World.

TOJQIH is interested in academic articles on the issues of quality in higher education. The articles should talk about quality in higher education, how quality process improves higher education, and the perspectives of students, teachers, school administrators and communities on quality in higher education. These articles will help researchers to increase the quality of both theory and practice in the field of quality in higher education.

TOJQIH thanks and appreciate the editorial board who have acted as reviewers for one or more submissions of this issue for their valuable contributions. TOJQIH's reviewers are drawn quite widely from all over the world.

TOJQIH, Sakarya University, Istanbul University, Kara Elmas University and Governors State University will organize the International Conference on Quality in Higher Education (ICQH 2014) between December 3-5, 2014 at Sakarya University. The web page of ICQH is "www.icqh.net".

Call for Papers

TOJQIH invites article contributions. Submitted articles should be about all aspects of quality in higher education. The articles should also discuss the perspectives of students, teachers, school administrators and communities. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJQIH. For any suggestions and comments on the international online journal TOJQIH, please do not hesitate to contact with us. All authors can submit their manuscripts to isman@sakarya.edu.tr for the next issues.

July 1, 2014

Prof. Dr. Muzaffer ELMAS

Editor in Chief

Sakarya University

Editor-in-Chief

Prof. Dr. Muzaffer ELMAS, Sakarya University, Turkey

Editors

Prof. Dr. Mehmet Ali YALÇIN, Sakarya University, Turkey

Prof. Dr. Aytekin İŞMAN, Sakarya University, Turkey

Prof. Dr. Colleen SEXTON, Governors State University, USA

Prof. Dr. Deborah BORDELON, Governors State University, USA

Prof. Dr. Teresa FRANKLIN Ohio University, USA

Prof. Dr. Douglas FRANKLIN Ohio University, USA

Associate Editors

Assoc. Prof. Dr. Ahmet ESKİCUMALI, Sakarya University, Turkey

Assoc. Prof. Dr. Fatoş SİLMAN - Near East University, TRNC

Technical Editors

Assist. Prof. Dr. İrfan ŞİMŞEK, Istanbul University, Turkey

Editorial Board

Dr. Abdullah SONSUZ, Istanbul University, TURKEY	Dr. Hüseyin EKİZ, Süleyman Şah University, TURKEY
Dr. Abdurrahman TANRIÖVEN, Pamukkale University, TURKEY	Dr. Hüseyin YARATAN, EMU, TRNC
Dr. Ahmet ADALIER, Cyprus International University, TRNC	Dr. İbrahim ÖZSERT, Sakarya University, TURKEY
Dr. Ahmet ESKİCUMALI, Sakarya University, TURKEY	Dr. İlyas ÖZTÜRK, Sakarya University, TURKEY
Dr. Ahmet PEHLİVAN, EMU, TRNC	Dr. İlayet AYDIN, Ankara University, TURKEY
Dr. Ali AKSU, Dokuz Eylül University, TURKEY	Dr. İsmet ÇEVİK, Sakarya University, TURKEY
Dr. Ali BALCI, Ankara University, TURKEY	Dr. K. Hüseyin KOÇ, , TURKEY
Dr. Ali Rıza KAYLAN, Boğaziçi University, TURKEY	Dr. Kadir ARDIÇ, Sakarya University, TURKEY
Dr. Arif ALTUN, Hacettepe University, TURKEY	Dr. M. Şahin DÜNDAR, Sakarya University, TURKEY
Dr. Arzu KIHTİR, Istanbul University, TURKEY	Dr. M. Yaşar ÖZDEN, METU, TURKEY
Dr. Aydın Ziya ÖZGÜR, Anadolu University, TURKEY	Dr. Mahmut ÖZER, , TURKEY
Dr. Buket AKKOYUNLU, Hacettepe University, TURKEY	Dr. Mehmet Ali HAMEDOĞLU, Sakarya University, TURKEY
Dr. Burhanettin DÖNMEZ, İnönü University, TURKEY	Dr. Mehmet ALTINAY, EMU, TRNC
Dr. Cem BİROL, Near East University, TRNC	Dr. Mehmet ÇAĞLAR, Near East University, TRNC
Dr. Cemil YÜCEL, Eskişehir Osmangazi University, TURKEY	Dr. Mehmet Durdu KARSLI, ÇOMU, TURKEY
Dr. Cengiz Hakan AYDIN, Anadolu University, TURKEY	Dr. Mehmet KESİM, Anadolu University, TURKEY
Dr. Cevat CELEP, Kocaeli University, TURKEY	Dr. Mehmet ŞİŞMAN, Eskişehir Osmangazi University, TURKEY
Dr. Coşkun BAYRAK, Anadolu University, TURKEY	Dr. Meral URAS BAŞER, Pamukkale University, TURKEY
Dr. Coşkun Can AKTAN, Dokuz Eylül University,	Dr. Metin IŞIK, Sakarya University, TURKEY
	Dr. Metin YAŞAR, Pamukkale University, TURKEY
	Dr. Muhlis BAĞDİGEN, , TURKEY

- Dr. Coşkun SÖNMEZ, Yıldız Technical University, TURKEY
- Dr. Durmuş GÜNAY, The Council of Higher Education (YÖK) , TURKEY
- Dr. Emin GARİP, TTKB, TURKEY
- Dr. Engin KARADAĞ, Eskişehir Osmangazi University, TURKEY
- Dr. Ercan ÖZTEMEL, Marmara University, TURKEY
- Dr. Eren KESİM, Anadolu University, TURKEY
- Dr. Ergun YOLCU, İstanbul University, TURKEY
- Dr. Erkan YAMAN, Sakarya University, TURKEY
- Dr. Erman COŞKUN, Sakarya University, TURKEY
- Dr. Erol EREN, Beykent Universtiy, TURKEY
- Dr. Erol Rifat SAYIN, Karabük Universtiy, TURKEY
- Dr. Esmehan AĞAOĞLU, Anadolu University, TURKEY
- Dr. Etem KÖKLÜKAYA, Sakarya University, TURKEY
- Dr. Fatoş SİLMAN, Cyprus International University, TURKEY
- Dr. Ferhan ODABAŞI, Anadolu University, TURKEY
- Dr. Feridun SEZGİN, Gazi University, TURKEY
- Dr. Gökhan ÇETİNSAY, The Council of Higher Education (YÖK) , TURKEY
- Dr. Gönül AKÇAMETE, Ankara University, TURKEY
- Dr. Gülriz İMER, Mersin University, TURKEY
- Dr. Gülsün ATANUR BASKAN, Hacettepe University, TURKEY
- Dr. Gültekin YILDIZ, Sakarya University, TURKEY
- Dr. Halil KALABALIK, Sakarya University, TURKEY
- Dr. Haluk ERKUT, İstanbul Technical University, TURKEY
- Dr. Haluk GÜVEN, , TURKEY
- Dr. Hasa Basri GÜNDÜZ, Yıldız Technical University, TURKEY
- Dr. Hasan ÇALIŞKAN, Anadolu University, TURKEY
- Dr. Hasan ŞİMŞEK, Bahçeşehir University, TURKEY
- Dr. Hasan Ali BIÇAK, Cyprus International University, TRNC
- Dr. Murat ATAİZİ, Anadolu University, TURKEY
- Dr. Murat BARKAN, Yaşar University, TURKEY
- Dr. Neşe GÜLER, Sakarya University, TURKEY
- Dr. Nil CURA, İstanbul University, TURKEY
- Nilgün BİLGE, Sakarya University, TURKEY
- Dr. Ömer Faruk TUTKUN, Sakarya University, TURKEY
- Dr. Ömer SAATÇİOĞLU, TOBB University, TURKEY
- Dr. Orhan UZUN, , TURKEY
- Dr. Osman ÇEVİK, Karamanoğlu Mehmet Bey University, TURKEY
- Dr. Osman TİTREK, Sakarya University, TURKEY
- Dr. Özcan Erkan AKGÜN, Sakarya University, TURKEY
- Dr. Özlem ÖZKANLI, Ankara University, TURKEY
- Dr. Petek AŞKAR, TED University, TURKEY
- Dr. Rahmi KARAKUŞ, Sakarya University, TURKEY
- Dr. Ramazan AKDEMİR, Sakarya University, TURKEY
- Dr. Rauf YILDIZ, ÇOMU, TURKEY
- Dr. Remzi ALTUNIŞIK, Sakarya University, TURKEY
- Dr. Rıza GÜVEN, İstanbul University, TURKEY
- Dr. Salih ŞİMŞEK, Sakarya University, TURKEY
- Dr. Selahattin GELBAL, Hacettepe University, TURKEY
- Dr. Selahattin TURAN, Eskişehir Osmangazi University, TURKEY
- Dr. Şükrü Oğuz ÖZDAMAR, , TURKEY
- Dr. Şule ERÇETİN, Hacettepe University, TURKEY
- Dr. Tuba CANVAR KAHVECİ, Sakarya University, TURKEY
- Dr. Tuncer BÜLBÜL, Trakya University, TURKEY
- Dr. Türker BAŞ, Sakarya University, TURKEY
- Dr. Tülen SANER, Near East University, TRNC
- Dr. Ümit KOCABIÇAK, Sakarya University, TURKEY
- Dr. Yılmaz ÖZKAN, Sakarya University, TURKEY
- Dr. Yüksel KAVAK, Hacettepe University, TURKEY
- Dr. Zeynep DEMİRTAŞ, Sakarya University, TURKEY

Table Of Contents

INVESTING IN THE QUALITY OF TEACHING IN HIGHER EDUCATION: WHY AND HOW?	1
<i>Doris Kiendl-Wendner</i>	
THE NEEDS OF INNOVATION IN MECHANICAL ENGINEERING EDUCATION: THE POSITION OF THE POLITECNICO OF MILANO	6
<i>N. Bachschmid, F. Cheli, C. Marinoni</i>	
FEEDBACK IN POSTGRADUATE SUPERVISORY COMMUNICATION: AN INSIGHT FROM EDUCATORS	12
<i>Balsam A. Mustafa, A. Noraziah, Mazlina Abdul Majid</i>	
INTEGRATING WEIGHTED LEARNING OUTCOMES IN ASSIGNMENT DESIGN: DOES IT HELP STUDENTS?	16
<i>Sherif Mohammed Ali El-Wageeh</i>	
IMPORTANCE OF IDENTIFYING AND EMBEDDING CORE AND ENTREPRENEURIAL SKILLS FOR THE DEVELOPMENT OF TVE STANDARDS IN HIGHER EDUCATION	24
<i>Murat ARI, Hayati Mamur, Fatih Kokmaz, İsmail Topaloglu</i>	
OBSTACLES AND CHALLENGES OF QUALITY ASSURANCE IN HIGHER EDUCATION IN LIBYA	28
<i>Eman Mohammed Almarghani</i>	

Investing in The Quality of Teaching in Higher Education: Why and How?

Doris Kiendl-Wendner

FH JOANNEUM University
of Applied Sciences,
Graz, Austria

Doris.kiendl-wendner@fh-joanneum.at

ABSTRACT

Higher education institutions (HEI) operate in a market oriented environment, since they compete for the best students and faculty. Universities have adopted various strategies to attract students and faculty. Many higher education institutions claim that they offer excellent education. However, only few institutions have so far been developing a strategy on how to prepare their teaching faculty to provide excellent teaching.

This paper discusses current trends in higher education related to quality in teaching. The paper focuses on the vision and mission of HEI and their impact on career paths of faculty members. The paper shows how strategic human resource development of faculty can improve quality in teaching. The paper finally discusses the influence of didactical training as human resource development measures on faculty retention as well as student satisfaction.

Keywords:

INTRODUCTION

University management is required to see the big picture in a globalized and competitive educational environment. Among the challenges which university face are student expectations and faculty demands. After all, it is the human beings who matter most: students and faculty as well as staff. Students regard themselves more and more as "customers", especially in countries where the level of tuition has increased significantly. Attracting the best students is only possible if the university has excellent faculty who provides outstanding quality of teaching and who care for the students. In this context, retention of excellent faculty is of very high importance.

This paper discusses university strategies and methods of HR development, in particular didactical training of faculty members. The paper shows that measures of strategic quality improvement of teaching will only be successful if several conditions are given: First of all, these measures have to be consistent with the overall mission and vision of the university, secondly, there has to be commitment from the top management of universities and, finally, there has to be a consistent reward system for such faculty members who participate in these HR development measures.

UNIVERSITY STRATEGIES

Many universities promise a lot. According to their written vision and mission which are usually published on their webpage, they claim to provide the best education, outstanding research, life long learning, knowledge transfer to the society, employability of their graduates, career services, special conditions for their faculty and additional benefits. While some universities which have sufficient resources may be able to keep all those promises, many institutions wrongfully raise these claims and, thus, mislead students, faculty and all other stakeholders. If the image of a university is not consistent with the university identity, the stakeholders will find out sooner or later and turn their backs on the university. Therefore, each university has to make sure that the HEI **brand image** (i.e. the outside view on the university) matches the **brand identity** (i.e. the inside view). Several researchers have recently elaborated on the issue of brand management of universities and pointed out that the success of each higher education institution depends on whether their outward image and their inward identity are identical (see, e.g. Boos/Grubendorfer, Mey 2013).

Each university has a **philosophy** which is shaped primarily by three components: the environment, the objectives of the institution and the resources. In this regard, the university is comparable to each other organization and the university management should follow the principles of management of organizations in general (Drucker). Such universities which promise excellent education to their students produce expectations which the universities have to fulfil. If it is the (main) objective of a university to provide the best education to their students, the strategy of the university has to be consistent with this overall mission.

The **resources of universities** are primarily faculty, students and staff. In addition, some programmes may also depend on equipment and machinery, such as engineering, IT and design departments. What all schools have in common, though, is their strong dependence on the performance of their faculty members. While it has always been clear that universities are characterized by the experts whom they have hired for teaching and research, it is nevertheless a fact that human resource development has not been developed well at most universities. It appears that many higher education institutions expect their faculty members to possess all skills and competences for excellent teaching and research before they are recruited so that any (additional) HR development measures are not necessary. This is, however, completely false. It is untrue for two reasons: First of all, many professors are mainly focussing on research because their academic career depends mostly on their publications. Many academics neglect teaching, many academics even see teaching as a nuisance which keeps them away from research. Secondly, universities have another important role: the role to educate future scientists and lecturers. For those junior academics, training in research and teaching methods is crucial. Nobody is born with all skills required for excellent research and teaching. It is hard work and it requires thorough preparation. Therefore, each university which claims to provide excellence in teaching has to set up strategies on how to effectively train their faculty members.

If an organization determines a strategy the organization will have to define measures and monitor and assess the effects of these measures. However, is it possible to **measure the quality of teaching**? While some key performance indicators may be used to measure the R&D output (e.g. publications, amount of research funding allocated), measuring the quality of teaching is even more difficult.

When looking at the **output of universities** in terms of teaching, the employability of the university graduates could serve as an indicator, however, the employability as such cannot be measured easily, since the employability is not equal to actual employment and salaries of university graduates. So, looking at the result of teaching does not render clear results on the quality of the education.

When looking at **input factors**, the quality of education primarily depend on the students and the faculty members. If universities have a rigorous selection process for students, these universities may have a high retention rate of students and a highly motivated and highly able student population. Rigorous selection processes, thus, help to achieve a high level of quality among the students. Whether a higher education institution is able to pursue such a selective process depends on the number of applications. Only such HEI which have a high reputation will have a high number of applicants. This leads – again – to the importance of matching brand image and brand identity in regard to the quality of education.

And what about faculty? The quality of faculty is, in most HEI, assessed in the light of their research achievements. However, being an excellent researcher does not automatically mean that the professor is a good teacher as well. Knowing the academic field is a prerequisite but not the only condition for being a good lecturer. Whether a professor will be willing to invest in his/her abilities in teaching depends, *inter alia*, on the reward system and the career paths provided by the HEI. These issues will be discussed in the next part of this paper.

