Journal of Applied Sports Science
December 2019, Volume 9, No. 1
www.jass.alexu.edu.eg

Evaluation of Teaching Practices for Physical Education Teachers in the Light of Trends Based on Knowledge Economy

El-Sayed Abdel-Aziz Issa[1]

[1] **Assistant Professor, Faculty of Physical Education, Azhar University, Egypt**

Abstract

The purpose of this study was to build a list of teaching practices for physical education teachers in light of trends knowledge based economy, and identified the level of performance of physical education teachers for these teaching practices. It also aimed test the significance of the differences in the means of practice degree in accordance with the variables: gender, teaching experience, and qualifications. To achieve these goals, the survey of the study was applied, after establishing its validity and reliability. The survey consisted of (42) Likert-scale questions distributed to five domains: planning, students' participation, utilizing the contemporary teaching methods, developing the students' abilities, and students' personal qualities, and assessment, and verified their validity and reliability. The researcher used the descriptive approach because it was appropriate for the nature of the study, The sample for this study was composed of (83) in- service physical education teachers (male, female) at intermediate schools in Al Azhar institutes affiliated to the central district, in the area of Minoufia Azhariah. The results of the study showed that the level of teaching practices for physical education teachers in light of trends knowledge based economy is low. Results also revealed that there were no statistically significant differences in the level of teaching practices, according to the study variables. Recommendations to policymakers, physical education teachers to incorporate trends knowledge based economy within a balanced educational system and ongoing professional development for physical education teachers.

Introduction

Knowledge is considered as a source to recreate the human societies through history; Also it has an important and growing role in economic, social, political and cultural activities in our time which characterized by development and rapid change in various fields of life Creating a new pattern of economy based on and related to knowledge in terms of its production, configuration and benefits from its applications in different industrial and commercial fields which is known by knowledge economy in a form which required us to participate in preparing human resources capable of dealing with vocabulary and components of this economy.

Knowledge economy depends on knowledge and make it a source of fortune and a power indicator not only through converting some of its data to advanced products with high economic and strategic benefits; but also to the very existence of knowledge by describe it as a global human development component.(22:463)

EL-shamari and EL-laythy (2008) refers to that knowledge economy is the economy which essentially based on knowledge using the human brain; research and development methods and the available economic resources through using the qualified human resources that capable to accept all the changes that arises on all economic , political and social aspects.(17:24)

The importance of knowledge economy appears through the role played by knowledge economy contents and its data, also through advanced techniques in various aspects which increasingly and accelerating being generate and that through spreading knowledge in all fields without limits at the long term, and helping the institutions develop, innovate and respond to customer needs, also achieve desired educational outcomes. (21:11)

Teacher role summarize in the light of knowledge economy in two things: Firstly Guarantee that learner acquire knowledge and that's mean develop his abilities to enable him reach different kind of knowledge, Secondly The teacher should be the effective element in the educational process and that's require him to quickly develop his kinds of knowledge (169:21).

So as to perform his role to the fullest the teacher of physical education perform many teaching practices that appears in the form of emotional, kinetic or verbal

responses characterized by accurate and fast performance. Also adapting to the conditions of the educational situation and that happen through teaching and learning process in the lesson of physical education and directly leads to the occurrence of learning process which can be observed and measured.

The importance of evaluating teaching practices for the teacher appears in helping him develop the quality of education that resented to his students through determine the type of changes required from the teacher to develop his teaching methods or the learning environment and diagnosis the individual needs for teachers through identifying strengths and weaknesses in teaching performance. Providing feedbacks to guide students towards effective learning. In addition to, providing information that can leads to modifying or developing the teacher's responsibilities. As well, developing the teacher's professional skills and information to effectively participate in the future developments processes or continuous update to the system of the school curriculum.(761:4)

Several studies and educational research has referred to the necessity of paying attention to the teacher and preparing him well. Also inclusion the adjustments in his evaluation and develop his performance to consistent with the changes in the knowledge economy society and the most important studies is Abdullah el- kataan (13) (2007) and Mohaned Mustafa (16) (2011).

