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Analysis of Effective Components of Educational Transformation in Agricultural Higher Education System in Iran

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Abstract

The purpose of the present study was to analyze the effective components of educational transformation in agricultural higher education system in Iran by a mixed study method. The statistical population includes all faculty members (N=361) teaching in agricultural college of Tehran, Tarbiat Modares and Shiraz University, and a sample of 186 faculty members (n=186) were selected by stratified random sampling method and finally 166 questionnaires were returned and analyzed. Data collection in this research was done in two general sections. Section one was a meta-synthesis method. In this method, effective components of educational transformation were identified according to investigation objectives, method of sampling, methodology, content analysis, and research results of 25 selected studies. The results of this analysis identified five main factors influencing educational transformation. These components included learning, education and teaching, competence, quality of education, and leadership. Section two was done in order to examine the hypotheses by using Structural Equation Modeling (SEM). The Results of this section showed that new learning models, leadership styles and educational competence had significant effects on educational transformation.

Keywords:
Educational transformation, Higher education, Agricultural education, Mix method

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INTRODUCTION

Higher Education Institutions (HEIs) in society have very important and also, complex tasks; for example, community development, distribution of technological innovation, and knowledge creation (Moore, 2005). The most significant role of traditional universities is to transfer knowledge to students, and the student's roles are to learn a series of lessons presented by teachers (Jucker, 2002).

In recent years, higher education institutions have faced the challenge of building a system which will be well-equipped to meet the needs of society. Today, HEIs seek to prepare students to live and work in a global society more than ever (Mayo and Lrrke, 2008). They must be able to develop the skills to work collaboratively, prepare critical thinking, do problem solving, and advance their level of cognitive skills (King, 1992).

These challenges lead many experts to believe that it is necessary to make radical shift in higher education system. Niekerk (2005) believed that the transformation has drastic implications for the management and functioning of the higher education institutions. Kegan (1994) described that transformation as a progression toward a higher level of consciousness. Moore (2005) explains that transformation is more powerful than any changes. Also, transformation in educational settings refers to changes in knowledge and cognition of students.

Faculty members create great amount of course-related references at higher education. They perform the crucial role of acquiring or generating knowledge and exchanging their knowledge and skills with students. According to Kim and Ju (2008), faculty is the major component in generating and transferring knowledge and skills in academic institutions and their attitudes through campus-wide institutional repositories are a fundamental part of the educational transformative process.

Dooley (2008) investigated institutional transformational goals for 21st century in Iceland. These goals were to (1) create a learning environment, (2) increase the magnitude, prominence and impact of research and create work, and (3) build a community at the university that values and embraces equity and diversity.

Green and Hayward (1997) identified some of the forces for the transformation in HEI. These forces included: 1) the effects of the expansion of higher education and the push for greater access; 2) the problems of declining references and the challenge of diversifying funding references; 3) the expectation that higher education would make a greater contribution to economic and social development. Godemann *et al.* (2011) summarized the characteristics of transformational changes in HEI. These characteristics included: 1) altering the culture of the institution by changing underlying assumptions and overt institutional behaviors, processes and structures; 2) being deep and pervasive, affecting the whole institution; 3) intentional and 4) occuring overtime (Eckel *et al.*, 2001).

Soudien (2010) stated a program for the transformation of HEI in South Africa. This threefold program included human reference development, high level skills training and, production, acquisition and application of new knowledge. Transformation in HEI requires reorganization of educational institutions although this new institutional landscape needs a new mission, social and educational roles, academic qualification, and program structures to facilitate rolls (Badat, 2010).

