Perceptions of University Students at the College of Basic Education Toward Implementing Moodle in Managing E-Courses to Enhance Learning in Kuwait

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Abstract

The study aimed to investigate **the perceptions of university students at the College of Basic Education toward implementing Moodle in managing e-courses to enhance learning in Kuwait.** The researcher employed the descriptive analytical method and developed a questionnaire to measure students' perceptions of the use of the Moodle system in e-courses management. The study tool was divided into two domains: the benefits of the Moodle system and the importance of using the Moodle system. The reliability and validity of the study tool were verifiedK The study sample consisted of **397 bachelor students (male and female)** from the College of Basic Education at the Public Authority for Applied Education and Training in Kuwait. The findings revealed that students' perceptions of using the Moodle system in managing university e-courses were at a medium level. The results also showed no statistically significant differences because of gender across all domains and the overall score. However, there were statistically significant differences attributed to the effect of the academic level in all domains, favoring students in the first and second academic years across all domains and the overall score.

Keywords: Perceptions, College of Basic Education Students, Moodle System, University E-Courses Management, Learning Process, Kuwait.

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Introduction

Revised Text for Clarity and Academic Style

Our era is characterized by rapid changes across all aspects of life, including a tremendous technological revolution and rapid progress in various fields. This has been accompanied by exponential growth in the volume and variety of information across all domains of knowledge. The data produced in the last three decades surpasses that generated throughout previous centuries, highlighting the transformative impact of the technological revolution. Advances in computers, software, and various types of networks have revolutionized the educational process and inspired persistent efforts to harness this revolution to develop academic sciences.

The information revolution, coupled with advancements in communication and technology, has presented a significant challenge to educational institutions in the Arab world. These institutions face an urgent need to integrate and adapt to the realities of this technological explosion. Such adaptation is crucial for addressing the demands of the future and is a prerequisite for implementing electronic management systems in educational settings. These systems are designed to serve individuals' interests, streamline administrative and educational procedures, and achieve developmental objectives. Among the most important goals is the development of human knowledge in the field of electronic technologies (Ali, 2001).

As education represents a critical pathway for nations to address contemporary challenges and build their futures, its importance as a fundamental dimension of state policy is increasingly recognized. Efforts to enhance educational quality have become a central focus. According to Alwale (2005:7), achieving high-quality education has been a key priority in educational reform processes worldwide.

Burrello (2001) emphasized that utilizing electronic technologies in learning and education significantly enhances the overall efficiency of educational systems and benefits those working in educational environments. E-learning systems store information in diverse formats, including drawings, images, signs, writings, and sounds. These

technologies allow learners to interact directly and positively with educational content, guiding them step-by-step towards mastery. Through multimedia-based learning, learners receive real-time feedback, enabling them to correct errors and reinforce successful learning outcomes (Mohammed, Mahmoud, Younis, Sweidan, & Aljazar, 2004:108).

Many researchers advocate integrating educational software into curricula as a modern tool for effectively delivering content. Such integration necessitates that educational authorities develop strategic plans aligned with the rapid advancements in e-learning technology (Al-Hadifi & Al-Daghaim, 2005:193-194).

Human attitudes play a central role in determining the acceptance and application of e-learning technologies. Individuals may strongly accept or reject certain trends based on their alignment with personal interests or readiness to adapt (Eid, 2000:20). Thus, fostering positive attitudes toward e-learning is essential for its successful implementation.

E-learning utilizes modern communication tools, including computers, networks, multimedia, and internet portals, to deliver information to learners efficiently and cost-effectively. These technologies not only enhance the management and control of the educational process but also enable the evaluation and measurement of learners' performance, contributing to the overall effectiveness of education systems.

Theoretical Framework

The Concept of E-Learning

E-learning is an educational approach that utilizes modern communication mechanisms such as computers, networks, multimedia, and internet portals to deliver information to learners efficiently and cost-effectively. It not only enhances the management and control of the educational process but also facilitates the measurement and evaluation of learners' performance. Al-Arifi (2003:6) defines e-learning as "providing educational content with explanations, exercises, interaction, and follow-up, either partially or comprehensively, in the classroom or remotely, through advanced software stored on computers or over the internet." Zaytoun (2005:24) further elaborates that e-learning involves

delivering electronic content via computer-based media and networks, allowing learners to interact actively with the content, teachers, and peers, whether simultaneously or asynchronously, and to complete learning at a pace and place suited to their circumstances.

In the context of higher education, e-learning platforms like Moodle have become essential tools for managing electronic courses (e-courses), enabling flexible, interactive, and student-centered learning environments.

Benefits of E-Learning

According to Salem (2004:295), the benefits of e-learning include:

1. **Promoting a Digital Culture**: E-learning fosters a digital culture focusing on knowledge processing, where learners control their learning by interacting with electronic environments, aligning with constructivist educational theories.
2. **Accessibility**: It provides educational opportunities for all segments of society, breaking geographical barriers.
3. **Flexibility**: Learners can access education anytime and anywhere, accommodating individual learning paces and schedules.
4. **Development of Thinking Skills**: E-learning contributes to developing critical thinking and enriches the learning process through interactive content.
5. **Cost-Effectiveness**: It reduces the cost of education by minimizing the need for physical infrastructure.
6. **Fostering Independence**: Encourages self-reliance and independent learning among students.
7. **Privacy in Learning**: Allows students to learn and make mistakes privately, enhancing confidence (Al-Gharab, 2003:28-29).
8. **Customized Learning**: Students can repeat or skip content based on their needs, facilitating personalized learning experiences.