Also some educational studies has referred to that the degree of performance of physical education teachers for teaching practices was generally less than the educationally acceptable level and the appeal to evaluate the teacher and develop his performance in a way that helps to achieve the desired educational goals such as the studies of both Ahmed Mamdouh (2) (2010) and Gamal Abd El- Samea (8) (2013).

In the light of the above, appears the need to evaluate and develop the performance of physical education teacher during the service to become a high degree of knowledge with principles and skills of the knowledge economy and the ability to implement it in teaching, within the knowledge of the researcher there is no study has dealt with the evaluation of teaching practices for physical education teachers in the light of trends based on knowledge economy. Hence appear the researcher concern in conducting the current study and working on answering the following questions:

1- What is the teaching practices that should be available in physical education teachers in the light of trends based on knowledge economy?

2- What is the level of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy?

3- Is there statistical differences between the levels of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy according to gender variables, scientific qualification and teaching experience?

The study hypotheses:

1- There is no statistical differences between the levels of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy according to gender variables.

2- There is no statistical differences between the levels of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy according to scientific qualification variables.

3- There is no statistical differences between the levels of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy according to teaching experience variables.

The study importance:

The current study acquires its importance as it is:

1- A response to recent global trends in establishing economy based on knowledge; In order to promote the educational outputs and keeping up with recent developments in methods and means of education.

2- It might help in developing the performance of physical education teachers through designing and developing training programs for physical education teachers ensuring their numbers to perform their roles in the light of trends based on knowledge economy.

Terminology of the study:

The Evaluation

Procedurally known as a process of collecting data and information that shows that the consistency between the performance of physical education teachers for teaching practices and the trends based on knowledge economy.

Teaching practices

Procedurally known as the practical procedures or the actual behavior of the physical education teacher according to the stages of the lesson plan in order to

achieve the goals set for the learning process with high efficiency through which a better level for learners is achieved in the light of trends based on knowledge economy that can be noticed and measured.

Knowledge economy:

Procedurally known as the economy that based on investing the abilities and potentials of physical education teachers and learners in making knowledge a behavior through making the physical as a technology field based on understanding, implementing and using the educational and physiological essentials related to the physical education of man, in order to improve physical, cognitive, skill, physiological and social efficiency level for the human.

Previous studies:

Many researchers did some educational studies and researches related to the current study:

1- the study of Haider shehab (9)(2015) : which aimed to recognize the training needs for physical education teachers based on the criteria of knowledge economy , the researcher has used the descriptive curriculum and the study has contained a sample composed of 254 teachers. From the most important results which the study has reached that the personal training needs for physical education teachers came with a high degree, but the academic training needs came with a medium degree. In addition to, the existence of differences with statically significant due to gender variables, females, scientific qualification, bachelor degree, experience and for less than 5 years.

2- the study of Ahmed Essa and Wasfi Mohamed (1)(2013): which aimed to recognize the effectiveness aspects of physical education lesson in the light of standards of educational development towards the knowledge economy from the point of view of physical education teachers, the researcher has used the descriptive curriculum and the study sample has included 179 teachers, from the most important results which the study has reached that the degree of general evaluation of effectiveness aspects of physical education lesson in the light of educational development towards the knowledge economy came with a medium degree. In addition to, the existence of differences with statistically significant according to gender variables, years of experience and scientific qualification.

3- the study of Amany Asi (5) (2013): which aimed to recognize how much the knowledge economy is used in physical education curriculums of basic education stage from the point of view of moderators and teachers, the researcher has used the descriptive curriculum and the study sample has consists of 30 moderators and 146 teachers, the study results has shown that the level of using knowledge economy in physical education curriculums came with a medium degree on all fields of study.

4- the study of Pandy (23) (2012): which aimed to recognize the level of awareness of knowledge economy among high school teachers in France, the researcher has used the descriptive curriculum and from the most important results which the study has reached that low-level of knowledge of knowledge economy of high school teachers and the existence of differences with statistically significant according to gender variables and for females.