As a developing country, Iran is faced with different challenges of the changing the world. Agricultural Higher Education Institutions (AHEI) in Iran include a wide range of universities, vocational and technical colleges (for example agriculture technical and vocational courses), and formal education (majority of agricultural universities in Iran). These institutions are controlled by a governmental or private system. In recent years, there has been a wide array of transformation-oriented initiatives to affect institutional changes including the definition of the purposes and goals of agricultural higher education, research policy, funding structure, quality assurance, and restructuring of the AHEI. Today's developing countries require promoting quality of human life and effective teaching and learning in HEI. On the other hand, agriculture sector plays an important role in Iran's

economy and employment. The functions of agricultural colleges are to educate future farmers and agricultural practitioners. Therefore, transformation in this sector can play an important role in developing agriculture. For these reasons, the main purpose of this study was the analysis of effective components of educational transformation in agricultural higher education system in Iran.

MATERIALS AND METHODS

A mixed method was used for this study. The first goal was to answer the question what components influence the transformational education in agricultural colleges in Iran. Meta-synthesis method was used for this goal. Qualitative meta-synthesis has been developed as a research method to interpret research on the same or similar phenomena to contribute to the development of knowledge. The outcome of meta-synthesis will contribute to a common understanding of a specific phenomenon.

According to Bondas and Hall (2007) in meta-synthesis method, systemic attention should be paid to each of the studies. The recommendation is that at least ten to twelve studies be purposively included in the meta-synthesis to create a meaningful and valid meta-synthesis. For this reason, 25 studies (22 qualitative and three quantitative studies) were selected. Criteria for the election of these studies were: 1) transformational issues in HEI, 2) studies from peer reviewed journals published and unpublished dissertations, 3) journals published from 2000-2012, and 4) all of the studies had English language.

Data collection tool was a questionnaire with four sections. These sections included synthesis of objectives, sampling, research methodology, and research results of all 25 studies. This attention cause to identify central concepts of each study and comparing them to other key concepts.

The second goal of the research was to find the possible correlations among known components in qualitative section. Structural Equation Modeling (SEM) was used to examine the hypotheses about relationships among effective components of educational transformation in agricultural higher education system.

In data analysis, the validity and reliability of the measurement items were firstly analyzed, and the significance of the model was determined using SEM. Convergent validity occurs when all items measuring a construct load on a single one of them. We assessed each factor by performing within scale factor analysis. It showed that all measurement items (47 items) converged onto their constructs with each factor loading having a value of higher than 0.7. Thus, all of our factors demonstrated unidimensionality.

Cronbach's alpha was used to assess the reliability of the proposed constructs. As a result, as all ranged from 0.72 to 0.91, these are greater than 0.7 and thus the constructs were considered as to be reliable.

The test of the model was carried out using SEM, a confirmatory factor analysis that tests a model and its validity simultaneously. LISREL 8.5 was used to perform the SEM analysis.

We followed the recommended two-stage analytical procedures of SEM: the measurement and structural model were checked to ensure that the results were acceptable and consistent with the underlying conceptual model, and the structural path model was then examined to determine the relations among the constructs and their significance.

The statistical population consisted of all faculty members (N=361) teaching in the top three universities of agriculture (Tehran, Tarbiat Modares and Shiraz University). These agricultural colleges are now well-known and important colleges for educating agricultural professionals in Iran. Using statistical sampling in a stratified randomization method, 186 faculty members were selected and finally, 166 questionnaires were returned and analyzed. A questionnaire consisting of four sections was designed to collect data. In designing a suitable questionnaire for the study, the authors were aided by faculty members of Tehran and Tarbiat Modares Universities. Section one in the questionnaire was related to demographic information of the participants including age, gender, work experience, and place (department) of work. Section two of the questionnaire (24 items) was designed to determine the components of educa-

tional transformation in AHEI. Section three of the questionnaire (17 items) was designed to identify the prerequisites of educational transformation including four prerequisites (learning model, leadership style, quality models, and competency). Section four of the questionnaire (6 items) was designed to identify the strategies related to educational transformation. Three sections of the questionnaire were assessed on a five-point Likert-type scale ranging from very low (1) to very high (5). A pilot test was conducted with 25 faculty members out of research population to improve the clarity and reliability of the instrument. Finally, 166 questionnaires (90%) were returned.