Types and Requirements of E-Learning

Al-Musa (2005:36-37) categorizes e-learning into:

1. **Synchronous E-Learning**: Real-time learning methods where learners and instructors interact simultaneously, such as virtual classrooms and live chats.

2. **Asynchronous E-Learning**: Learning that does not occur in real-time, allowing learners to access materials at their convenience through emails, discussion forums, and pre-recorded lectures.

Successful e-learning implementation requires:

- **Human Resources**: Qualified educators skilled in using modern technologies and designing digital courses, learners adept at self-directed learning in digital environments, and technical support staff.
- **Infrastructure**: Essential equipment like servers, computers, secure internet connections, interactive interfaces, and learning management systems (LMS) like Moodle.

The Concept of E-Courses and Moodle

E-Courses

E-courses are electronically delivered educational courses that encompass content and activities accessible online. Atmizi (2009:3) defines them as "the educational contents and electronic activities representing all or part of an accredited university course received by the learner online." E-courses are designed to be interactive and multimedia-rich, enhancing learner engagement and understanding.

Moodle as a Learning Management System

Moodle is an open-source LMS designed to help educators create effective online learning environments. It supports the management of e-courses by offering tools for course creation, content delivery, communication, assessment, and tracking learner progress. Moodle's design emphasizes collaboration, flexibility, and student-centered learning.

Objectives and Relevance of E-Courses Managed through Moodle

The integration of Moodle in managing e-courses aims to:

1. **Digitize Curriculum Delivery**: Transform traditional courses into digital formats accessible via the internet.
2. **Enhance Accessibility and Flexibility**: Allow learners to access course materials anytime and anywhere, accommodating diverse learning needs.

3. **Facilitate Interaction and Collaboration**: Provide platforms for interaction between students and instructors and among peers, fostering a collaborative learning environment.
4. **Support Self-Directed Learning**: Enable learners to control their learning paths, pace, and engagement with content.
5. **Improve Learning Outcomes**: Utilize multimedia resources and interactive activities to enhance understanding and retention.

Advantages of Using Moodle for E-Courses:

Using Moodle to manage e-courses offers several benefits:

1. **Dynamic Content Management**: Educators can easily update and enrich course content with new resources.
2. **Enhanced Interaction**: Moodle facilitates communication and collaboration through forums, chats, and messaging.
3. **Student-Centered Approach**: Emphasizes the learner's role in the educational process, promoting active engagement.
4. **Flexible Learning Activities**: Supports various activities not confined by time or location, catering to different learning styles.
5. **Immediate Feedback**: Provides instant feedback on assessments and activities, aiding in the learning process.
6. **Efficient Development and Maintenance**: Simplifies course development and updates, ensuring content remains current.

Study Problem:

While universities globally have adopted Moodle to enhance the learning process, there is a noticeable gap in its implementation at the College of Basic Education in Kuwait. Students may lack awareness or proficiency in using Moodle effectively, and faculty members might not be fully equipped to integrate it into their teaching. This situation hinders the potential benefits of e-learning and the management of e-courses, affecting the enhancement of the learning process.

Therefore, this study seeks to investigate the perceptions of university students at the College of Basic Education towards implementing Moodle in managing e-courses to enhance learning in Kuwait. Understanding these perceptions is crucial for addressing

barriers and facilitating the successful integration of Moodle into the educational framework.

Study Questions

1. What are the perceptions of university students at the College of Basic Education towards implementing Moodle in managing university e-courses to enhance the learning process in Kuwait?
2. Are there statistically significant differences at the significance level ($\alpha \leq 0.05$) in students' perceptions towards using Moodle based on variables such as gender and level of study?

Study Objectives

1. To explore the perceptions of students at the College of Basic Education regarding the use of Moodle in managing university e-courses to enhance learning.
2. To identify any differences in perceptions based on demographic factors like gender and academic level.

Importance of the Study

The study holds significance in:

1. **Enhancing Learning Processes**: By understanding student perceptions, strategies can be developed to improve the implementation of Moodle, thereby enhancing the learning experience.
2. **Promoting E-Learning**: Highlighting the necessity of e-learning systems like Moodle in modern education can encourage their adoption and integration.
3. **Supporting Self-Learning**: Insights from the study may help in fostering self-directed learning and improving students' abilities to navigate e-learning platforms.
4. **Informing Educational Policy and Curriculum Development**: The findings can guide curriculum developers and policymakers in creating programs that align with students' needs and preferences regarding e-learning.

Study Terms

- **Perception**: The individual's feelings or attitudes that determine their response to a particular subject or issue (Zaytoun, 2004:401). In this context, it refers to students' attitudes towards Moodle.