5- the study of Hanna Dhaifullah (19)(2010): which aimed to recognize the effect of knowledge economy in applying physical education curriculums developed for the basic stage from the point of view of physical education teachers. The researcher has used the descriptive curriculum and the study sample has consists of 119 male teachers and 130 male teachers. The results has referred to existence of huge positive effect of knowledge economy in applying developed physical education curriculums.in addition to, the lack of differences with statistically significant according to gender variables and females.

6- the study of Radina Ismail (10) (2010): which aimed to recognize the difficulties that faces applying physical education curriculums developed according to knowledge economy from the point of view of physical education teachers and the study sample has consists of 51 male teacher and 69 female teacher, the researcher has used the descriptive curriculum and the results has shown the existence of huge difficulties in applying physical education curriculums according to both fields information technology and knowledge economy. In addition to, the lack of differences in teachers responding according to study variables.

It's clear from the previous display of the educational studies and researches how much the researcher benefits from the general curve mode of study in terms of: identify the basic entrance of the study problem and formulating its questions, curriculum and formulating its objectives. Also identify study sample and build its tools and the appropriate statistical processors to validate hypotheses and comment on the results.

Study curriculum:

This study belongs to the descriptive studies category where the researcher used the descriptive curriculum and that's for his suitability to its nature and objectives using the questionnaire to collect data needed to process its subject.

Society of study and sample:

Society of study consists of physical education teachers of middle school in el-Azhar institutes of the central administration of el-Monofeya district of Azhar during the period of study in the second semester of the academic year 2016-2017 and their number is 137 teachers for physical education 108 male teacher and 29 female teacher. The sample of study has reached 83 teachers for physical education chosen randomly at the rate of 60.85% from the society of study.

Tool of the study:

The researcher used the questionnaire as a tool to collect data and it was designed so that to include a list of teaching practices needed for physical education teachers in the light of trends based on knowledge economy and that's after viewing the educational literature, the studies and the educational researches related to the subject of the study included: (1),(6),(12),(17),(14) and the tool of the study included a list consists of 42 teaching practices distributed on five axes as follows: planning, student participation in classes and school activities, using modern methods and means of teaching, developing the abilities and personal qualities of students and the evaluation.

Validity of the questionnaire:

Validity of the questionnaire was calculated through apparent honesty by displaying it on 10 of the staff teaching members from the specialists of curriculums, teaching methods, physical education, measurement and evaluation based on the views, observations and views agreed upon appropriate adjustments have been made and then display it again after modification to reach the questionnaire in its final form.

Reliability of the questionnaire:

The researcher calculate the reliability of the questionnaire by finding persistence transactions through (Cronbach Alpha) theory and that's through displaying the questionnaire on the reconnaissance sample which consists of 15 teachers of physical education from the society of study and from outside the basic sample. The results showed the existence of persistence transaction for teaching practices and questionnaire axes between (0,861-0,934) and its value has reached for the questionnaire as a total (0,913) and they are high reliability values which indicates reliability and confidence in the results that resulting the tool of study, it is also implementable.

Application of the questionnaire in its final form:

*The questionnaire was applied in its final form on the individuals of the study sample during their existence in the regular meeting of physical education teachers which have been held on Sunday and Monday 12, 13/2/2017 and the researcher has collected and emptied the questionnaires in order to make a proper statistical processing.