RESULTS

Meta-Synthesis method

Objectives of research studies

The results of investigation objectives in 25 research sources was led to identification eight main factors these factors briefly included:

1. Description of learner experiences about transformation process in higher education.
2. Investigation of possibility, potential benefits and identification of the obstacles of transformational learning in higher education.
3. Identification of the quality models in higher education institutions.
4. Identification of leadership styles in higher education and investigation of theories of transformative leaders.
5. Identification of challenges of transformation in higher education.
6. Identification of policy perspectives in higher education institutions.
7. Presentation of fundamental educational competency in transformation of higher education.
8. Investigation of teaching process in higher education institutions.

Sampling of research sources

The results of investigation type of sampling in 25 selected sources showed that in 15 sources, review literature study was used. In four sources, students were selected as the sample of study. In two sources, educational management was as the sample and in four sources faculty members were sample.

Sampling of research methodology

The results of investigation the method used in the selected sources showed that in 19 sources, qualitative method study were used. These methods include the review of literature about educational transformation, structural interviews, grounded theory, and lectures. Mixed method, was used in three references of research. Also, quantitative method was used in three studies.

Research results from investigation content of selected references

The results of the investigation content of 25 studies showed the focus of these studies on five components. These components are (1) transformative learning and topics related to theories of learning, students' experiences about learning and presentation of new models of learning in HEI, (2) educational quality problems

Table 1: Definitions of five components of educational transformation

Components	Definitions
Transformative learning	It's related to self aware of students, open to view points, critically reflective and inclusive of multiple perspectives.
Educational quality	Processes through which trained teachers use child-centered teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities.
Educational competence	Competency, fundamentally, is about the development and assessment of the capacity for a person to perform certain tasks, in given situations, in a particular way
Transformative leadership	Help followers to grow and develop by responding to followers individuals needs by empowering them and aligning the objectives and goals of the individual followers, the leader, the group and the larger organization
Strategies toward transformational education	Including the role of funding in transformation of higher education, policies of governments about transformation in higher education, and the role of cultural environment in transformational higher education.

Table 2: Distribution of components of educational transformation among references

	Nieterk, 2005	Hodge, 2009	Cranton, 2002	Cortes, 2003	Badat, 2010	Banerjee *et al.*, 2006	Mayo and Larke, 2008	Soudien, 2010	Kallioinen, 2009	Jucker, 2002	Gliszczinski, 2007	Wiratmadja *et al.*, 2008	Greiman, 2009	Sadeghi and Pihie, 2012	Julsuwan *et al.*, 2011	Godemann *et al.*, 2011	Madsen and Cook, 2005	Byrd, 2001	Garrison and Kanuka, 2004	Fetherston and Kelly, 2007	Callow, 2011	Srikanthan, 2002	Newton, 2009	Bergea *et al.*, 2006	Moore, 2005
Learning		*	*	*		*		*	*		*						*		*	*			*	*	*
Competency								*															*		
Quality								*														*			
Leadership	*											*	*	*	*						*				
Strategies					*		*			*						*		*							