HR DEVELOPMENT AT UNIVERSITIES

According to standard definitions of HR development, human resource development includes all measures which are taken in an organization in a structured and planned way in order to achieve the goals of the organization in terms of education, improvement and training of its members (Becker).

Universities are **expert organizations**. This means that the main asset of universities are their faculty, staff and students. At the same time, human resources at universities are demanding and not easily managed. Experts seek freedom, acknowledgement in the scientific community and rewards for their achievements. Professors, especially at a senior level, have a high level of self-esteem, which implies that they would usually not respond favourably to any HR measures which are imposed on them from above. The nature of universities as expert organizations requires specific processes in the implementation of new standards and tools which involve those persons whom the measures are addressed to. There has to be a participative process where faculty and staff members are able to voice their concerns and bring in their ideas. The expertise and knowledge of the faculty members should be used by the organization to arrive at well defined and also well accepted measures.

If a university aims at excellent teaching (see above part 2 on university strategies), this strategic goal has to be reflected in all processes and decisions in the university. If it is a key strategic priority that faculty members should provide excellent teaching, the university should first of all **hire such faculty which have a passion for teaching** and who are well qualified for teaching. Ideally, candidates for faculty positions shall have didactical knowledge. They should be able to reflect on their teaching methods and outcomes, they should have a willingness to further develop their teaching skills and they should, especially be ready to engage in intensive dialogue with their colleagues in order to provide a consistent education for the students in the specific programme. Faculty who are qualified for teaching can also be expected to coach other colleagues on their teaching, they should introduce innovative teaching methods

and interact effectively with students.

In addition, **specific measures for didactical training** of such faculty members who are lacking these qualifications need to be introduced. These measures could include seminars on the **planning of courses** with respect to

- learning outcomes
- teaching methods
- examination tools
- combination of face2face teaching and e-learning parts

In addition, the seminars shall address issues of the role of lecturers and students. In the light of the paradigm shift from knowledge transfer from faculty to students to a more balanced system of common creation of knowledge, also through the use of social media, the role of professors has been changing gradually. While professors would in certain contexts have the task to introduce students to an academic field, to explain certain concepts and make these concepts comprehensible to students, faculty members will in other contexts serve as coaches, especially in thesis supervision or research seminars at higher academic levels.

The introduction of these HR development measures at higher education institutions will, however, only work if

- a) faculty is involved in the creation of these programmes (participative process);
- b) the incentive system of the university provides material and immaterial rewards for engagement in good teaching.

Providing **incentives for investments in teaching** can include monetary incentives (bonus system), immaterial awards ("best teacher award") and career paths. If career opportunities at universities are linked to achievements in teaching, faculty members will be more likely to invest time and energy in their teaching abilities.

CONCLUSION

This paper discusses the following questions: Investing in the quality of teaching in higher education: Why and How? The first question, namely WHY higher education institutions should invest in the quality of teaching cannot be answered in a general way which fits all universities. Those higher education institutions, however, which claim to provide excellent education HAVE TO invest in the quality of teaching. Otherwise, these universities would not be able to fulfil the claims they make. These universities would have gaps between their brand image and their brand identity. This would, in the mid- to long run drive away all stakeholders: students, sponsors and faculty. If, on the other hand, a university is strongly research based and has a clear vision and mission to achieve outstanding results in research, this university will not have a need to invest in the quality of the teaching of their faculty. The opportunity costs would be too high and they would contradict the main objective of the institution.

The second question, namely HOW to invest in the quality of teaching, should be answered by taking into account the organizational culture of the respective higher education institution. The focus on the quality of teaching should, in those universities which claim to be teaching oriented, be of high relevance in the hiring of new faculty members. When it comes to the introduction of programmes and measures to increase the didactical skills of faculty, the organizational culture plays a major role as well. Since universities are, *per se*, expert organizations, an introduction of measures which aim at enhancing the quality of education, shall be designed, planned and implemented in a participative manner, using the know how, skills and competences of the faculty of the institution.

BIBLIOGRAPHY

Albs, Norbert (2005): *Wie man Mitarbeiter motiviert* (Cornelsen 2005).

Alfred, Richard L. (2006): *Managing the big picture in colleges and universities*, Praeger Publishers 2006.

Becker, Manfred (2013), *Personalentwicklung. Bildung, Förderung und Organisationsentwicklung in Theorie und Praxis*, 6. Auflage (Schäffer Poeschel 2013).

Boos, Margarete/Grubendorfer, Christina/Mey, Dorothea (2013), *Hochschule als Marke, OSC Organisationsberatung. Supervision. Coaching 2013*, 5-15.

Drucker, Peter F. (2006): Die Kunst des Managements, Econ Verlag, 3. Auflage 2006.

Egger, Rudolf (2012): Sozialisationsbedingungen von ForscherInnen in universitären Lehrräumen, in Egger, Rudolf/Merkt, Marianne (Hrsg), Lernwelt Universität, Springer Verlag 2012, 29-44.

Felbinger, Andrea (2012): Hochschuldidaktische Weiterbildung an der Fachhochschule Joanneum: Einblicke in ein erfolgreiches Modell zur pädagogischen Professionalisierung von Lehrenden, in Egger, Rudolf/Merkt, Marianne (Hrsg), Lernwelt Universität, Springer Verlag 2012, 209 - 224.

Florack, Arnd/Messner, Claude (2006): Führungsstrategien und Personalentwicklung in der Hochschule, Zeitschrift für Hochschulentwicklung 2006/1, 6-20.

Haag, Johann/Weißenböck, Josef/Gruber, Wolfgang (2013): Berufsbegleitende Studiengänge als Herausforderung für Curriculumsentwicklung und Hochschuldidaktik, FH St. Pölten 2013.

Hanft, Anke/Zentner, Tim (2004): Qualifizierung und Personalentwicklung – eine Kompetenzlücke in Bildungseinrichtungen? REPORT 2/2004, 42-52.

Hauser, Werner (2011): Fachhochschul-Studiengesetz. Kommentar, 6. Auflage, Verlag Österreich 2011.

Heritsch, Michael (2008): Personalentwicklung im Fachhochschul-Sektor, in Rankl, Stefan/, Wala, Thomas/ Mair, Michael/Breinbauer, Andreas (Hrsg), Management von Fachhochschul-Studiengängen, Linde Verlag 2008, 271-284.

Hornstein, Elisabeth von/Rosenstiel, Lutz von (2000): Ziele vereinbaren – Leistung bewerten (Wirtschaftsverlag Langen Müller/Herbig 2000).

Kehm, Barbara M./Merkator, Nadine/Schneijderberg, Christian (2010): Hochschulprofessionelle?! Die unbekanntes Wesen, Zeitschrift für Hochschulentwicklung 2010, 23-39.

Kiendl-Wendner, Doris ((2012): Die Anliegen der Studierenden an Fachhochschulen: Wer/Wie/Was? Zuständigkeiten und Verfahren nach dem neuen FHStG, zeitschrift für hochschulrecht 2012, 43-59.

Kiendl-Wendner, Doris (2013): Die Rahmenbedingungen der FH-Pädagogik, in Berka/Brünner/Hauser (Hrsg), 20 Jahre FHStG: Genese, Stand und Ausblick zu einem bildungspolitischen Erfolg, Neuer Wissenschaftlicher Verlag Wien 2013.

Konrad, Helmut (2007): Kann man akademische Qualität messen? In Koubek, Anni/Möstl, Friedrich/Pöllinger, Martin/Prisching, Manfred/Reininghaus, Peter (Hrsg), Bene Meritus. Festschrift für Peter Schachner-Blazizek zum 65. Geburtstag, 397-410.

Lehner, Martin/Mair, Michael (2008): Der Einsatz innovativer und praxisbezogener Lehr- und Lernformen an Fachhochschul-Studiengängen, in Rankl, Stefan/, Wala, Thomas/ Mair, Michael/Breinbauer, Andreas (Hrsg), Management von Fachhochschul-Studiengängen, Linde Verlag 2008, 127-144.

Lübeck, Dietrun/Soellner, Renate (2006): Die Lehrmails – Konzeption, Implementation und Evaluation eines niedrigschwelligen Personalentwicklungsangebots für Hochschullehrende, Zeitschrift für Hochschulentwicklung 2006, 40-54.

Malik, Fredmund (2006): Führen. Leisten. Leben. Wirksames Management für eine neue Zeit, campus Verlag 2005.

Morrill, Richard L.(2007): Strategic Leadership. Integrating Strategy and Leadership in Colleges and Universities, Praeger Publishers 2007.

Pinar, Musa/Trapp, Paul/Girard, Tulay/Boyt, Thomas E. (2011): Utilizing the brand ecosystem framework in designing branding strategies for higher education, International Journal of Educational Management 2011, 724-739.

Powell, Jo (2010): Useful or just another fad? Staff perceptions of Personal Development Planning, Journal of Learning Development in Higher Education. Special Edition: Research PDP Practice, 1-15.

Rehling, Mette (2008): Personalentwicklung als Pilotprojekt an einer Hochschule. Eine strukturationstheoretisch und mikropolitisch geleitete Analyse, Rainer Hampp Verlag München.

Schmidt, Boris (2007): Personalentwicklung an der Hochschule. Zehn Wege in ein unentdecktes Land, die hochschule 2007/2, 125-153.

Shields, John (2007), Managing Employee Performance and Reward (Cambridge University Press 2007)

Sohm, Kurt (2010): Qualitätssicherung im tertiären Sektor, in Hauser, Werner (Hrsg), Jahrbuch Hochschulrecht 2010, 264-273.

Trautwein, Caroline/Merkt, Marianne (2012): Zur Lehre befähigt? Akademische Lehrkompetenz darstellen und einschätzen, in Egger, Rudolf/Merkt, Marianne (Hrsg), Lernwelt Universität, Springer Verlag 2012, 83-100.

Wildt, Johannes/Dany, Sigrid (2006): Academic Staff Development – Eine Perspektive für die Entwicklung der Hochschuldidaktik? Zeitschrift für Hochschulentwicklung 2006/2, 1-4.

The Needs of Innovation in Mechanical Engineering Education: The Position of the Politecnico of Milano

N. Bachschmid[1], F. Cheli[1], C. Marinoni[2]

[1]Politecnico di Milano,
Department of Mechanics

[2]Fondazione Politecnico
nicolo.bachschnid
@polimi.it
federico.cheli@polimi.it
andrea.collina@polimi.it
clementina.marinoni
@fondazione.polimi.it

ABSTRACT

The Department of Mechanics (DM) of the Politecnico di Milano (PdM) and the Fondazione Politecnico (FPM) have taken actively part in different initiatives related to teaching and learning quality. First step was one extensive survey of alumni in Mechanical Engineering (ME) on regional basis (Lombardy region) for defining the levels of mastery in different topics attained during the studies, compared to the levels required by the enterprises on the workplace. Regarding knowledge even a surplus of mastery furnished by university was felt by the alumni, but regarding competences and skills also gaps were found. Later the participation to the EC funded project ECCE has allowed to compare the Italian situation not only to European universities but also to the expectations of industrial stakeholders and engineering associations. Recognizing the need of changes, some members of the Pedagogic Faculty of Catholic University in Milano university have been recruited for giving courses for young professors for increasing their teaching qualities. Finally in the basic course of Applied Mechanics in the second year of the bachelor curriculum an innovating method has been introduced with the aid and support of a team of the Pedagogic Faculty. The aim of the introduced innovation was to develop some of the missing skills, and more in detail team work capability, active learning, critical thinking, project management, and presentation skills.

Keywords:

INTRODUCTION

The engineering work place has undergone significant changes in the last decades. A growing number of engineers operate in environments that require intensive cross disciplinary activity, where economic, social and ethic concepts have also to be taken into consideration. Many engineers work in service-oriented businesses rather than in the more traditional product-oriented businesses. Language skills as well as presentation skills are required. And they depend obviously also on networking and computing tools that have appeared on the scene less than twenty years ago. Therefore a re-examination of the preparation that mechanical engineers receive in order accomplish these new requirements seems necessary. At European level also the accomplishment to the so-called Dublin descriptors is required. Many countries have adopted an accreditation system that reflects the needs of the European Higher Education Area, where already accreditation systems and formats in Engineering studies have been developed (as the EUR-ACE system). In the last years many efforts have been dedicated at PdM in order to analyze the actual European situation, to strengthen the links with the labour market, to introduce some innovating changes in the curricula, and finally to adopt the EUR-ACE accreditation system. In 2012 finally among others the course of ME at the PdM got the accreditation with a good score.

PRELIMINARY INVESTIGATION

Since year 2008 the ME course of PdM in cooperation with FPM has improved his links with industrial companies and institutions, in order to check the needs of the labor market, to evaluate the employability of the mechanical engineering alumni and finally to define a kind of ranking of competences. The first input was a survey performed with the regional institution Assolombarda that represents the enterprises of the Lombardy, one of the biggest industrial regions of Europe. The result of the survey indicated a trend in required competences, which were not covered nor trained in traditional curricula. Knowledge of foreign languages, team work abilities, project management abilities and critical thinking were some of the required skills that in traditional curricula were not trained at all. Regarding knowledge and specific skills even a surplus in university preparation with respect to the

required level was found. Figure 1 shows with more detail some of the different aspects of the competences which were insufficiently covered by the university studies, as result of the Assolombarda survey.

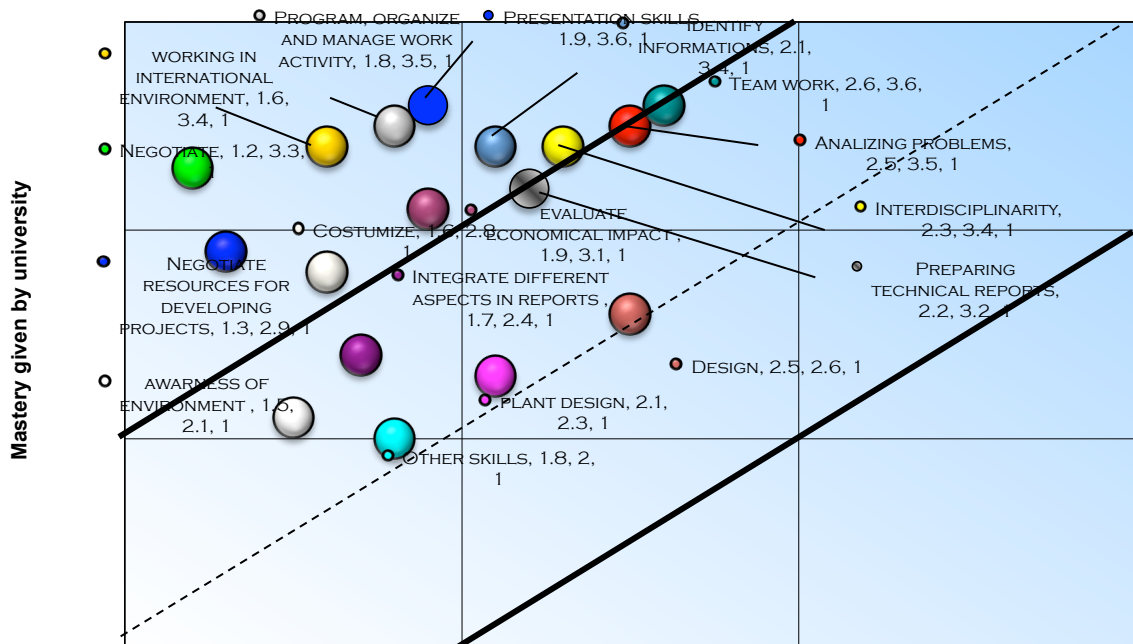


Figure 1 Levels of mastery required by job versus level of mastery furnished by university, as felt by alumni from PdM.