-Presentation and discussion of the results:

Firstly: The results related to the first question:

In this context is displaying a list of teaching practices for physical education teachers in the light of trends based on knowledge economy. The list has included 42 teaching practices distributed on five axes as follows:

Table (1)
List of teaching practices of physical education teachers in the light of trends based on knowledge economy

The Axis	The Teaching practices
1-Planning	1-Benefits from the teacher's guide while planning to the lesson
	2-Distribute the determined skills according to the time set plan
	3-Shape the educational objectives for the lesson in a procedural measurable way
	4-Distribute the lesson's time appropriately according to its objectives
	5-Analyze the educational material in an easy way before display it
	6-Planning to use appropriate education techniques to invest and generate the knowledge economy
	7-Ensure to initialize an appropriate and effective classrooms
	8-Adjusts his teaching plans according to the updates of teaching situations
	9-Considerate the individuals differences between students while shaping the educational objectives
	10-Considerate the material resources available at school
	11-Choose teaching strategy fit with the nature of educated skills
	12-Determine the degree of difficulty and suitability of educated skill for students in advance
	13-Determine the evaluation methods used in lesson
2-Students participation in classes and school activities	1-Give the students the chance to choose and participate
	2-Helps develop the challenge skills and be distinguished during the lesson
	3-Instill a spirit of active participation in students during the lesson
	4-Increases the cooperation teamwork efficiency between students
	5-Encourages the students to create, innovate, dialogue and discuss during the lesson
	6-Helps the students participate in making classroom decisions
3-Using modern methods and means of teaching	1-Present the educated skill in an appropriate and interesting way
	2-Use methods and means of teaching that encourage the students to self-education
	3-Use modern education techniques in teaching
	4-Use and develop various educational activities in the lesson
	5-Teach the educated skill in a smoothly and organized way
	6-Considerate the individual differences between students
4-Developing the abilities and the personal qualities of students	1-Helps the students gain leadership qualities
	2-Helps the students build their integrated personality
	3-Develop in students the ability to think critically
	4-Moivates the students to acquire lifelong constant learning skills
	5-Helps the students express themselves in front of their colleagues
	6-Works on develop the special abilities of talented students
	7-Helps the students develop the ability of accepting the opinions of others
	8-Develop the students ability of creative thinking
5-The Evaluation	1-Determines the level of students through the previous evaluation
	2-Use different kinds of reinforcement method
	3-Improve students skills effectively on the practical side
	4-Help students learn self-evaluation
	5-Use various evaluation methods according to the educational objective nature
	6-Present feedback to students in the right time
	7-Evaluate the student in the light of his progress in learning not by comparing him with his colleagues
	8-Documenting the students evaluation in a regulated records during skill learning
	9-Using the evaluation results to improve the learning process

Secondly: The results related to the second question:

To identify the level of performance of physical education teachers for teaching practices in the light of trends based on knowledge economy, the researcher calculated the arithmetic means and the standard deviations of the questionnaire axes as a total as seen by the study sample members and the results came as shown in the following table:

Table (2)
Responses of the study sample to the level of their performance of teaching practices for the questionnaire as a total (N=83)

S.N	The Questionnaire axes	Arithmetic mean	Standard deviation	Level of acceptance	Ranking
1	Planning	2,62	0,98	medium	1
2	Students participation in classes and school activities	2,43	1,13	low	4
3	Using modern methods and means of teaching	2,47	1,02	low	3
4	Developing the abilities and the personal qualities of students	2,41	1,05	low	5
5	The Evaluation	2,51	1,01	low	2
General average		2,49	0,98	low	

Table (2) shows that the level of performance of physical education teachers for teaching practices is generally low, where the average level of performance of teaching practices on all the questionnaire axes reached (2,49) which refers to that using of teachers of teaching practices was a low percentage.

The results of this study agree with the study result of Pandy (23) (2012) which referred to the low level of teacher awareness of skills importance and the demands related to knowledge economy. Also, agree with the study of Haider Shehab (9) (2015) which referred to the need of physical education teachers to the training that based on knowledge economy criteria and using it in teaching physical education. Also, the study of Mounira Essa (15) (2005) which reached to weakness in the level of teachers possession of knowledge economy competence. Also, agree with what was recommended by the study of Ahmed Essa and Wasfi Mohamed (1) (2013) to the necessity of physical education teachers subordination to more training courses and different workshops concerning educational development and knowledge economy.

While the result of this study differs from the study results of both Hadeel Makki (18) (2012) and Asmaa Mohamed (3) (2013) which referred to the achievement of the knowledge economy requirements and skills to the teacher with a huge degree.