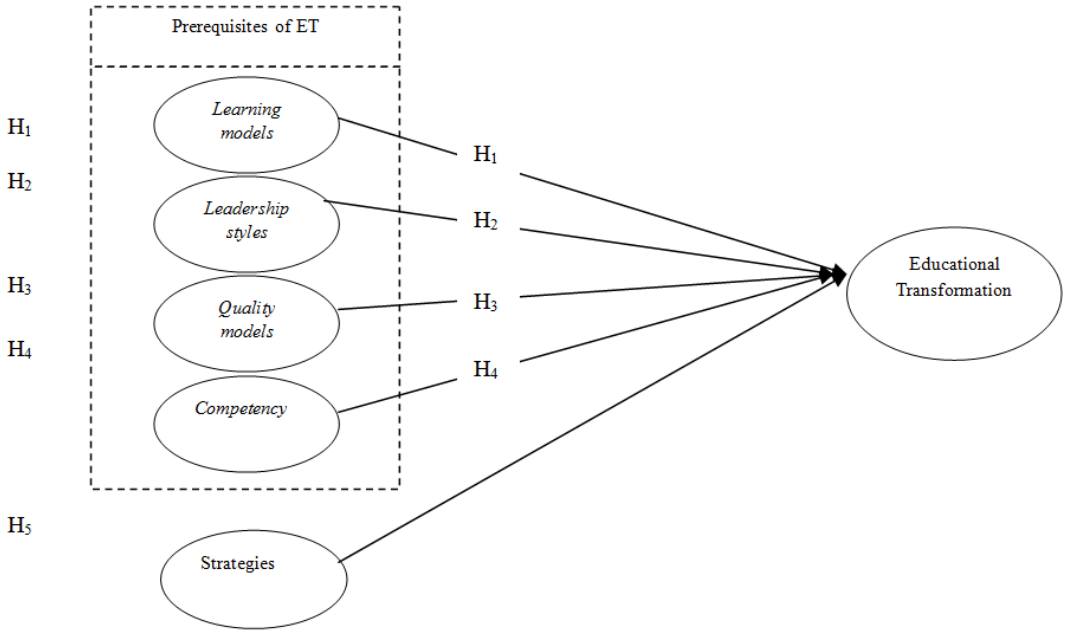

Figure 1: Conceptual framework of educational transformation and related constructs

in higher education and presentation of quality models, (3) educational competence and presentation of essential competency elements for teachers and educational institutions toward transformation, (4) transformative leadership and leadership style, and (5) strategies toward transformational education. Table 1 presents the definitions of each component and Table 2 presents the distribution of components in each reference.

The research model and hypotheses

Figure1 shows research model which integrated effective components on educational transformation. The model is obtained from incorporating the concepts of 25 studies in qualitative section. In our study, educational transformation is affected by five variables. These variables include prerequisites of educational transformation (learning models, leadership styles, quality models, competency, and strategies towards transformational education). Accordingly, five hypotheses were developed as following:

H_1: The learning models have a positive impact on educational transformation in agricultural higher education system.

H_2: The leadership styles have a positive impact on educational transformation in agricultural higher education system.

H_3: The quality models have a positive impact on educational transformation in agricultural

Table 3: Demographic and organizational information of faculty members

Characteristics	Groups	Frequency	Percent
Gender	Male	152	92
	Female	14	8
Work experience (years)	<10	51	31
	11-20	66	40
	21-30	38	23
	>31	11	6
Age (years)	31-41	48	29
	42-51	62	37
	52-61	43	26
	>62	13	8
Academic status	Professor	30	18
	Associate professor	65	39
	Assistant professor	71	43

higher education system.

H_4: The competency has a positive impact on educational transformation in agricultural higher education system.

H_5: The strategies have a positive impact on educational transformation in agricultural higher education system.

Structural Equation Modeling

To test the model, we adopted a survey method for data collection and examined the hypotheses using Structural Equation Modeling (SEM) on the data. The data used to test our hypotheses were collected by means of a survey in three agricultural colleges: Tehran, Tarbiat Modares and Shiraz University. Table 3 provides some demographic information about faculty members in these universities. In the survey, all variables (47 items) were measured using a 1–5 point (very low to very high) Likert-type scales.

Table 4 summarizes the results of the measurement model; they show that three model constructs of leaning models, leadership styles, and competence were valid measures of their respective constructs based on their parameter estimates and statistical significance.