This was the first input for extending the research on European basis, and for starting a process for introducing some innovation in the traditional Mechanical Engineering curricula. From informal contacts with some leading European universities that offer mechanical engineering curricula, it resulted that some university had already introduced innovating teaching methods for covering the gap between the expectations of the market and the competences furnished by the university, utilizing the opportunity of the changes required by the Bologna process. In general all the contacted universities were aware of the changes in the engineering labour market and of the necessity of analyzing the situation. Also the position of industrial stakeholders, recruiting enterprises and of engineering associations is obviously required for getting a clear picture of the situation of Mechanical engineering education.

POSITIONING AMONG EUROPEAN UNIVERSITIES AND STAKEHOLDERS

In the frame of this process, the Fondazione Politecnico di Milano (has proposed and has led a Project, funded by the European Commission, on establishing an "Engineering Observatory on Competences Based Curricula for Job Enhancement" (acronym ECCE), in which the Mechanical Engineering Course (MEC) of the Politecnico was one of the academic partners. Other partners have been academics (university of Stuttgart Germany, university of Birmingham UK and university of Budapest Hungary) and professional organizations (like SEFI Société Européenne pour la Formation des Ingenieurs (France), CEFI Comité d'études sur les formations d'ingénieurs (Europe), Associació Catalana d'Ingenyers de Telecomunicació in Spain, DEKRA Akademie, biggest training enterprise in Germany).

The aim of the project was first to define with the aid of professional engineering organisations the expected learning outcomes (LOs) for engineering curricula (mechanical, civil and information technologies) which are suitable for actual engineering professional life. According to the Bologna process the studies in Italy and in many European countries are divided in two levels (bachelor and master), as shown in Fig. 2. The third level (PhD) has not been considered in the project.

The project has been developed using the level descriptors defined by the European Qualification Framework (see [1]). The Learning Outcomes (LOs) have been defined using categories of EUR-ACE Framework Standards (see website [2] for more information) for the accreditation of Engineering Programs, and additional specific details for different professional engineering courses (mechanical, civil, telecommunication and information technologies). The main objectives, preliminary and final results of the project can be found in the website [3] of the project. Detailed results of the project have been published also in [4]. For mechanical engineering education specific descriptors listed in Table I have been chosen.

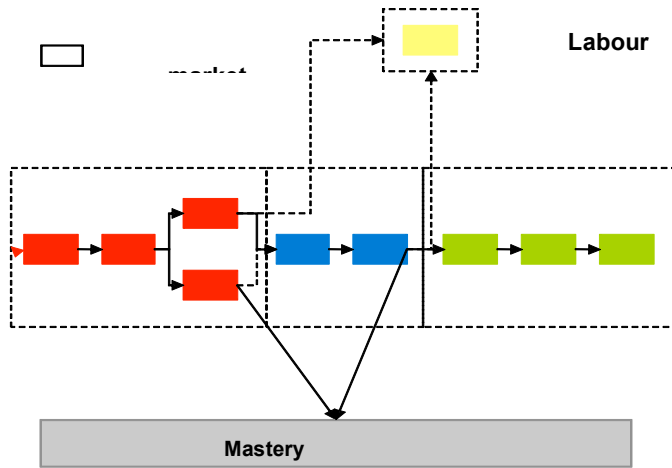


Figure 2 –Actual organization of engineering studies in Italy

Table I Descriptors for Engineering education adopted in the ECCE project.

<i>Knowledge</i>	Know and understand the fundamentals of mathematics, physics, and engineering sciences
<i>Engineering analysis</i>	Ability to use simple models for mechanical systems (machines or components) for analyzing its behavior, its performance, the arising stresses and strength of components
<i>Engineering design</i>	Ability to develop projects and design mechanical systems able to accomplish given requirements of motion, of performance, of strength and lifetime
<i>Investigations</i>	Ability to investigate by means of bibliographic research, experimental tests and suitable modeling
<i>Engineering practice</i>	Ability to integrate knowledge of different engineering fields

Surveys addressed to alumni have been launched in different countries or regions, aimed at defining for different categories of learning outcomes the levels of mastery (in a scale from 1 to 4): a) Obtained at the end of studies, b) Required in actual working position, c) Desired (by the alumni) at the end of studies. As an example the results for the category of Soft Skills and Management taken from survey addressed in France to all engineers are shown in fig. 3: a clear gap exists between levels reached at the end of studies and required or desired levels according to the opinion of alumni.

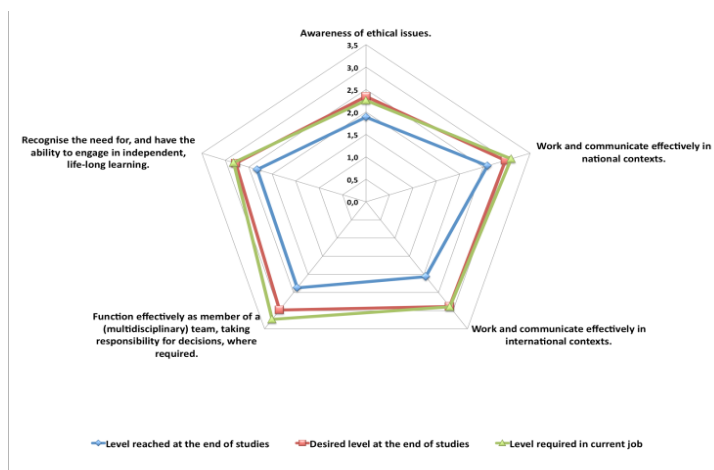


Figure 3 Levels of mastery in some soft skills as felt by alumni in France

The alumni were asked to define for each one of the 5 categories, and within each category for each descriptor, the level of mastery required in the actual job, the level reached at the end of the studies and the level alumni would have desired at the end of studies, scaled between 1 (no or limited understanding) and 4 (fully conversant).

The categories which show the maximum gaps between acquired levels and required levels are mainly Soft Skills, Management and Sustainability, but also Engineering Design, Investigation and Engineering Practice.

Regarding skills and competences the trends identified in the regional survey were definitely confirmed at European level, by all alumni surveys launched in Germany, UK, Italy and Hungary.

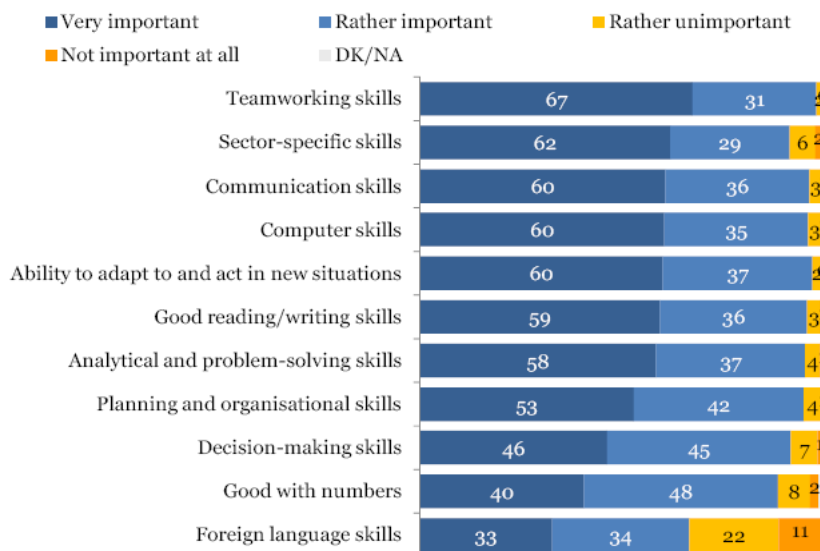
Surveys addressed to enterprises have also been launched, for defining similarly the levels of mastery in the selected learning outcomes: a) Required by the labour market, b) Found actually in the hired engineers

Similar results have been found in interviews with industrial stakeholders, and in surveys sent to enterprises. As an example the highest gaps between level reached and level required for Italian enterprises related to Mechanical Engineering Education resulted for the category of Management and Sustainability in i) ability to evaluate economic implications of different engineering solutions ii) ability to apply project management techniques iii) ability to apply risk assessment techniques, and for the category of Soft Skills in i) work and communicate effectively in international contexts.

It is interesting to point out that the EC (with the aid of professional agency Gallup) has made in 2010 a rather extensive survey involving 27 european countries , called “Employers’ perception of graduate employability” in which 7063 enterprises have been interviewed, asking among others: a) the importance of various skills and abilities for graduates (mainly in business, economics and engineering) b) opinions about skills and capabilities that graduates should have in the future (next 5-10 years). The results are shown respectively in Fig. 5 and 6. Complete results can be found in [5].

It can be seen that teamworking skills and communication skills, besides of course the sector specific skills, are felt as very important for professional life.

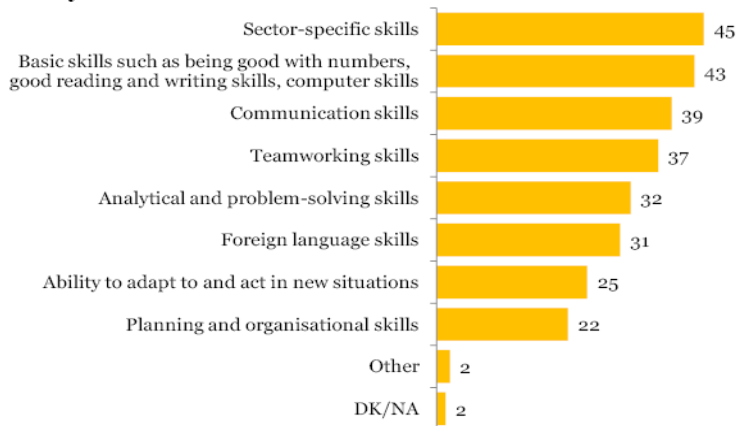
Importance of various skills and capabilities when recruiting higher education graduates – TOTAL



Q3.2. Please rate the following skills and competencies in terms of how important they are when recruiting higher education graduates in your company.
Base: all companies , % TOTAL

Figure 5 Importance of skills and capabilities according enterprises (from [5])

Opinions about the skills and capabilities that higher education graduates should have in next 5-10 years – TOTAL



Q3.4. In your opinion, in the next 5-10 years, which skills and competencies will be the most important for new higher education graduates? Please choose the three most important ones!
Base: all companies, % TOTAL

Figure 6 Skills required for the next decade according enterprises (from [5])

Taking account of all these results it was decided in the faculty of ME to start with some initiative to try to fill up some of the gaps mainly for training teamworking, communication skills, project management, and awareness of economic issues. Not all topics can be covered during university studies, but a feeling of professional life can be given to the graduates. Recognizing the need of changes the Industrial engineering faculty (to which the ME course belongs) decided to ask for support some members of the pedagogic faculty in Milano (CREMIT) for giving courses for young professors for increasing their knowledge about teaching methods and quality. All faculty members have been informed about the need to introduce some changes in the teaching approach for allowing training also in soft skills and project management. Finally it was decided to launch an experiment in the basic course of Applied Mechanics in the second year of the bachelor curriculum in Mechanical Engineering.

Experiments of innovating teaching methodologies

Despite difficulties in finding resources, the necessary space and time for introducing innovations, an experiment of introducing in the basic course of Applied Mechanics, at the second year of the bachelor degree, some improvement has been made, without changing the structure of the course, by changing simply the modalities of the development of the practical exercises where the theory must be applied.. Teamworking has been introduced, active learning has been fostered and guided, team work, project management, communication skills and critical thinking have been trained by means of the development of a project, its peer review and its final presentation. In such a way something resembling a working environment was simulated. Teams of 10 people were formed, a tutor has been assigned, initial, intermediate and final team meetings were programmed and milestones were set for the progression of the work. Team meetings and meetings with the tutor were supervised by the staff of CREMIT, in order to observe the interrelationship dynamics. The flow sheet of the experiment is shown in Fig.7.

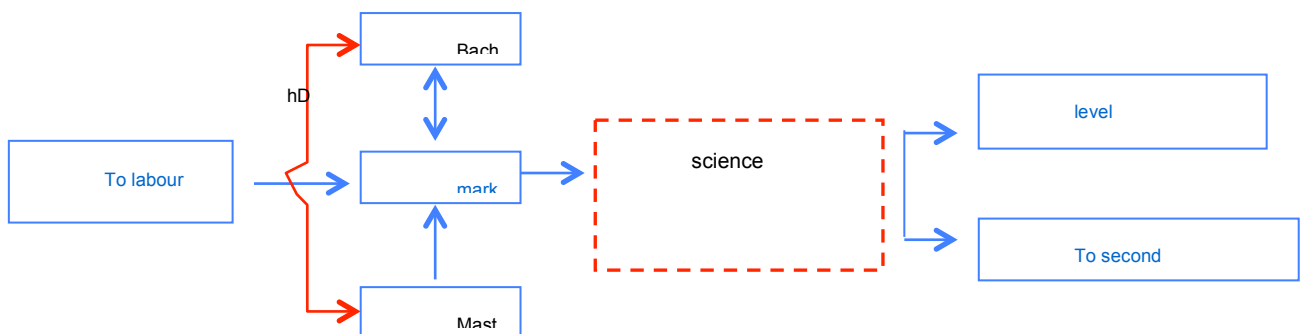


Figure 7 Organization of the experiment

The same topic (in the considered case it was “Energy Saving in Railway Transportation System”) was assigned, considering different scenarios of application. Regional, tram and metro network were assigned to the groups of 10 students, so that different technical solution could be obtained. The project was proposed in a form of a technical feasibility study. A general frame was given, with related support material, but the groups were free to integrate the

information from other sources. The students had to search from different data sources the necessary information for completing the project, integrating technical basic knowledge from electrical engineering, mechanical engineering as well as from economic and management engineering. A key aspect was to limit the extra knowledge necessary for the development of the project, in order to enhance the added value related to the cooperation. Each group was assigned a technical supervisor (tutor), and could meet in a meeting room, at a predefined time table to discuss the status of the project and arising difficulties. Group members had to elect a team leader (coordinator) responsible for the work progress, and to assign specific tasks to each component of the group (such as search of support material, calculation, programmer, calculation reviewer, presentation and report preparation). Main part of the work was housework where the group members had to organize themselves working both in presence and/or interconnected by means of internet with different modalities. At the end of the activity the project had to be presented and discussed in a plenary session of all students, professors and supervisors. An exhaustive final report was required as well as a power point presentation showing main results with animation of the selected solution. Presentation skills were so trained. A vote increment ranging from zero to 15% was available according to the overall evaluation formed by the team internal peer review and the external evaluation of the project development (by professors, tutors and students of the other groups). This way also critical thinking and responsibility were trained. The project has been carried out on voluntary basis (ca. 20% of the total number of the students attending the 3 parallel courses of Applied Mechanics agreed to participate and 10 teams of 10 people each were formed). The experiment has finally been evaluated by all participants (students, supervisors and professors) by means of a questionnaire. During the first implementation of the experiment, the organization of team work, of the internal communication and the peer review and the final evaluation were supervised by professionals from pedagogic faculty CREMIT. A certificate signed by CREMIT responsible, the head of the mechanical engineering course and the course teacher, describing the project in terms of the following Dublin indexes: *applying knowledge and understanding*, *making judgements* and *communication skills* was delivered for all who gained a positive evaluation at the end.