Thirdly: The results related to the third question:

*The validity of the first hypothesis for study was tested by using "t" test of two independent samples to determine the differences significance between the average responses of physical education teachers according to gender variables as shown in the following table:

Table (3)
Arithmetic means, standard deviations and "t" value for the differences of teachers response according to gender variables
N for male teachers=62, n for female teachers=21

S.N	The Axis	Male teachers		Female teachers		"t" value	level of significance
		M	D	M	D		
1	Planning	2,63	0.92	2,61	0,88	0,086	Not a significance
2	Students participation in classes and school activities	2,44	1,11	2,42	1,09	0,009	Not a significance
3	Using modern methods and means of teaching	2,49	0,99	2,46	1,01	0,118	Not a significance
4	Developing the abilities and the personal qualities of students	2,43	1,07	2,40	1,04	0,111	Not a significance
5	The Evaluation	2,52	0,97	2,51	1,01	0,039	Not a significance
Total performance level		2,50	1,04	2,48	1,09	0,074	Not a significance

Tabular "t" value at level (0, 05), D.H. 1.99=81

Table (3) shows that the differences in the study sample individuals' responses according to gender variables not statically significant at level (0, 05) on all the study axes and this result agree with the study of both Ahmed Essa and Wasfi Mohamed (1) (2013), Yousef Al Jar rah (20) (2007) and with those who claimed that there were no

statistically significant differences of the performance level of teaching practices due to gender variables, and this result differs with what was shown by the study of Haider Shehab (9)(2015), Hanna Daifallah (19)(2010) and pandy (23)(2012) to the existence of statistically significant differences due to gender variables and for female teachers sake.

Although there are no incorporeal differences in the current study axes due to gender variables, but the male teachers showed greater superiority than the female teachers in every axis of the study axes separately and in the performance level of teaching practices. Thus, the validity of the first hypothesis of the study has been confirmed.

So to test the validity of the second hypothesis of the study, the researcher used "t" test of two independent sample to identify the differences significant between the arithmetic means of physical education teachers' responses according to scientific qualification variable, as shown in the following table:

Table (4)
Arithmetic means, standard deviations and "t" value for the differences of teachers response according to scientific qualification variable
N for bachelor degree only=62, n for higher than bachelor degree =21

S.N	The Axis	Bachelor degree		Higher than bachelor degree		"t" value	level of significance
		M	D	M	D		
1	Planning	2,59	1,02	2,65	1,05	0,203	Not a significance
2	Students participation in classes and school activities	2,42	1,14	2,45	1,01	0,929	Not a significance
3	Using modern methods and means of teaching	2,46	0,98	2,51	1,04	0,175	Not a significance
4	Developing the abilities and the personal qualities of students	2,39	1,11	2,45	0,99	0,191	Not a significance
5	The Evaluation	2,49	1,02	2,54	1,11	0,167	Not a significance
Total performance level		2,47	0,97	2,52	1,07	0,175	Not a significance

Tabular "t" value at level (0, 05), D.H. 1.99=81

Table (4) shows that the differences in the study sample responses according to scientific qualification variable not statically significant at level (0, 05) on all the study axes and this result agree with what was confirmed by the study of both Mounira Essa (15)(2005), Hanna Daifallah (19)(2010) and Ahmed Essa and Wasfi Mohamed (1) (2013), that there were no statistically significant differences of the performance level due to scientific qualification variable, while this result differs with the study results of Haider Shehab (9)(2015) and Gamal Khalil (7)(2013) which showed the existence of statistically significant differences of the performance level due to scientific qualification variable and for teachers with only bachelor degree.

Although there are no incorporeal differences in all the axes due to scientific qualification variable, but the teachers with scientific qualification higher than bachelor degree showed greater superiority than the teachers with bachelor degree only in all the study axes and in the total performance of teaching practices.