Table 5 shows the results of hypothesis testing of the structural relationships among the latent variables. Figure 2 describes the final results of the measurement and structural models. To assess

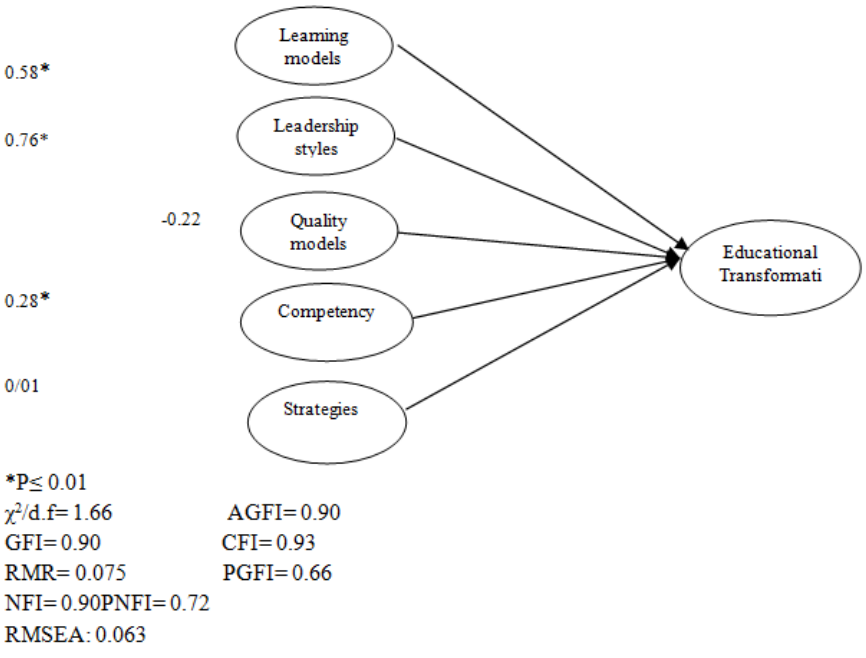

Figure 2: Results of the confirmatory factor analysis model

Table 4: Summary results of the model constructs

Model construct	Measurement item	λ	Standardized estimates	t-value
Leaning Models	Q25	0.63	0.16	3.61
	Q26	0.60		
	Q27	0.62		
Leadership styles	Q30	0.69	0.19	3.97
	Q31	0.16		
	Q32	-0.24		
	Q33	-0.42		
	Q34	-0.45		
Quality models	Q35	0.82	0.13	-0.22
	Q36	0.37		
	Q37	1.09		
Competency	Q38	0.87	0.14	2.05
	Q39	0.91		
	Q40	0.54		
	Q41	0.41		
Strategies	Q45	0.34	0.12	0.08
	Q46	0.87		
	Q47	0.91		
Educational Transformative	Q1	0.37		
	Q2	0.51		
	Q3	0.46		
	Q4	0.43		
	Q5	0.20		
	Q6	0.40		
	Q7	0.51		
	Q8	0.41		
	Q9	0.61		
	Q10	0.36		
	Q11	0.29		
	Q12	0.38		
	Q13	0.39		
	Q14	0.34		
	Q15	0.23		
	Q16	-0.55		
	Q17	-0.26		
	Q18	-0.79		
	Q19	0.60		
	Q20	0.11		
	Q21	0.61		
	Q22	0.54		
	Q23	0.45		
	Q24	0.62		

the model fitness, we applied seven measures from three perspectives: absolute fit measures (evaluated using χ^2/d.f.), goodness of fit index (GFI), and root mean square error (RMR); incremental fit were measured by the normal fit index (NFI), the adjusted goodness of fit index (AGFI), and the comparative fit index (CFI); and parsimonious fit measures were evaluated by the parsimonious goodness of fit index (PGFI).

Table 6 shows the overall fit indexes of our model. It shows that our model resulted in good results at the χ^2/d.f., GFI, RMR, AGFI, CFI and marginal fitness levels for the indexes of NFI, PGFI, and RMSEA. It is concluded that the findings reached an acceptable level and could be used to explain our hypotheses.