CONCLUSIONS

The experience of a team working project for the second year of bachelor's course was carried out and positively evaluated by all parties, despite the involvement of a lot of extra work for students, supervisors, professors. Feed back from labor market is not yet available. A key aspect was to limit the extra knowledge necessary for the development of the project, in order put the emphasis more on the added value related to the cooperation and team working than on additional technical knowledge. Next step will be the systematic application of the experimented modalities to some teaching courses, in which a project can be developed. The experience gained on the first application and the feed-back from participants will be useful for the subsequent edition, aiming at finding a suitable compromise among different aspects like amount of required work and quality of the final work, number of participants and management of information flux (data, report, presentations) through e-platforms at disposal, organization of the necessary technical data, procedure, models and self learning capability. The final aim is to achieve a sustainable framework enabling to manage all the students of the second years' course of applied mechanics. For a proper simulation of a working environment it is considered mandatory to keep the structure of cooperative team working, and work progress organization in terms of milestones and peer reviewed final presentation.

REFERENCES

- [1] http://ec.europa.eu/education/lifelong-learning-policy/doc44_en.htm
- [2] Website FEANI, European Federation of National Engineering Associations, www.feani.org/webfeani
- [3] Website www.eccceobs.eu
- [4] N. Bachschmid, F. Cheli, A. Castelli, C. Marinoni "Comparing Needs of Employers to Learning Outcomes of Engineering Curricula in Europe: Preliminary Results of ECCE Project" DINAME Int. Conference 2011
- [5] http://ec.europa.eu/public_opinion/flash/fl_304_en.pdf

Feedback in Postgraduate Supervisory Communication: An Insight From Educators

Balsam A. Mustafa[1], A. Noraziah[2], Mazlina Abdul Majid[3]

Faculty of Computer Systems and Software Engineering, University Malaysia Pahang - Malaysia

[1]balsam@ump.edu.my
[2]noraziah@ump.edu.my
[3]mazlina@ump.edu.my

ABSTRACT

Postgraduate supervision is one of the most complex forms of teaching in higher education. Given the high rate of failure to complete postgraduate research, the quality of the research supervision has been questioned and some determinant factors leading to this undesirable outcome have been proposed like student's expectations of the supervisor, supervisors' insufficient knowledge, lack of interest in students' work, and unsatisfactory ways of delivering feedback to the students' work. Based on our experience as research supervisors and supervisees, we consider feedback significant in creating effective working relationship between the research supervisor and supervisee and supports successful completion of the research program. Different studies have investigated to what extent the supervisor's feedback can be more effective in improving student's performance and the type of feedback the students need. However, few studies have looked at how and why feedback is given as a supportive activity for students' learning and development. This paper specifically focuses on how effective working communication between the research student and the supervisor can be achieved through the way feedback is given to the supervisee and how the student receives the feedback. The study concludes that the supervisors' ability and the supervisee's readiness to be open to criticism to provide and receive constructive feedback in a balanced way should lead to desirable academic outcomes in the academic context.

Keywords: postgraduate supervision, constructive feedback, feedback strategies, working communication

INTRODUCTION

In most research universities, students who pursue postgraduate degrees usually do a research study under the supervision of one or more faculty members. The Economic and Social Research Council in UK ESRC (1991) has regarded the supervision process as the single most important variable affecting the success of the research process. Armstrong (2004) describes it as the most complex and subtle form of teaching in which academics engage. Connell (1985 P38) describes research supervision as "the most advanced level of teaching and one of the most complex and problematic". The role of supervisor is to guide the research student throughout their study, provide the time, expertise and support to foster the candidate's research skills and attitude and to ensure the production of a research of acceptable standard (Heath, 2002). The results of surveys about postgraduate supervision quality showed low completion rates and levels of student's satisfaction with the guidance provided and unsatisfactory delays in receiving feedback about written drafts and progress. Researches pointed out that this indicates not an ideal situation and inadequacy in the monitoring of higher degree student progress (Gurr, 2001; Aspland et al, 1999). Armstrong (2004) reported on the high figures of failure of graduate degrees in the social sciences in the UK and North America. Further, his study indicated that a high proportion of those who complete their research degrees take longer time than expected, and students often express dissatisfaction with the research process. These studies reveal numerous concerns for both postgraduate students and supervisors. This paper is structured as follows, Section2 discusses the supervisor- postgraduate student relationship from different points of view in the literature, Section3 presents the importance of giving and receiving feedback between both the supervisor and the research student, Section4 presents best strategies for giving feedback, and finally Section5 concludes the paper.

THE SUPERVISOR- POSTGRADUATE STUDENT RELATIONSHIP

The quality of the supervisor-research student relationship has been discussed in a number of research studies as vital to the success of the research process and student's satisfaction and timely completion of their postgraduate

study (Spear, 2000; Aspland et al, 1999; Armstrong, 2004). Mainhard et al (2009) indicated that good working relationship between supervisors and their PhD or master by research students were associated with good progress and satisfaction. Pearson and Kayrooz (2004) see the domain of research supervisory practice as a facilitative process involving educational tasks and activities that comprise the work of supervision. These studies have identified the need for more awareness of supervision responsibilities, demands and interests of research students. As Zuber-Skerritt and Roch (2004) explained that to identify and communicate the postgraduate supervisor's role and meet the expectations of postgraduate students, there is a need for an in-depth studies of the PhD experience and supervisory pedagogy to overcome some of the problems associated with the supervisor-student relationship. In discussing the characteristics of good research supervisor, Brown and Atkins (1986) suggested a list of supervisory roles and attitudes which include director, facilitator, advisor, guider (suggesting timetable for writing up and giving feedback on progress), manager (checks progress regularly, monitors study, gives systematic feedback, plans work). This paper focuses on particular role of the supervisor which is providing a constructive and timely feed back to the student.

A consensus is developed in the literature around the conceptualization of feedback as a process of communication and dialogue in specific social context (Pokorny and Pickford, 2010). Others have defined it as giving and sharing information in the form of guidance and support as an integral element to foster improvement, development, and understanding of material learned and applied (Sutton, 2009; Gullet, 2010). Gullet has concluded that influential and mutual feedback between peers, which has its focus on development rather than evaluation, is the most important feature during assessment. As argued by many researchers in higher education (Ramsden, 2003; Sutton, 2009; Hattie and Timperly, 2007; Weaver, 2006) effective and high quality feedback is a key element of quality teaching in higher education. In their argument, Row and Wood (2008) noted that feedback is the most powerful factor that affects students' achievement. They also explained the consistent positive effects of feedback on learning and developing student's understanding and skills. They found that undergraduate students value feedback; want to receive feedback that enables them to improve their performance. However, they found, students feel that providing late feedback shows little interest in their work and students want tutors to consider their feelings and point of views when giving feedback. The study found also that feedback was considered unhelpful when it is vague, untimely, or when not enough information was provided to make it useful.

Feedback can be both positive and negative. While giving positive feedback is relatively easy, being a supervisor can involve occasions when it is important to give negative feedback on research or progress in general. Feedback helps research student to become more aware of what s(he) is doing and how to do it, but it is important to realize the way feedback is given. Pearson and Kayrooz (2004) describe introducing any type of evaluative activity or feedback between research students and supervisors as highly problematic for different reasons, such as cordiality of the circumstances and student's fear of negative consequences in a relation featured with difference in power and dependence. They suggested at the same time that providing feedback to students give them the opportunity to reflect on their work, change and modify in order to become more effective. On the other hand, Pearson (1999) argued for the importance of giving feedback to supervisors as well on their practice that will enable them to understand the more subtle features of their practice and what they might improve.

Zhao et al (2007) emphasizes the importance of feedback and that students most satisfied with their supervisors when they receive both regular and constructive meaningful feedback on research and progress towards the degree. Feedback is constructive when it both emphasizes the strength of the student and offers suggestions for improvement in a timely manner. For feedback to be helpful, it needs to be given in a concerned and supportive way and to include both positive and negative observations. It's good to remember that people often dislike feedback if it is negative. The effective supervisor can reduce the stress on the research student by employing certain communication strategies so that student completes the study on time and feel satisfied, while at the same time the supervisor achieves the goals expected from the student.

GIVING AND RECEIVING FEEDBACK

Research indicated that to maximize the effect of feedback, attention must be paid to the psychology of giving and receiving feedback (Rae and Cochrane (2008). Mutch (2003 P25) contended that "the giving of feedback on assessed work is a social practice that demands attention to not only the text but also to condition of production, distribution, and reception ". The importance of the way of giving feedback is that student's self-esteem has the potential to be damaged by feedback. This is supported by Weaver's study (2006) on how students vary in their attitudes to receiving feedback. She argued that the way in which comments are worded in a written feedback is ultimately shaped by tutors values, beliefs, and understanding for the nature of the message conveyed. Further, self-esteem is affected by receiving negative or unexpected feedback especially for student with low self-confidence which tends to take all feedback as a judgment of ability. This makes the student feel beaten and may think of leaving the study. Therefore, it is important for the supervisor to have an understanding of each student's needs before providing feedback.

The constructive feedback will be most helpful when used to develop the current performance of the student. If the student remains open minded when receiving this sort of feedback, s (he) will feel more confident in openly discussing research, issues, and challenges with the supervisor and will help break down barriers and encourage productivity. When students perceive feedback as not personal, they will tend more to accept it and being able to integrate it into future work which is a powerful skill that will be of great benefit for the student in the future career life. On the other side if the supervisor be able to receive feedback, this points supervisor's ability to create effective communication with the student. As the most commonly reported difficulties for the research student relate to communication difficulties with supervisor, maintaining good communication strategies can help avoid some of the more distressing situations in which students and supervisors can find themselves. When students feel confident that they can offer feedback without consequences they will feel that supervisor listen to them, value their opinions which increase their confidence and help student to grow in areas of weaknesses. Studies in the nature of the relationship between supervisor and student (Sutton, 2009) affirm the importance for both tutors and students to enter into a meaningful and effective academic dialog through which students can effectively provide feedback by identifying strength and weakness in tutors' practice. He argued that dialog relationship encourages students to compare their own performance with that ideal and enables them to diagnose their own strength and weakness. Through dialog students can receive formative feedback which emphasizes the strengths of student's work and offers suggestions for improvement.

STRATEGIES FOR GIVING FEEDBACK

Certain strategies are important in giving feedback. Supervisor should present his concern objectively not emotionally and without judgment. Focus on the problem not the student. Ask questions and listen to understand what is being said and help student to understand how to improve his/her work. Negative feedback is person focused and could be disappointing instead of encouraging. Positive constructive feedback is problem focused and seeks way to improve performance. In giving feedback, especially when assessing written work the purpose should be clear, vague comments may leave the student confused and not able to know what to do. Supervisors should mention work that is being done well in addition to any series shortcoming that needs to be overcome. In that, supervisor needs to be specific about the errors that were made, what should be done to correct them, and the expected results. Supervisor better listen to student, make sure the student has opportunity to talk about his perspective on this constructive feedback, to ask questions to clarify what the supervisor is talking about and then offer suggestions of corrective action. The student on the other hand should be prepared to receive supervisor's constructive criticism in a positive way. Student should check attitude, recognize that supervisor's feedback is not a personal attack. It should be viewed as part of learning experience. Student should listen carefully to understand the message especially if it appears to be negative and critical, then reflect back the message to the supervisor to clear up any misunderstanding before it becomes more complicated. For this, student may need to clarify the feedback by asking questions. Student is expected to accept praise with appreciation, considering that positive, encouraging feedback is an indicator of a healthy relationship with the supervisor. Then student should use positive feedback as motivator to strengthen what is already being done.

CONCLUSION

Supervision is a complex role especially if it involves supervising postgraduate students. The importance of feedback in the supervisor - research student relationship has been analyzed in different studies that confirmed the effect of constructive feedback on the student that receives it in timely manner. Constructive feedback focuses the strength and weakness of the student research not the student himself. It regularly offers suggestions for improvement and needs to be given in a concerned and supportive way by discussing both positive and negative sides of the student research. For the supervisor to be helpful to the student, there are certain communication strategies that the supervisor may employ to reduce the stress on the research student. It is important that the supervisor be able to listen to the student and help him understand how to improve his/her work. Feedback from the supervisor as comments on a written work should be clear because vagueness leaves the student confused about what to do. It is important that both student and supervisor involve in discussions and provide feedback to each other's. Student is expected to accept praise with appreciation, considering that positive, encouraging feedback is an indicator of a healthy relationship with the supervisor.

ACKNOWLEDGMENT

We are thankful to University Malaysia Pahang (UMP) for financing this research. This work is supported by the short term RDU Grant No.130356.

REFERENCES

- Armstrong, S. (2004). The impact of supervisor's cognitive styles on the quality of research supervision in management education. *British Journal of Educational Psychology*, 74, 599-616.
- Aspland, T. , Edwards, H. , O'Leary, J. & Ryan, Y. (1999). Tracking New Directions in the Evaluation of Postgraduate Supervision. *Innovative Higher Education*, 24, 127-147.
- Brown, G. & Atkins, M. (1986). Academic Staff Training in British Universities: Results of a National Survey. *Studies in Higher Education*, 1, 29-42.
- Connell, R. W. (1985). How to Supervise a PhD. *The Australian Universities' Review*, 28, 38-41.
- ESRC (1991). Economic and Social Research Council, Postgraduate training: Guidelines on the provision of research training for postgraduate research students in the social sciences. Swindon: ESRC.
- Gurr, G. M. (2001). Negotiating the Rakey Bridge: A Dynamic Model for Aligning Supervisory Style with Research Student Development. *Higher Education Research & Development*, 20, 81-92.
- Gullet, E. (2010). Web-Based Learning Solutions for Communities of Practice: Developing Virtual Environments for Social and Pedagogical Advancement. In *Nikos Karacapilidis (Ed)*.
- Hattie, J. & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*, 77, 81-112.
- Heath, T. (2002). A Quantitative Analysis of PhD Students' Views of Supervision. *Higher Education Research & Development*, 21, 41-61.
- Mainhard, T., Van der Rijst, R. & Van Tartwijk, J. (2009). A model for the supervisor-doctoral student relationship. *Higher Education*, 58, 359-373.
- Mutch, A. (2003). Exploring the practice of feedback to students. *Active Learning in Higher Education*, 4, 24-38.
- Pearson, M. (1999). The changing environment for doctoral education in Australia: Implications for quality management, improvement and innovation. *Higher Education Research & Development*, 18, 269-287.
- Pearson, M., Kayrooz, C. (2004). Enabling critical reflection on research supervisory practice. *International Journal for Academic Development*, 9, 99-116.
- Pokorny, H. & Pickford, P. (2010). Complexity cues and relationships: Student perceptions of feedback. *Active Learning in higher Education*, 11, 21-30.
- Rae, A. & Cochrane, D. (2008). Listening to students: How to make written assessment feedback useful. *Active Learning in higher Education*, 9, 217-230.
- Ramsden, P. (2003). *Learning to teach in higher education*, (2nd Ed.) London: Routledge. *Richardson*.
- Rowe, A. & Wood, L. (2008). Student Perceptions and Preferences for Feedback. *Asian Social Sciences*, 4, 78-88.
- Spear, R. H. (2000). Supervision of Research Students: Responding to Student Expectations. *The Australian National University, Canberra*.
- Sutton, P. (2009). Towards dialogic Feedback. *Critical and Reflective Practice in Education*, 1, 1-10.
- Weaver, M. (2006). Do Students Value Feedback? Students' Perception of Tutors' Written Response'. *Assessment and Evaluation in Higher Education* 31, 379-394.
- Zhao, C. , Golde, C. , & McCormick, A. (2007). More than a Signature: How advisor choice and advice behaviour affect student satisfaction. *Journal of Further and Higher Education*, 31, 263-281.
- Zuber-Skerrit, O. & Ryan, Y. (2004). A Constructivist Model for evaluating Postgraduate Supervision: A case study. *Quality Assurance in Education*, 12, 82-93.

Integrating Weighted Learning Outcomes in Assignment Design: Does It Help Students?