The researcher impute that to teachers' acquisition from educational qualification campaign higher than bachelor degree all that is new from the basic and recent educational methods in facilitating their educational tasks. In addition to, their acquaintance of knowledge innovations and to get benefits from using it in different fields in a way that helps them develops their teaching practices in the physical education teaching. Thus, the second hypothesis of the study has been confirmed.

So to test the validity of the third hypothesis of the study, the researcher used "t" test of two independent sample to identify the differences significant between the arithmetic means of physical education teachers' responses according to teaching experience variable, as shown in the following table:

Table (5)
Arithmetic means, standard deviations and "t" value for the differences of teachers response according to teaching experience variable
N for experienced teacher less than 5 year =25,
N for experienced teacher more than 5 year=58

S.N	The Axis	Experience less than 5y		Experience more than 5y		"t" value	level of significance
		M	D	M	D		
1	Planning	2,63	1,11	2,61	1,09	0,079	Not a significance
2	Students participation in classes and school activities	2,45	1,07	2,42	1,04	0,121	Not a significance
3	using modern methods and means of teaching	2,48	1,04	2,47	0,88	0,044	Not a significance
4	Developing the abilities and the personal qualities of students	2,42	0,99	2,41	1,01	0,041	Not a significance
5	The Evaluation	2,53	0,97	2,50	0,92	0,132	Not a significance
Total performance level		2.5	1,02	2,48	0,99	0,083	Not a significance

Tabular "t" value at level (0, 05), D.H. 1.99=81

Table (5) shows that the differences in the study sample responses according to teaching experience variable not statically significant at level (0, 05) on all the study axes due to the performance of physical education teachers for teaching practices in the light of trends based on knowledge economy and it is a new teaching practices has attracted attention recently which motivates to do training programs, workshops, courses and meetings to target all physical education teachers either newly appointed teachers or who has many years of experience in physical education teaching field.

And this result agree with what was confirmed by the study of both Mounira Essa (15)(2005), Hanna Daifallah (19)(2010) and Ahmed Essa and Wasfi Mohamed (1) (2013), that there were no statistically significant differences of the performance level of teaching practices due to teaching experience variable, while this result differs with the study results of Haider Shehab (9)(2015) and Gamal Khalil (7)(2013) which their results showed the existence of statistically significant differences of the performance level of teaching practices due to teaching experience variable and for experienced teacher less than 5 year. Thus, the validity of the third hypothesis of the study has been confirmed.

Recommendations:

1- preparing continuously training programs for physical education teachers aims to develop their teaching practices in the light of trends based on knowledge economy.

2- making workshops and training courses at the level of Al-Azhar institutes sector for physical education teachers to identify the teaching practices needed in the light of trends based on knowledge economy.

3- the necessity to emphasize the university professors to show the importance of introducing educational units in their curriculums showing the physical education teachers' roles in the age of globalization and knowledge economy.

4- making educational studies about evaluate the performance of physical education teachers for teaching practices in the light of trends based on knowledge economy in the other educational stages from the point of view of the educational mentors.

5- making educational studies in the field of teaching practices for physical education teachers to study the mutual effect between modern teaching methods used and the concepts of knowledge economy.

References

1- Ahmed Issa and wasfi Mohamed: Evaluation of the effectiveness aspects of physical education class in the light of the educational development criteria towards knowledge economy in the Schools of Irbid Governorate, Al-ManaraMagazine. 19, p3, Al-Bayt University, Jordan 2013.

2- Ahmed Mamdouh: Evaluation of the performance of physical education teacher in technical secondary schools in Dakahlia Governorate, Scientific Journal of Physical Education Sciences, p. 15, Faculty of Physical Education. Al- Mansoura University 2010.

3- Asmaa Mohammed: "Evaluation of teaching performance of biology teachers of the secondary stage in Al - Majma'a Governorate In the light of knowledge economy requirements, "Unpublished Master degree", faculty of Social Sciences, Imam Muhammad bin Saud Islamic University, Saudi Arabia, 2013.