Hypothesis H_1 was confirmed and it was shown that the use of learning model in students' training contributed to the educational transformation in AHEI in Iran (t=3.61; Path coeffi-

Table 5: Summary of the structural model results

Relationship	Hypothesis	Path coefficient	t-value
Learning models ⟶ Educational transformation	H_1	0.58	3.61*
Leadership styles ⟶ Educational transformation	H_2	0.76	3.97*
Quality models ⟶ Educational transformation	H_3	-0.22	-0.22
Competency ⟶ Educational transformation	H_4	0.28	2.05*
Strategies ⟶ Educational transformation	H_5	0.01	0.08

*p ≤ 0.001

Table 6: Overall model fit indices

Fit index	Scores	Recommended cut-off value from literature
Absolute fit measures		
χ^2/df	1.66 **	≤ 2**: ≤ 3*: ≤ 5*
GFI	0.90**	≥ 0/90**: ≥ 0/80*
RMR	0.075*	≤ 0/05**: ≤ 0/08*
Incremental fit measures		
NFI	0.90**	≥ 0/90**
AGFI	0.90**	≥ 0/90**: ≥ 0/80*
CFI	0.93**	≥ 0/90**
Parsimonious fit measures		
PGFI	0.66*	The higher, the better
PNFI	0.72*	The higher, the better
The root mean square error of approximation (RMSEA)	0.063	≤0.08 is better

Acceptability: ** acceptable, * marginal.

cient=0.58). Also, results supported hypothesis H_2 (t=3.97; Path coefficient=0.76) implying that leadership style has a positive impact on educational transformation in agricultural higher education. Hypothesis H_3 was not supported in this study (t=-0.22; Path coefficient=-0.22). In other words, quality models have no significant impact on educational transformation. Hypothesis H_4 (competency impact on educational transformation) was supported (t= 2.05; Path coefficient= 0.28). This hypothesis showed that competency has positive impact on educational transformation. Hypothesis H_5 was not supported in our study (t=0.08; Path coefficient=0.01). Strategies in this research did not have significant influence on educational transformation (Figure 2).

CONCLUSION AND DISCUSSIONS

Educational transformation in higher education requires a systems thinking, identifying challenges and problems, reforming infrastructure and promoting educational institutions towards reception developments in various fields. Therefore, considering the vital role of agriculture colleges on food security and training of skilled manpower, our main objective was to understand the effective components on educational transformation in agricultural higher education system in Iran.

The results of the literature review about five effective components (learning, leadership, quality models, competencies and strategies) indicated that learning models had a positive impact with educational transformation in agricultural higher education system. In other words, using the experiences of transformational learning model in many successful educational institutions in the world (Badat, 2010; Soudiend, 2010), emphasis on the responsibility of individuals to do things (Boyar *et al.*, 2006), and a better understanding of the theories and approaches for achieving transformational learning (Massingham and Herrington, 2006; Ponzurick *et al.*, 2000) can be an effective step towards the implementation of the main components of agricultural higher education in Iran.

According to the results obtained in researching

the field of leadership (Pastor and Mayo, 2006; Scarbrough, 2010), leadership styles had positive impact on educational transformation. Modeling the key behavior of transformational leaders in agricultural institutions of higher education can be an effective step to facilitate access to transformation. Accordingly, it can be concluded leadership styles that consider the effectiveness of the organization, could affect on the implementation of educational changes (Reinertsen, 2004; Bolden *et al*., 2003; Scarborough, 2010).

Quality models in this study did not have positive effect on educational transformation. According Soudien (2010), quality education can be considered as the most influential factor in the transformation of higher education. However, the quality of education without defining standards in the field of education does not materialize. Also, competence in this study had positive impact on educational transformation. According to Srikanthan (2002) and Bennet *et al*., (2010), external and internal evaluation in the university centers could be created as a way to influence the quality of education. In addition, the introduction of standards of competence (in different fields of learning and teaching, leadership, educational environment, references, etc.) can accelerate the transformation of the educational centers (Kallioinen, 2009; Newton, 2009).