Sherif Mohammed Ali El-Wageeh

College of Architecture
Engineering and Design,
Kingdom University

sherifwageeh@yahoo.com
s.wageeh@ku.edu.bh

ABSTRACT

This paper discusses the importance of designing well structured assignments that are based on Intended Learning Outcomes (ILOs). Through the researcher experience as an assistant professor in the department of Architectural Engineering, it is found that the quality of students' response to required assignments in the course of "Construction Management" together with their output was affected by the structure and design of the assignment itself.

The researcher designed an assignment about an important topic "Trade-off in Construction Projects Management" without writing the relative weight of tested ILOs in the assignment. After receiving students output of the assignment and marking it, the researcher modified the assignment in order to incorporate certain ILOs (Knowledge and Understanding skills, subject-specific skills, intellectual skills and transferable skills) with a relative weight assigned to each. The updated assignment was re-submitted to students. While re-marking students' output, it was found that the students' response and quality of their output was significantly improved.

Keywords: Learner-centered education, rubric-based assessment, assignment design, Intended Learning Outcomes (ILOs), generic skills, decision taking, Trade-off

INTRODUCTION

Context and Background

After the shift from teaching to learning approach, and the emergence of student-centered approach in the mission and vision of higher education institutes, it was important to integrate learning outcomes in the design and specifications of academic programs and courses. Various assessment methods were re-designed in order to test students' Intended Learning Outcomes (ILOs). Assignments are examples of such assessment methods. The study focuses on the effect of integrating ILOs with relative weight in the design of assignments on students' submittals.

In this paper, the researcher conducted an experimental study in the course "Introduction to construction project management" to depict the importance of integrating course ILOs with relative weight in assignment design. An important topic in construction management is chosen for the assignment. The topic is "Trade-off in construction management". Trade-off is favouring one factor in expense of other factors. According to (Gould, 2002), the three project pillars (time, cost and quality) are subject to trade-off process during the life cycle of construction projects. The Project Manager (PM) is responsible for managing the trade-off process and taking timely decisions in that regard so that the construction project stages run smoothly without any delay.

Motivation and Importance

The significance of this research is motivated by the continuous quality assurance reviews for academic programs in the author's university. The reviews are conducted by National Authority for Qualifications and Quality Assurance of Education and Training (NAQQAET) in Bahrain. The continuous development of academic programs, course facts and descriptions, and assessment policy led to the necessity of accurately defining ILOs for the academic program as well as for courses under each program. It was advised to link assessment methods to ILOs by indicating tested ILOs in each method. In order to follow NAQQAET recommendations, the author designed a template for assignments that incorporates tested ILOs with a relative weight of importance for each ILO.

Accreditation Board for Engineering and Technology (ABET) made it mandatory for universities to follow the outcome-based assessment and evaluation process for accreditation purposes (Pallapu, n.d.). The importance of this research stems from the continuous trials of educational institutions to assure the quality in teaching, learning and

assessment methods. The education currently is shifting from teaching approach to learning approach; that means it is important to measure students' learning outcomes by all possible means and through all possible assessments methods in order to assure the effectiveness of teaching process.

Research Question

The paper tries to answer the question: Is it feasible to incorporate weighted ILOs in the design of course assessment?. Moreover, the paper tries to test whether the response of students to such assessments is affected positively or negatively. A hypothesis is designed to answer research question. The hypothesis is "average of students' marks increases if the assignment incorporates tested ILOs with their relative weight". Experimental steps taken to test research hypothesis are explained in detail later.

Research Objectives

The research aims at:

1. Highlighting recent conceptual shifts in higher education system
2. Highlighting the importance of ILOs in education.
3. Testing the feasibility of integrating tested ILOs with relative importance weight in the design of assignments.

Research Structure

The research is structured on four sections. The first section introduces the topic's context and background as well as the motivation behind conducting the research and its importance. The research question and hypothesis are also highlighted. The second section highlights the recent shift from teaching to learning approach in education, and the origin and evolution of ILOs concept in education and its reflection on assessment process. The third section explains experimental study methodology, steps of assignment design, experiment procedures and the results of experimental study. The fourth section comes up with the conclusion, limitations, recommendations and directions for further research.

ASSESSMENT AND EDUCATIONAL SHIFT

This part of the study surfs through different topics related to experimental study context. First, the conceptual shift from teacher-centered approach to learner-centered approach is highlighted with its reflection on the assessment process. Second, the role of assessment in education and the transparency in assessment design is emphasized. Finally, the link between Learning Outcomes and assessment is tackled.

Student-Centered Approach and Assessment in Education

During last decade, some research studied the shift from teacher-centered approach to learner-centered approach (Weimer, 2002; Wright, 2011). Weimer (2002) revealed that classrooms at the college/university level are extremely instructor-centered and that this situation affects negatively students' success and maturity. Wright (2011) pointed out that when students face an unmanageable amount of course content, they resort to memorization rather than conceptualization. In fact, this is reflected clearly on their response to some modes of assessment such as written assignments. In her book, *Learner-centered teaching*, Weimer (2002) pointed out five areas in education that can be affected by the conceptual shift from teacher-centered approach to learner-centered approach. Those areas are: the balance of power in the classroom, the function of the course content, the role of the teacher versus the role of the student, the responsibility of learning and the purpose and the process of evaluation.

Wright (2011) predicts some features about students' evaluation in student-centered approach. She predicts that "course objectives and learning will be clearly stated, and students will be taught to assess their own work and that of their peers by asking critical questions in a constructive manner". Wright's prediction reveals that learner-centered approach enhances both teaching and learning process and improves students' generic skills.

Transparency and Assessment in Education

According to (Parkes, 2010), assessment provides a critical link in the teaching and learning process. Fu & Kwok (n.d.) highlight the purpose of assessment in applied learning context as "it involves generating and collecting evidence of students' attainment of knowledge, skills, values and attitudes, and judging that evidence against defined standards". Fu & Kwok (n. d.) recommend that the assessment design should consist of a representative set of tasks which can measure a wide spectrum of knowledge, skills and attributes. They mentioned certain dimensions that have to be considered when designing an assessment task. These dimensions are: assessment mode; assessment method; assessment criteria; assessment task weighting; weighting of individual and group assessment; weighting of in-class and outside-class assessment and weighting of written and practical assessment.

It is important to put a lot of effort in designing and standardizing assessment. Many countries started to establish centralized authorities that are responsible for assuring the standardization of assessment in all educational stages. Fu & Kwok (n.d.) shed the light on the role of Hong Kong Examination and Assessment Authority (HKEAA) which is: the setting of performance standards; the guiding of assessment design; and the moderating of assessment results.

Few studies focused on the importance of using rubrics in assignment design. Keefer (2010) conducted a survey to test students' opinion about using rubric. She designed an open –ended questionnaire that is structured around previous study by Andrade and Du (2005). Students indicated that rubrics were: helpful in completing assignments and giving insight into teacher expectations. Moreover, students noticed that, for teacher, grading was easier using rubrics and resulted in consistent feedback. Additionally, several students commented that their anxiety increased when instructors used rubrics because of the pressure to produce very specific high quality work (Keefer, 2010).

Learning Outcomes Based Assessment

The emergence of Outcome Based Education (OBE) was inspired by Bloom's categorization of the skill levels achieved by students in 1956 into six categories: knowledge; comprehension; application; analysis; synthesis and evaluation (Bloom, 1984). According to (Pallapu, n.d.), design and developing of outcome-based course is a three step process: (i) Identify the outcomes; (ii) Decide the contents and teaching strategies; and (iii) Developing assessment based on the outcomes. Fu & Kwok (n.d.) state that "alignment of curriculum, learning and assessment plays a key role for the implementation of a coherent course". They add that "the Intended Learning Outcomes (ILOs) of the curriculum lead the assessment design as well as the relevant learning activities required" and "since the development of assessment tasks, criteria and rubrics are started with the ILOs, coherent assessment is expected".

Taylor & Harlow (2010) point out that learning outcome-based assessment can help identify how learning occurs within and across time. They add that ILOs and corresponding aligned assessment tasks and teaching activities are increasingly being used in order for students to achieve deeper levels of learning and understanding. Fu & Kwok (n.d.) link between assessment in applied learning and learning outcomes (knowledge, skills, values and attitudes). They highlight the challenge of Hong Kong Examination and Assessment Authority (HKEAA) in devising appropriate assessment instruments to measure the performance of students taking different Applied Learning (ApL) subjects. HKEAA developed a set of written descriptors for the 'attained' level that describes what a typical student of a particular ApL subject performing at this level is able to do. Performance descriptors drafted by HKEAA was linked to Learning Outcomes (LOs) through covering seven dimensions: knowledge and understanding; application of knowledge; generic skills; communication skills; subject-specific performance related to the context; values and attributes towards the related industry and self-understanding for further studies and career development (Fu & Kwok, n.d.). In his description of assignments and projects as assessment tools, Pallapu (n.d.) mentioned that assignments and projects can help in assessing student's ability to apply the knowledge acquired; analyze and solve problems; design, develop, and implement solutions. The assignment that is presented in the next experimental study complies typically with Pallapu's description.

EXPERIMENTAL STUDY

Experimental Study Methodology

In order to answer the research question and to achieve research objectives, an experimental assignment was designed in a way that assures covering at least three categories of the course ILOs. These ILOs were not mentioned to the students in the first version submitted to them. However, the structure of assessment tasks reflected those ILOs. The students Output of the first version were evaluated according to pre-weighted ILOs. The assignment was re-written after incorporating those ILOs with their relative weight of importance. The students were asked to re-submit the assignment again according to its second version. Inferential statistics methods were used to compare between the two results and to test research hypothesis.

The Assignment

The assignment that was used to test research hypothesis is structured around '*Trade-off*' in construction projects. As was clarified before, trade-off is an important decision making situation that faces Project Manger (PM) during the life cycle of construction projects. The first version of the assignment was designed in a form of systematic steps/tasks for students to follow. Following those steps properly assures achieving certain learning outcomes. Following is the first version of the assignment:

The three project factors (Performance/Quality – cost – time) are subject to a trade-off process.

1. *Explain the previous fact*
2. *Apply this fact to a selected real project in which a trade-off decision was made.*

3. Criticize the decision that was made and suggest your own alternative trade-off decision
4. Present your assignment in a research format (size A4) containing (text – photos of the project – diagrams if applicable)

Students were asked to demonstrate their understanding of "Trade-off" in construction project management, and to select a case study in which a clear trade-off decision was taken by the management team. Moreover, students were asked to conduct a critical analysis on the taken trade-off decision and suggest an alternative trade-off decision that can be taken.

After receiving students' submittals for the first version of the assignment, the tested course ILOs, with their relative weight was added to that version. The result was the second version which included the following ILOs. Table (1)

Table (1): Tested ILOs with their relative weight

ILO Category	ILO Code	ILO	Relative Weight (%)
Knowledge and Understanding Skills	A2	Understanding Trade-off in Construction Project Management	5
Thinking skills	C1	Decision Making	40
General and Transferable Skills	D1	Critical Thinking - Problem Solving	30
	D2	Analytical skills	15
	D3	Management skills	10
Total			100

The Experiment

The first version of the assignment was presented to 14 students. They were given 3 weeks to submit the assignment. During the first week of submission period, there was a follow-up for students' works in order to make sure that they have selected proper case studies. After receiving students' submittals, they were evaluated according to the weighted ILOs in table (1). The result was as shown in table (2)

The second version of the assignment was presented to the same 14 students with further two weeks period for submission. Students were asked to re-submit the assignment after putting into consideration the weighed tested ILOs shown in table (1). Students' second submittals were marked again. Two students didn't submit the assignment in the second round; those students were excluded from the experiment. The result are shown in table (3)

Table (2): Assignment's first version marking results

	Tested ILOs with their Relative Weight (%)					Total
	A2	C1	D1	D2	D3	
Student Number	5 %	40%	30%	15%	10%	100%
1	3	20	20	10	0	53
2	5	40	25	15	8	93
3	3	20	20	10	0	53
4	3	25	20	10	0	53

5	5	20	15	10	0	50
6	5	25	20	10	5	65
7	5	20	15	10	0	50
8	5	20	20	8	5	58
9	4	25	15	15	5	64
10	5	40	30	15	0	90
11	4	25	15	15	5	64
12	5	40	25	15	8	93
13	5	20	15	10	0	50
14	5	25	20	10	5	65

Table (3): Assignment's second version marking results

	Tested ILOs with their Relative Weight (%)					Total
	A2	C1	D1	D2	D3	
Student Number	5 %	40%	30%	15%	10%	100%
1	5	35	25	12	5	82
2	5	40	25	15	10	95
3	5	35	25	12	5	82
4	5	35	25	12	5	82
5	5	30	20	10	8	73
6	5	30	20	10	10	75
7	5	30	20	10	8	73
8	5	20	20	8	5	58
9	5	25	15	15	10	70
10	--	--	--	--	--	--
11	5	25	15	15	10	70
12	5	40	25	15	10	95
13	5	35	25	15	10	90
14	--	--	--	--	--	--

In order to test research hypothesis, the results shown in tables (2) and (3) need to be compared. The null hypothesis (H_0) will demonstrate that average of student's marks was not affected by adding weighted ILOs to the assignment (with a significance level $\alpha = 0.05$) i.e.

$$H_0: \mu_1 = \mu_2(1)$$

Where: μ_1 is the average of students' marks in the first version; μ_2 is the average of students' marks in the second version

Because it is required to test whether students' submittals were affected positively in the assignment's second version or not, the alternative hypothesis (H_1) is a positive directional hypothesis i.e.

$$H_1: \mu_2 > \mu_1(2)$$

The statistical parameter (t) is used to test the hypothesis. It is given by the equation:

$$t = \frac{\bar{D}^-}{S_D / \sqrt{n}} \quad (3)$$

Where: \bar{D}^- is the average of differences between students' mark in the second version and their mark in the first version, S_D is the standard deviation of differences, n is the sample size.

Table (4) shows the difference between students' mark in both versions of the assignment. Variables of equation (3) are then calculated from the table as follows:

$$\bar{D}^- = \frac{199}{12} = 16.58 \text{ and } S_D = 13.11$$

$$\text{From equation (3): } t = \frac{16.58}{13.11 / \sqrt{12}} = 4.38$$

Table (4): Difference between students' mark in both assignment versions

Student Number	Marks (1 st Version)	Marks (2 nd Version)	Difference (D)
1	53	82	29
2	93	95	2
3	53	82	29
4	53	82	29
5	50	73	23
6	65	75	10
7	50	73	23
8	58	58	0
9	64	70	6
10	90	--	excluded
11	64	70	6
12	93	95	2
13	50	90	40

14	65	--	excluded
Total			199

Results, Discussion and Implications

As mentioned before, the alternative hypothesis (H_1) will be positive directional hypothesis and the test will be one-tailed test (right tail). In this case, from standard statistical tables, the critical value of "t" (with degrees of freedom = $n-1=12-1=11$ and a significance level $\alpha = 0.05$) will be 1.790.

As the calculated "t" is greater than critical "t", the decision will be rejecting (H_0) and accepting (H_1) which yields that students' submittals were significantly affected positively in the assignment's second version. Fig. 1

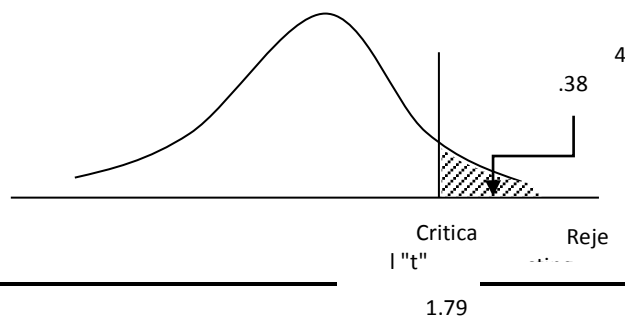


Fig. 1

Critical and calculated values of (t)

The experiment proved that students' marks in the second version of the assignment were significantly improved. It seems that adding ILOs with their relative weight helped students to tune their submittals by putting more emphasis on achieving Learning Outcomes (LOs) with higher weight. All students achieved higher marks in the second version of the assignment except one student whose mark remains the same. When investigating the GPA of that student, it was found that it is very low. It seems that he didn't care about improving his mark.