4- El-sayed Ismail: Contemporary trends in evaluating teacher performance, the 14th scientific conference, Egyptian association for Curriculums and Teaching Methods, c2, Ain Shams University, 2002.

5- Amani Assi: using of knowledge economy in physical education curriculums of basic education In Palestine, "Unpublished Doctoral Thesis", faculty of Graduate Studies, Jordan University, Jordan, 2013.

6- Bassam Abdel Hady: Education based on knowledge economy, Amman, Dar al bidaya for publication and distribution, 2014.

7- Gamal Khalil: Degree of possession of Islamic education teachers of knowledge economy concepts, Journal of Islamic University for Educational and Psychological Studies, C21, p1, Islamic University, Gaza, 2013.

8- Gamal Abdel Samie: Evaluation of physical education teachers' performance in the preparatory stage Mansoura City, Scientific Journal of Physical Education Sciences, p 21, Faculty of Physical Education, Mansoura University, 2013.

9- Haidar Shehab: The training needs for physical education teachers based on the criteria of Knowledge economy in Iraq, "Unpublished Master Thesis", Faculty of Educational Sciences, Al-Bayt University, Jordan, 2015.

10- Ridina Ismail: Difficulties facing the implementation of physical education curriculums developed according to knowledge economy from the point of view of physical education teachers in Irbid governate, "Unpublished Master thesis", "Faculty of Physical Education, Yarmouk University, Jordan 2010.

11- Abdel Hakim Mahmud, Salim Mohamed and Abdel Latif Mohamed: Teaching children in the age of knowledge economy, Amman, house of culture for publication and distribution, 2010.

12- Abdel-Muttalib Abdel-Hamid: The Knowledge Economy, Alexandria, University House, 2011.

13- Attalla Al-Hadan: A proposed program for training teachers based on knowledge economy and measuring its impact on both cognitive and practical aspects of teachers, "unpublished PHD thesis", faculty of Higher Education Studies, Amman Arab University, Jordan, 2007.

14- Ali Mahmud: The knowledge economy of physical education curriculums in the light of present and future challenges in the 21st Century and its Practical Applications, Jordan, Center of The Academic Book, 2010.

15- Munira Issa: Building a training program based on knowledge economy competencies for the professional development of Home Economics teachers in Jordan, "Unpublished Doctoral Thesis", faculty of Higher Education Studies, Amman Arab University, Jordan, 2005.

16- Muhannad Mustafa: The degree of practice of Islamic education teachers to the role of teacher in the light of knowledge economy From the point of view of their supervisors in Jordan Damascus University Journal of Educational and Psychological sciences , C27, p3, Syria, 2011.

17- Hashem Al-Shammari and Nadia Al-Leithi: Knowledge Economy, Amman, Dar Safaa' for Publication and Distribution, 2008.

18- Hadeel Makki: Evaluation of mathematics teachers' performance for the intermediate stage in Riyadh In the light of of knowledge economy requirements, "Unpublished Master Thesis", faculty of Education, Imam Muhammad bin Saud Islamic University, Saudi Arabia, 2012.

19- Hanaa Daifallah: The impact of knowledge economy in applying physical education curriculums developed for the basic stage in Irbid, "Unpublished Master Thesis", Faculty of physical Education, Yarmouk University, Jordan, 2010.

20- Yousef Al-Jarrah: An Evaluative Study of Physical Education curriculums based on Knowledge Economy in The Age of Globalization, 17th Scientific Conference, Egyptian association for Curriculums and Teaching Methods, c3, Ain Shams University, 2007.

21- Bonal, X. & Ramba, X.: "Captured by the Totally Pedagogies Society: Teacher and Teaching in the Knowledge Economy Globalization", Societies and Education, Vol.11, No 2, 2003.

22- Nelson, M.: "The adjustment of national education systems to a Knowledge – based economy: a new approach", comparative Education, Vol. 46, No.4, 2010.

23- Pandy, c.: Economic Literacy of Senior Secondary School Teachers: A field Study, Journal of all India association for educational research, Vol. 24, No. 1, 2012.