The present study showed that strategies are not positively associated with educational transformation. Clear strategies can facilitate leadership and other mechanisms to ensure performance of duties. Management of universities must develop guidelines that everyone (faculty members and other staff) in the universities know what their duties are, and what matters are expected (Badat, 2010; Godemann *et al.,* 2011).

Our study tried to identify effective components on educational transformation and some of these effective components were identified. Future studies could identify additional factors and model. Accordingly, the following suggestions can be made:

1- Using transformative learning experiences in successful countries and adapting them to experiences and local conditions of country.

2- Implementation of successful leadership styles in the Department of Agriculture to provide an atmosphere of trust and confidence to achieve transformation.

3- Establishment of working group in each university to enhance the quality and increase competitive spirit in universities.

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REFERENCES

1- Badat, S. (2010). The challenges of transformation in higher education and training institutions in South Africa. *Development Bank of Southern Africa,* 1-56, Available at http://www. dbsa. org/Research/Higher% 20 Education%20 and % 20 Training/The% 20 chal lenges%20 of %20 transformation %20 in %20 higher %20 education% 20 and% 20 training, 2.

2- Banerjee, A., Galiani, S., Levinsohn, J., & Woolard, I. (2006). Why has unemployment risen in the New South Africa? Harvard university center for international development, *CID working paper*, 134, 1-9.

3- Bennet, P., Bergan, S., Cassar, D., Hamilton, M., Soinila, M., Sursock, A., Trumnic, S. U., & Williams, P. (2010). Quality Assurance in Transnational Higher Education. Lifelong Learning Program of the European Union, Workshop Report 2. Available in http://www.enqa.eu/ pubs.lasso.

4- Bergea, O., Karlsson, R., Astrom, A. H., Jacobsson, P., & Luttropp, C.(2006). Education for sustainability as a transformative learning process: Apedagogical experiment in eco design doctoral education. *Journal of Cleaner Production,* 14, 1431-1442.

5- Bolden, R., Gosling, J., Marturano, A., & Dennison, P. (2003). A Review of leadership Theory and competency frameworks. Report for chase consulting and the management standards centre. United Kingdom.

6- Bondas, T.,& Hall, EOC (2007), Challenges in approaching Meta synthesis research. *Qualitative Health Research,* 17(1),113-121.

7- Byrd, M.(2001). Back to the future for higher education medieval universities. *Journal of Internet and Higher Education,* 4, 1-7.

8- Boyer, N. R., Maher, P. A., & Kirkman, S. (2006). Transformative learning in online setting. *Journal of Transformative Education,* 4(2), 335-361.

9- Callow, N. (2011). Transformational leadership in higher education. The hospitality higher leisure,