By comparing breakdown of students' marks in both versions of the assignment, it is easily found that knowledge and understanding skills mark was not affected significantly. However, both marks of thinking skills and general and transferable skills were improved significantly in students' submittals for the second version of the assignment.

The results of marking both versions of the assignment helped the instructor both in re-considering the relative importance of course ILOs, and in fine tuning some ILOs. Moreover, it helped the instructor in balancing tested ILOs in further assignments.

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

Conclusion

The educational shift from teaching approach to learning approach resulted in structuring academic programs and courses on pre-defined ILOs that cover wide range of skills such as: knowledge and understanding skills; subject-specific skills; intellectual skills and general and transferable skills. Assessment tools needed to be re-examined in order to test those ILOs effectively. It is found that transparency is an important factor in designing assessment instruments. Integrating tested course ILOs with their relative weight of importance improved students' response to the experimental study assignment. Students tuned their response to various assessment tasks in the assignment according to the weight of corresponding LOs.

Limitations

The experimental study covered by this paper has some limitations. Communication skills, which are normally tested through student's presentation of his submittals, were not included in the assignment. Instructor's feedback on the two versions of the assignment was given to students in a written form. Moreover, the feedback process was not highlighted in the paper in order to focus on the comparative analysis of students' final results in both versions of the assignment. Obviously, those areas of limitations can be covered in further experimental studies.

Recommendations and Future Studies

The following recommendations and directions for future studies are emerged from both theoretical background and practical part of the study:

- Establishing central examinations and assessment authority that is responsible for the setting of performance standards, the guiding of assessment design, and the moderating of assessment results.
- The instructor has to guide students to use the course concepts to acquire skills of critical thinking and problem-solving.
- It is important to map assessment tasks with ILOs. The relative importance of ILOs is revealed by frequency and weighting of the assessment tasks concerned.
- Devising instruments and indices that can be used to assess the quality of assessment design by testing the balanced coverage of cognitive requirements and generic skills through assessment tasks.

REFERENCES

- Andrade, H. & Du, Y. (2005). Student perspectives on rubric-referenced assessment. *Practical Assessment, Research & Evaluation*, 10(3), Retrieved on August, 2013 from: <http://pareonline.net/getvn.asp?v=10&n=3>.
- Bloom, B. S. (1984). *Taxonomy of Educational Objectives-Book 1: Cognitive Domain*, 2nd ed., Addison Wesley Publishing Company.
- Fu, T. W. & Kwok, K. B. (n.d.). *Design of assessment instruments for applied learning subjects in Hong Kong*. Retrieved on June, 2013 from: http://www.iaea.info/documents/paper_4d52d1c.pdf
- Gould, F. E. (2002) *Managing the construction process: estimating, scheduling, and project control*. New Jersey, USA: Pearson Education Inc.
- Keefer, L. R. (2010). Rubric-referenced assessment in teacher preparation: An opportunity to learn by using. *Practical Assessment, Research & Evaluation*, 15(8), 1-9
- Pallapu, S. K. (n.d.). *Automating outcome based assessment*. Retrieved on July, 2013 from: <http://technology.asu.edu/./tradeshows/May04/suseelpallapu.pdf>
- Parkes, K. A. (2010). Performance assessment: lessons from performers. *International Journal of Teaching and Learning in Higher Education*, 22(1), 98-106
- Taylor, L. D. & Harlow, S. (2010). *Learning outcome based assessment with counselling courses: in pursuit of active assessment*. Paper based on a program presented at the 2010 American Counselling Association Conference, March 18-22, Pittsburgh PA. Retrieved on June, 2013 from: http://counselingoutfitters.com/vistas/vistas10/Article_30.pdf
- Weimer, M. (2002). *Learner-centered teaching: five key changes to practice*. San Francisco, CA: Jossey-Bass
- Wright, G. B. (2011). Student-centered learning in higher education. *International Journal of Teaching and Learning in Higher Education*, 23(3), 92-97

Importance of Identifying and Embedding Core and Entrepreneurial Skills For The Development of Tve Standarts in Higher Education

Murat ARI[1], Hayati Mamur[2], Fatih Kokmaz[3], İsmail Topaloglu[4]

Cankiri Karatekin
University, Turkey

mari@karatekin.edu.tr

hmamur@karatekin.edu.tr

fkorkmaz

@karatekin.edu.tr

itopaloglu

@karatekin.edu.tr

ABSTRACT

Core and entrepreneurial skills are the basic reference in the TVE (Technical and Vocational Education) program design. On the basis of the competencies, the programs are being structured, implemented, evaluated and amended when necessary. Competency based development of TVE standards aims to train instructors in accordance with the task requirements. Sustainability of activities for the development of competencies and curricula is required for the qualitative improvement of the TVE systems. On the other hand, Competencies would function as a basis for the development of the National Qualifications System. A National Qualifications System is important for the recognition of diplomas and certificates in other countries. Competencies can be used as criteria for internal and external assessments of the institutions. In this study, suggestions, arrangements and solutions for this matter has been presented in detail for future reference in the view of Turkish Tertiary Education.

Keywords:

INTRODUCTION AND BACKGROUND

The idea of core or entrepreneurial skills is not new (M. Brockmann, L. Clarke, C. Winch, 2008). People involved in TVE have long realized that narrow, specific technical training fails to equip people for changes in both the economy and in occupations.

Across the industrialized and developing world, economic growth is increasingly linked to skill formation to raise labor productivity and average living standards. The twin forces of global integration and technical change have increased the focus on and importance of education and training in the competitive process (B. Jackling, P. Lange, 2009). The role of the education and training system in this process is becoming increasingly important. The researchers discuss that the consensus is deficient in four general ways. First, it is incorrect to assume a linear and automatic connection between skill formation and economic performance. In this study we examine a range of theoretical perspectives on this connection. The most important finding is that the link between skills and performance has to be seen in its social context. And the major macroeconomic developments across the world, and considers econometric and other evidence for convergence of national economic systems.

There are many different versions of core skills. If we say that core skills are all the skills which are not specific technical or occupational skills, there are many different ways in which they can be described (M. Ari, M. C. Taplamacioglu, 2011). First of all there are different categories. Some of them are given in the below.

basic skills

life skills

broad skills

non-technical skills

common learning outcomes

personal competences

common skills

personal effectiveness

core skills

personal skills

employment (or employability) skills

process skills

enterprise skills

process independent skills

entrepreneurial skills	soft skills
extra functional skills	social competence
generic skills	social and life skills
key qualifications	transferable skills

EXPECTATION OF TVE STANDARDS

Education and training is the key to making people employable, thus allowing them to gain access to suitable work and to escape poverty (B. Jacklinga, P. Langeb, 2009). To compete in today's global economy, workers and employers need to be especially well trained in information and communication technology, new forms of business organization, and the workings of the international market. Societies aiming to reach full employment and sustained economic growth therefore need to invest in education and human resources development. By providing basic education, core work skills, and lifelong learning opportunities for their entire working population, countries can help ensure that workers can maintain and improve their employability, resulting in a more skilled and productive workforce. Nevertheless, gaps in education and access to information technology continue between countries and within countries. TVE standards encourage the countries to develop well qualified human resources and training policies which are beneficial to all the social partners.

Training benefits not only the individual technical person, but by increasing her or his productivity and skill level, the industrial needs provides as well.

The TVE have to works with member States to reform and strengthen their national skills policies and improve their training systems. Experience shows that an enabling framework linking skills development to productivity, employment, development and suitable work targets three main objectives:

- matching training to demand for core or entrepreneurial skills for industry;
- helping technical graduates and enterprises adjust to technological or market changes, making it easier to move from declining or low productivity activities to growing and higher productivity activities through re-skilling and lifelong learning;
- building and sustaining competencies for future industrial needs,

focusing on the strategic role of education and training policies in triggering and continuously fuelling innovation, enterprise development, technological change and competitiveness (W. J. Mathis, 2010).

Coordinated efforts on TVE system are needed to promote skills development for the industry. New technologies and climate are changing day by day. And to integrate skills development into national and sector development strategies are becoming more important. Turkish Higher Authority have to study in this area supports mechanisms, institutions, and social dialogue that can sustain inter-ministerial coordination and improve the early identification of skill needs and reduction of skill gaps. This authority research agenda must focuses on sustainable forward looking frameworks for skills development; country experiences worldwide in developing and implementing national qualifications frameworks; improving informal apprenticeship systems and meeting the training needs created by economic upper programmers and emerging jobs.

1. Improving the Communication between Business and Industry and TV

In order to identifying and embedding core and entrepreneurial skills standards to impact TVE there should be a national vision and national direction. Yet the most relevant communication for TVE should be at the state and local levels (W. J. Nijhof, 1998). Strengthening business and industry and education partnerships at all levels will take time. Building partnerships at national, state, and local levels provides a mechanism for broad industry and education acceptance of the standards. Better communication avenues must be opened and dialogue within and among all partners must be strengthened.

According to industry Lack of communication has been a major problem, and the development of skill standards has become an effective way to address the need for communication among business, industry, and education. Effective communication can help educators understand what needs to be done. According to universities, educators get highly creative once they have an understanding of what is expected of them and their programs (B. Jacklinga, P. Langeb, 2009). This will enable students to make the connection between the skills being taught and relate them to work.

2. How can We Make the Curriculum Content More Relevant ?

The curriculum had been rewritten to meet the needs of business and industry, and teachers had an understanding of what was expected of them, then there would be the desired effectiveness. To make the curriculum content more relevant to the needs of business, TVE authority can determine the curriculum and an accepted performance level for the standards, produce an improved teaching and learning process, provide the additional training and work experiences for instructors so they can teach effectively. Technical and vocational educators must be held accountable to make the necessary changes and meet the criteria established by the skill standards.

3. How should the Connection between University and Industry be?

Technical university educators would use core and entrepreneurial skills standards to assist students in securing employment, to give students portable skills, to determine graduation requirements, to build student profiles, to strengthen the value of the graduation diploma, to define what students need to learn, and to get students into the industry. The goal should be to help the student become a fully competent, contributing, self-motivating and self-fulfilling member of society (Arjen Vos, 2006). The connection between teaching and learning the standards and meeting the needs of business by helping students make that connection will be a positive impact. According to some industrial area, an impact of the effectiveness of skill standards would be that educators could better place their students because they can show industry what the students know the teacher and the students become more responsive to industry. Some of them believed the skill standards would make vocational educators more effective, It makes the process and the education of the students more applicable to today's business environment so that they are theoretically better educated. They have a better experience because it's a realistic situation, and it's based on fact and not something that doesn't carry any resemblance to the industry (M. Ari, M.C. Taplamacioglu, 2012).

ADOPTING THE STANDARDS, WHICH WILL IMPROVE THE TEACHING AND LEARNING PROCESS, AND MAKE TVE EDUCATORS MORE ACCOUNTABLE.

Suggestions

- Skill standards could have an effective impact on technical and vocational by helping TVE educators become more accountable as a result of incorporating skill standards into the teacher training programs. TVE education needs to take the initiative to educate teachers in an understanding of skill standards and workplace skills, In other words, educators acceptance is needed to effectively impact the adoption of skill standards (Arjen Vos, 2006).
- Teacher training must be continuous and on going. This is education's responsibility.
- Industry must be responsible for a work based component of teacher training and preparation for teaching skill standards.
- TVE educators need a minimum of two years experience in business and industry before being certified to teach.
- The responsibility of accepting the standards, promoting the standards, and training in the adopted skills should begin with the educational system.
- Improvement of communication between business and industry and education creates a better direction for teaching and learning. Thus, educators have an understanding of what needs to be done. The development of business partnerships, strengthening advisory committees and industry based teacher training are further indicators. TVE educators should keep current in incorporating skill standards into their daily teaching activities (Qualifications and Curriculum Authority, UK, 2003).
- Overcoming resistance to change and having the ability to teach the standards would impact the effectiveness of how TVE educators adopt the standards and improve educators' accountability. In regard to accountability, one industrial manager indicated that: I could get a student in here and I start showing him things, and he says, "I've never heard of that. I've never seen that." and the person is intelligent. I know that he's telling me the truth. I know that the opportunity wasn't afforded him to learn this. Then I'm going to hold that educator responsible. I'm going to say, "You told me this boy went through a ...certified course, and he did not." I'm not going to deal with those people again (M. Ari, M. C. Taplamacioglu, 2011).
- In addressing accountability there was a definite thought that TVE educators would become more accountable as a result of incorporating skill standards into teacher training and vocational programs.
- Improving communication among all partners and development of related skill standards could help make the curriculum more relevant to the needs of industry, make TVE educators more accountable to the needs of business and industry, make students better prepared to enter the workforce, and make business and industry more efficient and productive.

DISCUSSIONS AND RECOMMENDATIONS

Continued dialogues among business and industry and TVE in Higher Education are important. This dialogue could provide occasions for representatives of labor and business and industry to develop a common language. In addition, continued communication provides the opportunity for industry to "sell" the standards to those employers who do not see the need to develop the high performance engineers and technologists. Communication can also strengthen the support of university administrators.

One implication of this study is that the skill standards should be used to develop relevant curriculum for TVE programs at the higher technical education. Training programs need to be developed for retraining, updating of skills, and retraining instructors. This training could be provided by industry trainers, private training facilities, and continuing education programs in higher education. This is an area where employers and educators must work closely so that the instructor's education curriculum provides the tools for teaching the skills. A result of appropriate curricula would be that students could acquire the skills for particular jobs or occupations. A relevant curriculum would mean that pertinent learning would take place because educators would know and focus on the needs of industry. Additional research could provide mechanisms for technical instructors to enhance employer partnerships for curriculum development, teacher training and updating of skills, and researching equipment and tools.

CONCLUSION

In this study we are trying to give importance of the establishing, identifying and embedding core and entrepreneurial skills for the development of TVE standards in Turkish Higher Education. We saw that improved communication and stronger partnerships between business and industry and education can help establish more relevant with TVE curricula. Coordinated efforts on TVE system are needed to promote skills development for the industry. New technologies and climate are changing day by day. And to integrate skills development into national and sector development strategies are becoming more important. Turkish Higher Authority have to study in this area supports mechanisms, institutions, and social dialogue that can sustain inter-ministerial coordination and improve the early identification of skill needs and reduction of skill gaps. This authority research agenda must focus on sustainable forward looking frameworks for skills development; country experiences worldwide in developing and implementing national qualifications frameworks; improving informal apprenticeship systems and meeting the training needs created by economic upper programmer and emerging jobs.

REFERENCES

- Arjen Vos, (2006). European Training Foundation Expert International Conference on Vocational Education and Training System and Qualifications Framework in Turkey, March 09-10, Istanbul.
- Beverley Jacklinga and Paul De Langeb (2009). Do Accounting Graduates' Skills Meet The Expectations of Employers? A Matter of Convergence or Divergence. *Accounting Education: An International Journal*, Volume 18, Issue 4-5, pages 369-385. DOI: 10.1080/09639280902719341
- Martin Muldera, Tanja, Weigelb and Kate Collinsa (2007). The concept of competence in the development of vocational education and training in selected EU member states: a critical analysis, *Journal of Vocational Education & Training*, [Volume 59, Issue 1](#), pages 67-88. DOI:10.1080/13636820601145630
- Michaela Brockmann, Linda Clarke and Christopher Winchb (2008). Knowledge, skills, competence: European divergences in vocational education and training (VET) the English, German and Dutch cases. *Oxford Review of Education*. [Volume 34, Issue 5](#), pages 547-567. DOI:10.1080/03054980701782098
- M. Ari, M. C. Taplamacioglu (2011). Competence Based Skills In Engineering Education And Training From Theory To Practical Application. 7th International Conference on Technical & Physical Problems in Power Engineering, ICTPE-2011, Lefkosa, TR Northern Cyprus.
- M. Ari, M.C. Taplamacioglu (2012). Web-based Blended E-learning for Adults; a Case Study. *Elsevier Procedia-Social and Behavioral Sciences*, Volume 47, 2012, Pages 1028-1033.
- Qualifications and Curriculum Authority (2003). Life skills Teaching, Available at: <http://europa.eu.int> National Council for Engineering Qualifications, UK
- William J. Mathis, Ph.D. (2010). The "Common Core" Standards Initiative: An Effective Reform Tool? The Great Lakes Center for Education Research & Practice, Search Date: November 19, 2013. http://greatlakescenter.org/docs/Policy_Briefs/Mathis_NationalStandards.pdf
- Wim J. Nijhof (1998). Key Qualifications in Work and Education. *Qualifying for the future*, pp 19-38, DOI 10.1007/978-94-011-5204-4

Obstacles and Challenges of Quality Assurance in Higher Education in Libya

Eman Mohammed Almarghani

Faculty of Economics,
Tripoli University

emanelfeed@yahoo.com

ABSTRACT

Many studies investigated the issues associated with higher education quality in Libya. On other side, most of modern researches indicated that higher education needs to be developed meeting the objectives of such systems and attaining point of sustainability realization. This paper investigates the obstacles face the quality assurance representatives within higher education system in Libya. Furthermore, examine challenges of improving higher education outcomes quality. Inductive approach methodology was adopted to obtain results. Research found several challenges facing processes of quality assurance and accreditation starting from obstacles in public universities, quality offices difficulties, leading difficulties, organizational difficulties, learning and teaching difficulties, scientific research difficulties, community service difficulties, and obstacles in private universities. Study recommendations concentrate on the important of developing trend to reduce profound gap that make education process away from sophisticated universities, and it is time to cooperate among different destinations, starting from students through staff and parent down to labor institutions.

Keywords: Quality Assurance, Accreditation, Higher Education

INTRODUCTION

Higher education is considered as critical and vital issue within any country. For any country or region to be competitive, the education system should be able to provide high quality of services, to ensure that higher education outputs are placed at the level of challenges (Wilkens, 2011). Without doubt, there are absent areas and distortions in the education system within Arab world and in Libya particularly, where a lot of burdens were generated by the rapid growth of education institutions. However, a lot of universities have established in Libya, and such matter has played a crucial role in pressuring the quality of higher education process, where a huge numbers of students who intend to catch up higher education in the last years have constituted massive load on the potentials of education system, so the attention turn out to quantity rather the quality, to the extent of that the National Centre for Quality Assurance and Accreditation of Educational and Training Institute has been established in 2006. As a bottom line, to address quality of higher education in Libya, a lot of intervention strategies and solution plans have taken a place lately, but those who have the responsibility on education system should provide more measures that could be harmonize for the situation in Libya at various levels to meet the contemporary challenges (Tamtam et al., 2011).

A BRIEF HISTORY OF EDUCATION-BASED UNIVERSITIES IN LIBYA

The first higher education institution in Libya was established in 1955 in Benghazi under the name of the Libyan University. Where, the first national university has started with Faculty of Arts and Education with 31 students and six members of the teaching stuff. In the Tripoli, in 1957, the College of Science was opened. In the same year, the Faculty of Economics and Commerce in Benghazi was established and was followed by the Faculty of Law in 1962 and then the Faculty of Agriculture in 1966. In 1967, the Libyan University started the expansion of its colleges and educational programs, and then, in 1973, separated into two independent universities: Garyounis University in Benghazi (now it is Bengazi University) and Al-Fateh University in Tripoli (now it is Tripoli University (Al-ashahr, 2008). Because of the increase in the number of students who have high school diplomas along with the expansion of the society's need the development of university education was continued steadily after 1970. Number of university faculties, in both Tripoli and Benghazi, were increased and new colleges were opened, in various disciplines, in cities Al-Baydaa and Sabha with development plans to become independent universities (Atlobah& Al-Haddad, 2010, P: 9-10). Since the beginning of the Eighties the number of universities has steadily expanded until it exceed thirteen universities in 2004 in Tripoli, Benghazi, Al-Baydaa, Sabha, Al-Zawya, Misurata, Elhoms, Sert and Al-Jabal Al-Gharbi, each of which includes variety of

disciplines and provides higher education for free, the statistics showed that there was a significant increase in the numbers of universities in Libya in 2010 where they become forty private university and twenty seven public universities (Higher Education in Libya, 2012).

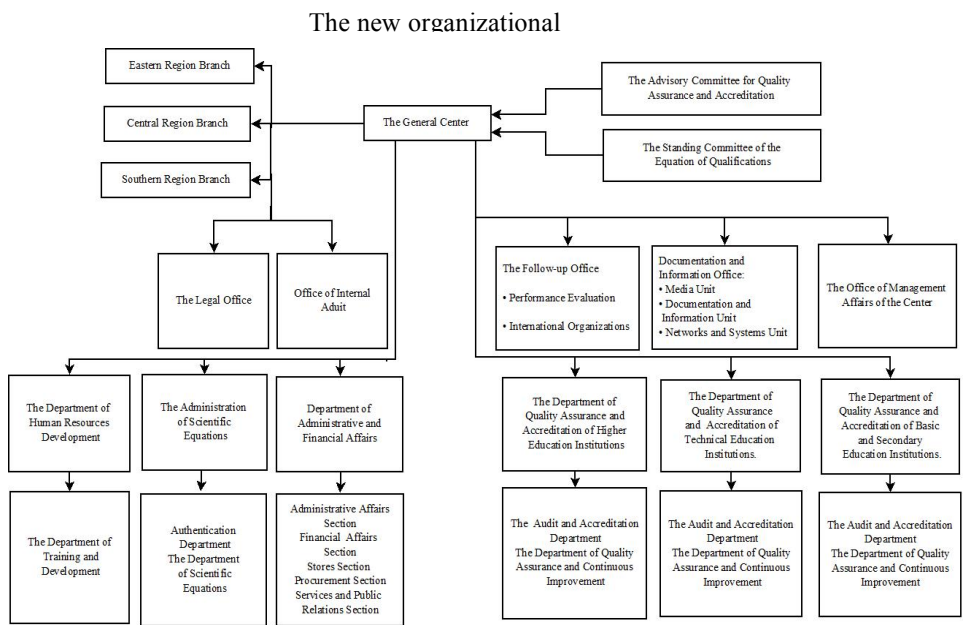
QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION IN LIBYA

The quantitative and horizontal expansion in some universities are resulted in a decline in quality level, and perhaps this is due to the significant shortage of permanent and specialist faculty members, poor infrastructure, as well as lack of funding, along with the absence of philosophy and the absence of clear criteria for evaluation and development (Al-Gadid, 2010). Based on the foregoing, the system of quality assurance in higher education has been initiated along with the application of quality standards and the issuance of laws for the development of higher education, where the national higher education has started in the year 2006. One of its most important development stations is that it granted the initial accreditation of the General People's Committee Act for Higher Education No. (38) Of the year 2006 for the following universities: Africa University in Benghazi, the University of United Africa in Zawia, Al-Refak University, after that in 2010 the General People's Committee Act No. (149) was issued of the reorganization of the universities, and thus became (10) ten universities, including three universities of a private nature (Al-Saghir, 2011, P: 423).

Libya has realized the important and the vital role of the system of education in the overall development. It also understood the local and global challenges they may face, and the importance of improving the quality of the system through the introduction of methodologies and applying quality assurance and accreditation mechanisms, so the center of quality assurance and accreditation of higher education institutions was established, according to the Act no. (164) of 2006 issued by the General People's Committee (formerly).The Education Act No. (18) for the year 2010 came to make the name of the Center (The National Center for the Quality Assurance and the Accreditation of the Educational and Training institutions) and the Centre has the legal personality along with the independent financial disclosure, which is the entity authorized by law to develop and follow up on quality assurance and accreditation in education institutions in Libya (The Quality Assurance and Accreditation Center of the Educational and Training Institutions, Strategic Plan for the center, 2012:6).

The General People's Committee (formerly) issued Act No. 430 of 2008, subjecting higher education institutions to the accreditation of the Quality Assurance Center, where Article (1) states the following: The public, civil, common and foreign higher education institutions in Libya (universities, academies, senior professional positions, and other institutions of higher education) are subject to the standards and procedures that ensure audit quality and accreditation contained in the directory of quality assurance and accreditation issued in the directory of quality assurance and accreditation of the Center of Quality Assurance in Higher Education Institutions (Al-Gadid, 2010 :16).

The center is a member of the Arab Network for Quality Assurance in Higher Education (ANQAHE) and is a member of the International Accreditation Organization (IAO), and in the International Network for Quality Assurance Agencies in Higher Education (INQAAHE). The organizational structure of the center consists of several departments which can be summarized in fig. (1) (The Quality Assurance and Accreditation of Educational and Training Institutions Center, 2012, The Strategic Plan:pp8-11).



The Quality Assurance and Accreditation of Educational and Training Institutions Center, 2012, The Strategic Plan: p23.

Evaluation Processes of Accreditation are carried out according to the Following Steps:

1- Self-study: A set of procedural steps undertaken by the faculty members, staff, students and community members, and whoever the institution see beneficial, in order to assess their organization by themselves based on the Quality Assurance and Accreditation Manual issued by the center, through the collection of data and statistics on the performance of the institution in the current situation, and comparing it to the quality and accreditation standards, is considered the first step towards preparing for the process of internal audit, as is the process of internal audit in preparation for the development of hypotheses that may need a team of external audit in the field visit.

The results of the self-study include showing the strengths and weaknesses with respect to the activities of the institution or the educational program. Writing report must be based on the minutes of the meetings, files, records, and questionnaires of students, faculty members and staff. The report includes the organization's mission, strategic plan, the program of studies of the first undergraduate stage, the graduate program, scientific research and other activities (Radwan, 2008).

2- Starting the audit process: The audit process usually begins after the educational institution fulfills the required accreditation requirements and then contacting the center, and expressing their desire in writing to conduct the audit process. The specialized department in the center commissioned a director for the audit process who must be one of the employees of the center or one of its experts, and who has experience in the audit and accreditation operations. He must also be eligible to manage the audit process. Then, the center forms an audit team of local and international professionals to conduct external audit. Then, official contracts are signed with this team, along with clear job descriptions signed between the center and the team members. And hence, the institution or program, concerning with the time frame of the external audit to be implemented, is notified. The external audit team holds a preliminary meeting before visiting the institution to review and determine the appropriate mechanisms of action. The institution prepares a room that fits the audit team with the provision of computers and imaging services. Then, the external audit team interviews the members of the Technical Committee for Internal Audit during its field visit of the facilities of the institution. The number of auditors has to be no less than three, in addition to the team leader (Baird, 2006).

3-The team members raise their final reports to the center in a maximum period of (six weeks) from the date of the start of the work of the external audit team and each member of the team gives estimates of the degree deserved for each of the special items in all axes to be independently audited.

4- After the completion of the field visit, each member of the team has to give estimates of the degree deserved for each of the items in all axes to be independently audited

5- These estimates are delivered according to the form, assigned to that, by each member confidentially to the head of the team, accompanied by the evidences and the proofs on which every auditor has depended in his estimates for each item.

6- The head of the audit team convenes a meeting of all the team members to discuss the estimates given by each member to each item; to reach a majority agreement based on the debate and dialogue between the team members (Quality Assurance Manual, 2011).

7-After reaching the due estimates on each of the axes of quality assurance, the team extracts the due degree in accordance with the provisions and procedures for the distribution of the points allocated to the axes and gives the points which forms each of the axes contained in the Quality Assurance Manual.

8-The audit team writes the report, which must take into account the structure and the general instructions contained in this Quality Assurance Manual.

9- The report is treated confidentially until submitting it to the Quality Assurance Center, which will issue the appropriate decisions, where they attached a copy of the report to the institution requesting accreditation to inform them of the points obtained and of the strengths and weaknesses (Baird, 2006).

OBSTACLES AND CHALLENGES FACING PROCESSES OF QUALITY ASSURANCE AND ACCREDITATION

In light of the above, the processes of quality assurance and accreditation in higher education institutions in Libya are carried out under the supervision of the Center for Quality Assurance and Accreditation of Higher Education Institutions. The process of accreditation of higher education institution in Libya does not differ in terms of procedures and standards from the procedures followed in many developed countries. The research questions are: "Are really those criteria and procedures have been applied in Libyan Universities before?" Is there a genuine interest by the

Libyan universities for institutional and program accreditation? Is the current status of the Libyan universities suitable for the application of quality standards and for getting accreditation? Are the procedures applied to private universities in the event of absence of accreditation are the same applied to public universities? Do the employees, members of the faculty and students have the sufficient background to allow the institution to carry out self-assessment? Is everyone ready to change and adopt the culture of quality? Finally and the main important question is, what are the obstacles and challenges facing processes of quality assurance and accreditation? In this paper we would like to present obstacles facing the Libyan universities in the field of quality assurance and accreditation.

Generally In Libya, there is a lack of satisfaction with the performance of higher education. Radwan (2008), for example, has referred to the decrease of internal efficiency in education in Libya, to the predominance of cognitive underachievement, and to the poor analytical and innovative capabilities of its outputs. The results of the study of Atlobh (2010) noted that the internal adequacy rate in Misurata University is low.

One of the results of research provided by Nick (2004) is that the educational policies in Libya have failed in almost the bulk of the scientific and the academic objectives. The report of the Center of Quality Assurance and Educational Institutions Accreditation (2010) indicated the low of quality of the Libyan universities in general (Ababneh, 2011, p6). It is clear that most of the Libyan universities continue to suffer from poor performance and from low-level curricula and teaching aids as a result of not absorbing the culture of globalization and the ITC revolution to develop their mechanisms and to ensure the quality of their outputs, which reflected negatively on the competencies of the graduates to cope with the requirements of the labor market in its real sites (Pisan, 2012, pp 258-259).

According to The Report of Exploratory Visit to the Center for Quality Assurance (2010, p12-18) the most important obstacles in public universities in Libya are:

- The lack of financial resources for the development of higher quality programs and its activities
- The incompetence and lack of qualifications of the management related to quality assurance in higher education in some universities and colleges and their branches.
- The lack of enabled binding legislation considering quality as a strategic choice binding on all.
- The lack of clarity in the terms of reference and functions of quality offices in the university regulations.
- Not delegating full powers to the quality offices in the universities to work for improvement.
- Keeping away from strategic planning, and restricting only to short-term planning.
- No clear criteria for selecting academic leaders.
- Unfamiliarity with the concept of quality and its assurance.
- The non-application of the principle of accountability in the event of wrongdoing and the overcome of the personal interests to the public interest.
- The continuation of the majority of the universities in using the traditional methods of learning, such as focusing on the memorization and indoctrination, the lack of using technology, the modern learning strategies and employing them in teaching, along with neglecting the use of self learning and mental skills such as analytical thinking, problem solving, innovation, and research.

the most important good practices taken by the quality assurance offices in the targeted universities, where the offices which are responsible for making sure that standards of quality are being matched, and provides the platform for validating or determining whether the University's services meets the customers' expectations. Some quality offices in some universities hold meetings with colleges to ensure the application of quality and the improvement of the programs provided by the university. Some offices hold monthly meetings with the coordinators of quality in colleges. Some of them implement programs and workshops related to the characterization of the educational program and the strategic planning as well as the implementation of workshops for the staff, the completion of the manual of the academic and administrative tasks, and the completion of the manual for the faculty staff affairs and graduate studies.