Sport education and tourism academy network, 1-7.
10- Cortes, A. (2003). The critical role of higher education in creating a sustainable future. *Planning for Higher Education*. 15-22.
11- Cranton, P. (2002). Teaching for transformation. *New Directions for Adult and Continuing Education*, 93, 63-71.
12- Dooley, D.M. (2008). Transformational goals for the 21ST century. Working paper, University of Rhode Island.
13- Eckel, P.,Green, M., & Hill, B. (2001): On change V. Riding the waves of change: Insights from transforming institutions. Washington DC: American Council on Education.
14- Fetherston, B., & Kelly, R. (2007). Conflict resolution and transformative pedagogy: A Grounded theory research project on learning in higher education. *Journal of Transformative Education*, 5(3), 262-285.
15- Garrison, D., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Journal of Internet and Higher Education*, 7, 95-105.
16- Glisczinski, D. J. (2007). Transformative higher education: A meaningful degree of understanding. *Journal of Transformative Education, 5(4), 317-328.*
17- Godemann, J., Herzig, G., & Moon, J. (2011). Approaches to Facilitating the Transformational Change Process. Nottingham University Business School, ISIBS Workshop-Session II.
18- Green, M.F., & Hayward, F.M. (1997). Forces for change. In M.F. Green (Ed.) transforming higher education: *Views from leaders around the world*, 3-26.
19- Greiman, B. C. (2009). Transformational leadership research in agricultural education: A synthesis of the literature. *Journal of Agricultural Education*, 50(4), 50-62.
20- Harvey, L. & Knight, P.T. (1996). Transforming higher education, Society for research into higher Education and Open University Press UK.
21- Hodge, S. (2009). Pedagogy matters; A research-based dilemma for Australian vocational education policy. Paper presented at the 39th annual SCUTREA conference, University of Cambridge, 1-90.
22- Jucker, R. (2002).Our common illiteracy: Education as if the earth and people mattered. NewYork: Peter Lang.
23- Julsuwan, S., Srisa-ard, B., & Poosri, S. (2011). Transformational leadership of supporting-line administrators at public higher education institutions in Thailand. *European Journal of Social Sciences*, 22(3), 423-430.
24- Kallioinen, O. (2009). The transformative role of teachers in modern higher education. *Journal of Quality of Teaching in Higher Education,* 3(5), 1-7.
25- Kegan, R. (1994). In over our heads. Cambridge: Harvard University.
26- Kim, S., & Ju, B. (2008). An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution. *Library and Information Science Research,* 30, 282-290.
27- King, P.M. (1992). How do we know? Why do we believe? *Liberal Education*, 4(2), 56-69.
28- Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement,* 30, 607-610.
29- Madsen, S. R., & Cook, B. J. (2005). Transformative learning: VAE, women, and higher education. Available in http://www.suu.edu/ academics/provost/ peer-review. html.
30- Massingham, P., & Herrington, T. (2006). Does attendance matter? An examination of student attitudes, Participation, Performance and attendance. *Journal of University Teaching and Learning Practice,* 3(2), 82-103.
31- Mayo, S., & Lrrke, P. (2008). Multicultural education transformation in higher education. *Journal of Case Studies in Education*, 1-9.
32- Moore, J. (2005). Is Higher education ready for transformative learning? A question explored in the study of sustainability. *Journal of Transformative Education,* 3(1), 76-91.
33- Newton, S. (2009). Transformational higher education in the built environment. *Journal of Education in the Built Environment*, 4(1), 100-113.
34- Niekerk, M. (2005). Transformational leadership at a higher education institution. Submitted in partial fulfillment of the requirements for degree of master of arts. University of South Africa, 1-202.
35- Pastor, J. C., & Mayo, M. (2006). Transformational and transactional leadership: an examination of managerial cognition among Spanish upper echelons. *Instituto de Empresa Business School Working Paper No. WP06-13*.
36- Ponzurick, T. G., France, K. R., & Longar, C.M. (2000). Delivery marketing graduate education: An analysis of face to face versus distant education. *Journal of Marketing Education,* 22, 180-186.
37- Reinertsen, J. L. (2004). A Theory of leadership for the transformation for the health care organizations, *Journal of Organizational Behavior,* 1-18.
38- Sadeghi, A., & Pihie, Z. A. (2012). Transformational leadership and its predictive effects on leadership effectiveness. *InternationalJournal of Business and Social Science,* 3(7), 186-197.

39- Scarborough, T. (2010). Defining Christian transformational leadership. African National Congress, 58-87.
40- Soudien, C. (2010). Transformation in higher education: A briefing paper. Development bank of southern. *Journal of Transformative Education,* 3 (4), 1-29.
41- Srikanthan, G. (2002). Developing a holistic model for quality in higher education. Published in center for management quality research, RMIT University, 1-7.
42- Voorhees, R. (Ed.). (2001). Measuring what matters: Competency-based learning models inhigher education: *New directions for institutional research*. No.110. URL: http://www.medbev. umontreal.ca/gtea/ Competency- Based%20 Learning%20Models.pdf
43- Wiratmadja, I.I., Govindaraju, R., & Rahyudu, A. G. (2008). Transformative education for culurally divers learners through narrative and ethnography. Proceedings of the 9th Asia Pacific Industrial Engineering and Management Systems Conference. 693-699.

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