Some offices participate in the programs of international quality assurance, the completion of self-study in some colleges, making questionnaires for students to evaluate the curricula in the scientific sections, along with the development of the Best Academic Program Award. Some offices develop the website of the university in accordance with the international standards. However, there is a set of difficulties that faced such bodies, those difficulties are various and expanded to many areas, they have been listed below.

The Difficulties Faced by Quality Offices:

1-The weakness of rehabilitation and preparation:

A lack of experiences and knowledge for the human elements those are responsible to manage and apply the quality programs in most universities and colleges.

2- Leading Difficulties:

A lack of keenness of the senior management of the universities to apply the concept of quality in all the undergraduate programs, the lack of clear criteria for the selection of academic leadership, lack of acceptance of these leaders of the culture of quality.

3- Organizational Difficulties:

The organizational difficulties are represented in the absence of vision and mission of the Ministry of Higher Education and Scientific Research, the lack of a strategic plan for the Ministry of Higher Education and Scientific Research, the absence of organizational structures, job descriptions and regulations, the lack of databases that can be invoked in the debriefing and making decisions properly, poor communications management within the university, the inadequacy of the university budget and unequal terms of disbursement, the times of disbursement are appropriate, in addition to the weakness of relying on the university work.

4- Learning and Teaching Difficulties:

sit-ins of students and their repeated protests because of the low level of the dormitory, curricula and grants, which led to stopping studying in some colleges for extended periods, the lack of programs to develop the capacity of faculty members, not linking the libraries to the internet and the non-participation in periodicals and international scientific journals.

5- The Difficulties of Scientific Research:

Which summarized in the lack of financial support for scientific research, in addition to aspects of classifying the research relevant to quality and its assurance among the promotion research, and the lack of specialized consideration affairs such as books, scientific journals?

6- Difficulties of Community Service:

This related to Lack of interest of universities in the development of programs and linking the requirements of the labor market.

MAIN OBSTACLES IN PRIVATE UNIVERSITIES

Although, there are some private universities, has achieved a high level of quality, but most of them are not at the required level, The most important difficulties that came in the report on the exploratory visit to the year 2010 as follows:

1- Dependence on the collaborator faculty members in the educational process.

2- Most obstacles of quality offices are focused on the absence of a dedicated and a specific budget to activate quality in the universities and the lack of independence of quality offices.

Through the foregoing, the researcher sees that all the previous problems did not emerge today or yesterday, rather they are the result of a long experience characterized by improvisational in taking decisions, Moreover, the state spending on higher education and scientific research was very little, not in line with the income of an oil-producing country. Just getting a Master's Degree or a PHD Degree was sufficient to enable its holder to teach at the Libyan universities, without paying attention to the criteria of appointment for this profession. Also, the low salaries of the faculty members led to the cooperation of the faculty members with other institutions, rather than their own institutions, in order to raise their financial level which had a negative impact on their teaching performance (Harathi, 2012).

The salaries level of the faculty members have been raised only in the recent years and, despite of that, the Libyan universities have faculty members having high degrees of knowledge and having many published scientific research which directly related to the problems of the Libyan society in all areas. They are, as well, eminent graduates of the best international universities. But, general situation faced by the Libyan universities are viewed, and the lack of training programs for faculty members is due to the lack of interest of the senior management and the faculty members themselves of the importance of training in promoting their professional and teaching competence since some of them believe that they do not need such programs as the curricula are still old and duplicate and the concept of quality has not spread in the academic sites and in the educational institutions because of the novelty of the

experience. Also, the issue of tribes and social kinship plays a very big role in the Libyan society in terms of employment, candidacy for post-graduate studies, getting scholarships to study abroad, and others, (Braun and Jones, 2013).

This had a negative impact on the level of the outputs of the Libyan universities and on the lack of any programs to link between the outputs and the requirements of the labor market. Despite of the large numbers of those who carry high degrees, community is suffering from unemployment because the graduate does not meet the level of requirements of the labor market. Whoever follows that matter can realize that the problem is not only in higher education as the student is enrolled in the university while having a low level of skills, whether research skills, diction skills or the skills of working in groups. In addition, the vast majority suffer from not writing correctly in Arabic which is their native language along with the inability to deal with modern technology. The matter starts first from the stages of basic education, because you cannot, in any way, create poor inputs and get quality outputs, except if you have huge potential. Also, the infrastructure of the universities, are not in line with the scientific programs to be applied as they lack many equipment, (Shaw, 1981) and (Harathi, 2012).

Although the country has started the maintenance operations for all universities in the recent years, the projects have stalled due to the political circumstances which took place in Libya. The problems of the faculty members as referred to by Dr. Mregin, the Manager of the Department of Quality Assurance and Accreditation of Higher Education Institutions in Libya, represented in the weak professional formation of some faculty members, not accepting the views of the students in the lecture halls, not reducing the importance of these opinions, depending on the method of memorizing and indoctrination, lack of timeliness of lectures, not developing the curricula and courses, lack of commitment to the criteria of students assessment, along with the low standard of ethics of some professors who insult and degrade students through the educational process.

It was stated by the Director of the Department of Quality Assurance that the most important problems of students are the lack of books and references, the lack of freedom of opinion within the lecture, not attending the seminars and conferences related to the specialization, the use of threat in exams, the dependence of the curriculum on photocopying some notes only, the derision and mocking of the students by lecturers, along with the inability of some teachers to explain information well. (Mregin, 2012, P: 274-277).

As for the private universities, there are some universities which are characterized by good reputation because it provided all the necessary equipment for the implementation of the scientific programs. Most of the private universities seek developing their infrastructures and obtaining accreditation because this is linked to success and to bringing the largest proportion of students to them, especially after the activation of quality and accreditation decisions on these universities which were opening their doors without any restriction or condition, which caused a crisis for the graduates of these universities because they are not accredited from the Center of Quality Assurance and Accreditation. The solution was to hold a thorough exam for the students of these universities.

These institutions depend on collaborator faculty members, because most of the collaborator faculty members are main faculty members at the public universities. This matter negatively affects the public and private sectors. Despite of the existence of a law not to give permission to faculty members working in the public universities to cooperate with private universities after raising the salaries of the faculty members at public universities, the law is inactive and there is no body to question or punish the violators of the law. In addition, the educational environment does not permit all the equipments necessary for the students of Applied Sciences in particular. Most universities take normal buildings designated for housing as premises of private universities though they were not designed originally as universities, (The National Report of the Great Libyan Jamahiriya, 2008).

Also, the websites of most universities are sites with a very weak level, i.e. Most of the links are inactive or under construction. What asserts this saying is the research done by Alchuirv on assessing the websites of the Libyan universities (that there is no fixed and specific criteria on which the Libyan universities depend when preparing their websites on the information network in a way to achieve the goals of the universities and meet the needs of beneficiaries, especially students) (Alchuirv, 2012, p236)

Despite of that there are some private universities, such as the Libyan International League for Medical Sciences, having a website characterized by modernity and providing all the information benefiting the students and beneficiaries.

Here, the most important of these obstacles are reviewed to try to find solutions necessary to raise the level of our universities to the level of prestigious universities, to underestimate the deep gap that gets us away from the developed universities, to get the outputs of education to be outputs able to go towards progress in all areas as failure is not the end of the road, but the knowledge of the causes of failure and trying to treat them is the first steps in the road to success. Diagnosing the disease correctly makes us get to find the right medicine to treat the illness, and trying to figure out where is Libya from quality first to begin in quality assurance processes. How can study ensure something

which does not mainly exist? Quality standards, and the ways to apply it, are the lamp that illuminates our way to access quality in higher education, and to achieve the desired development and progress.

Perhaps the efforts carried out by the Centre for Quality Assurance have a great impact on the dissemination and improvement of the educational process, on making the term of quality much easier and more understandable within the university environment and focusing on following up the officials responsible for quality within the offices of quality and the top leaders in the Libyan universities and whether they are qualified for this work or not. To ensure the achievement of the goals that are aspired to achieve, it must be realized that what is seen today achieving quality standards will become tomorrow not achieving it due to the great acceleration of the scientific and technological advances and the information revolution which has gone into accelerated development every day. Will the day when our universities realize that it is time to work together (students - faculty members - staff - parents - labor institutions) to create an integrated system to improve higher education, (Othman, 2012).

BENCHMARKING ON OTHER COUNTRIES EXPERIMENTS IN FACING QUALITY CHALLENGES

Decision maker in higher education in Libya realized that they should compare their experiment and challenges facing with other countries and benefit from their way of dealing with such challenges in order to arrive to ideal solutions, moreover case studies have been taken in terms of higher education challenges and education quality problems, it will be easy to benefit from their own experiences, plans, and measures to upgrade such gaps within the higher education in Libya. For example, it was obvious that there is correlation between investment in university education and economic growth as well as social development, at the same time, there is various problems faced Africa – Nigeria in particular – related to poor of scientific research, facilitates, preparation of entering students and inappropriate policy environment, so several procedures have been taken to address to control the situation such as rehabilitation of administrators to be more leadership, monitoring and evaluation through constant processes, engaging a third party as regulator – for instance the National University Commission (NUC) to enhance policy strategies and support quality offices, (Oladipo et al., 2009). Furthermore, Europe recently is taking into account the issue of quality assurance in terms of higher education, where there is a lot of limitations areas associated with poor infrastructure and strong population growth, and therefore a set of professional bodies such as the European parliament involve in drawing roadmap solutions related to improve and enhance the role of external quality assurance, this enhancement will be directed to process of guaranteeing predefined standards and evaluating units, departments, and programs, also revisiting the European criterion and strategy guidelines, finally encourage recognition of their decisions in other countries through conventions of mutual identification, 2(COM, 2009).

CONCLUSION

Higher education is one of the most significant segments that sustain a lot of aspects. In order to achieve high quality criteria in terms of education institute systems in Libya, problems existing in public and private universities should be addressed and analyzed clearly. Furthermore, challenges such as difficulties of quality offices or community service should be overcome, whereas most indicators showed that there is lack in financial supporting, rehabilitation human resources, enabled binding legislation, etc. Moreover, it is recommended to look for alternatives of the traditional solutions, mainly it's important to seek for long-term strategic planning, reconsider academic leaders, pay attention to scientific research, and involving all the educational elements within quality practice and utilize from overall feedback, in addition to using measures related to performance assessment, such as the balanced scorecard, moreover holding seminars, conferences and workshops. All of those procedures will lie in the framework of quality and its assurance in integrated and comprehensive manner.

REFERENCES

- 1- Ababneh, S. A. (2011). Assessing the Quality of Academic Performance from the Point of View of Faculty Members. The Faculty of Arts, University of Misurata, *Arab Journal for Quality Assurance of University Education*, 8 (4).
- 2- Al-ashahr, A. (2008). Scientific research in Libya: Evaluation Study. Arabic Language Academy, Trablus: Libya.
- 3- Alchuirv, A. H. (2012). The Criteria for Evaluating the Websites of the Universities on the Global Information Network. The Fourth Annual Conference of the Arab Organization for Quality Assurance in Education, Smart Village, Cairo, 2-3 / September 2012.
- 4- Al-Gadid, Kh. M. (2010). The Quality of Higher Education and its Role in Achieving Development. The Arab Conference on Higher Education and the Labor Market, the University of the Seventh of October, the period 13 - 15/4/2010, Misurata, Libya.
- 5- Al-Saghir, A. F. (2011). The Libyan Experience in the Field of Quality Assurance. The International Arab Conference for Quality Assurance in Higher Education, University of Zarqa, Jordan, the period 10-12/5/2011.

- 6- Atlobh, A. L., & El-Haddad, M. (2010). Measuring the Quality of University Education in Libya during the period (1993-2007). The Arab Conference on Education and the Labor Market, The University of the Seventh of October, the period 13 - 04/15/2010, Misurata, Libya.
- 7- Baird, J. (2006). Quality Audit and Assurance for Transnational Higher Education. AUQA Occasional Publications, Australian Universities Quality Agency, Melbourne, Australia.
- 8- Braun, G., Jones, A., 2013. Libya – Building the Future with Youth: Challenges for Education and Employability. Deutsche Gesellschaft Für Internationale Zusammenarbeit (GIZ) GmbH.
- 9- Commission of European Communities, (2009). Report From The Commission To The Council, The European Parliament, The European Economic And Social Committee And The Committee Of The Regions. Report On Progress In Quality Assurance In Higher Education.
- 10- Commission of European Communities, 2009. Report From The Commission To The Council, The European Parliament, The European Economic And Social Committee And The Committee Of The Regions. Report On Progress In Quality Assurance In Higher Education.
- 11- Harathi, M., 2012. Quality Assurance Concepts of Institutionalization: Some Indicators towards Higher Educational Development Policy in Libya. European Scientific Journal, Vol. 8, No. 32.
- 12- Higher Education in Libya, (2012). The Education, Audiovisual and Culture Executive Agency (EACEA). National Tempus Office Libya, July 2012. tempus_libya@yahoo.com, available at http://eacea.ec.europa.eu/tempus/participating_countries/overview/libya_overview_of_hes_final.pdf, 01/12/2012.
- 13- Mregin, H. (2012). Are We In need Of Quality Assurance in the Libyan universities. The Fourth Annual Conference of the Arab Organization for Quality Assurance in Education, Smart Village, Cairo, 2-3 / September 2012.
- 14- National Center for Quality Assurance and the adoption of educational and training institutions Site, (2013). Libya, available at: WWW.QAA.LY.COM.
- 15- Nick, C. (2004). Education in Libya. World Education News & Reviews, 17 (4), July/August 2004. Available at: <http://www.wes.org/ewenr/04july/Practical.htm>, 1/12/2012.
- 16- Oladipo, A., Adeosun, O., Oni, A., 2009. Quality Assurance and Sustainable University Education in Nigeria. Research Paper, Faculty of Education, University of Lagos.
- 17- Othman, S., Kashadah, O., Gosbi, A., Khoja, S., 2012. Higher Education in Libya. This Document Has Been Produced By The Education, Audiovisual And Culture Executive Agency (Eacea).
- 18- Pisan, H. (2012). Towards a Future Strategy to modernize the University of Nasser and development. The Fourth Annual Conference of the Arab Organization for Quality Assurance in Education, Smart Village, Cairo, 2-3 / September 2012.
- 19- Radwan, A. B. (2008). Management Libyan universities in view of the contemporary global trends. Science and Literature College, Omar Al-Mukhtar University.
- 20- Shaw, P., 1981. Manpower and Educational Shortages in the Arab World: An Interim Strategy. World Development, Vol. 9, No. 7, P. 637 – 655.
- 21- Tamtam, A., Gallagher, F., Olabi, A., G., & Naher, S. (2011). Higher education in Libya, system under stress. Procedia - Social and Behavioral Sciences, 29, P. 742 – 751.
- 22- The Center for Quality Assurance and Accreditation of Educational and Training Institutions, (2010). Report on Exploratory Visits to Some Institutions of Higher Education for the academic year 2009-2010. Available on: <http://limu.edu.ly/newlimu/qaaReport.pdf>, on 12/12/ 2012.
- 23- The Center for Quality Assurance and Educational and Training Institutions, (2012). Strategic Plan 2012-2017. Tripoli - Libya, available on the Website: <http://www.qaa.ly/Reports/Strategy2012-2017.pdf>, on 12.12.2012.
- 24- The Development of Education, National Report of Libya, 2008. The International Conference on Education, Session 44.
- 25- The Manual of Quality Assurance and Accreditation of Higher Education Institutions, (2011). Libya, available at: <http://www.benghazi.edu.ly/pdf/3.pdf>.
- 26- Wilkens, K. (2011). Higher Education Reform in the Arab World. The Brookings Project on U.S. Relations with the Islamic World 2011 U.S, Islamic World Forum Papers.