- **Moodle**: An open-source learning management system designed to facilitate the creation of online learning environments (Al-Mezher, 2005:43).
- **E-Course**: Electronic learning material provided through computers and the internet, enabling interaction between students, content, peers, and teachers (Abu Khatwa, 2010:7).
- **E-Learning**: Delivering educational content aimed at creating a rich, interactive learning environment using technology, without constraints of time or place (Al-Sofiani, 2008:7).

Study Limits

1. The study focuses on investigating students' perceptions towards the use of Moodle in managing university e-courses to enhance learning.
2. It is limited to students of the College of Basic Education at the Public Authority for Applied Education and Training in Kuwait during the first semester of the 2020/2021 academic year.

Previous Studies

- **Abu Ria and Khashan (2010)**: Explored the effectiveness of an educational website in teaching geometry to ninth-grade students in Jordan, finding positive impacts on achievement and attitudes.
- **Al-Gharf (2008)**: Examined the requirements for activating Moodle e-courses in Saudi Arabia's public education, emphasizing training, infrastructure, and support.
- **Ashour (2009)**: Investigated Moodle's effectiveness in teaching 3D design skills to education technology students, noting significant improvements in knowledge and performance.
- **Jackson & Helms (2008)**: Analyzed students' perceptions of e-learning programs at the undergraduate level, highlighting the need for effective e-course management systems.
- **Dahlan (2012)**: Studied the impact of a Moodle-based program on lesson planning skills and attitudes among Al-Azhar University's basic education students, reporting positive outcomes.
- **Mohammed (2011)**: Assessed the effectiveness of an e-course in developing Moodle skills among graduate students, finding enhancements in cognitive achievement and motivation.

- **Hassan (2011)**: Evaluated an e-course's effectiveness in developing Moodle skills in graduate students at Benha University, noting improvements in achievement and motivation.
- **Bremer & Bryant (2004)**: Compared Blackboard and Moodle from students' perspectives, with a majority preferring Moodle for its user-friendly features.

These studies collectively emphasize the importance of understanding student perceptions in implementing e-learning platforms like Moodle. They provide evidence of Moodle's effectiveness in enhancing learning outcomes and underline the necessity of addressing challenges related to its adoption in educational institutions.

Commentary on Previous Studies

The current study distinguishes itself by being the first of its kind in Kuwait, as per the researcher's knowledge, focusing on investigating the perceptions of students at the College of Basic Education regarding the use of the Moodle system in managing university e-courses to enhance learning. Previous studies have informed the methodology, sample selection, statistical methods, and development of the study tool used in this research. These studies provided foundational insights but did not address the specific context of Kuwait, making this research a significant contribution to the literature.

Method and Procedures

Study Methodology

The descriptive analytical approach was utilized in this study, which is suitable for presenting and analyzing the measured phenomenon. This method aligns with the research objectives and variables, enabling a systematic investigation of students' perceptions.

Study Population and Sample

The study population comprised **17,455 students** enrolled in the College of Basic Education at the Public Authority for Applied Education and Training during the first semester of the academic year 2020/2021. The population included **5,324 male students** and **12,131 female students**.

A random sample of **397 students** was selected, including **152 male students (38.3%)** and **245 female students (61.7%)**, with almost equal

representation of first and second-year students (50.1%) and third and fourth-year students (49.9%).

Table 1: Distribution of Study Sample by Variables

Variable	Category	Frequency	Percentage
Gender	Male	152	38.3%
	Female	245	61.7%
Academic Year	First and Second	199	50.1%
	Third and Fourth	198	49.9%
Total		**397**	**100.0%**

Study Tool

The study tool was developed after reviewing theoretical literature and previous studies. It consisted of **28 items**, divided into two domains:

1.The pursuit of using the Moodle system.

2.The importance of using the Moodle system.

The tool's reliability and validity were verified through the following steps:

1.**Validity**: The tool was presented to a panel of experts specializing in educational technology and curricula. Based on their feedback, necessary amendments were made to improve clarity and accuracy. For instance:

- The item "Moodle training could not be trained" was revised to "Moodle training is difficult and requires considerable effort and time."
- The item "I support the use of Moodle system at all educational levels" was revised to "I support the use of Moodle system in all educational stages and courses."

2.**Reliability**: Reliability was assessed using two methods:

- **Test-retest method**: The tool was administered twice, two weeks apart, to a group of **30 students** outside the study sample. The Pearson correlation coefficient was calculated for their responses, confirming consistency.
- **Internal consistency**: Cronbach's Alpha was calculated for the domains and the tool as a whole. The values indicated high reliability, as shown in **Table 2**.

Table 2: Reliability Coefficients (Cronbach's Alpha)

Domain	Test-Retest Stability	Internal Consistency
Pursuit of using Moodle	0.89	0.81
Importance of using Moodle	0.86	0.79
Total Score	**0.90**	**0.84**

Statistical Standard

The study adopted a **Five-Point Likert Scale** for data analysis, with the following scoring and interpretation:

Strongly Agree(5)Agree (4) Neutral (3)Disagree (2)Strongly Disagree (1).

The interpretation ranges were: 1.00–2.33: Low,2.34–3.67: Medium , 3.68–5.00: High

Study Procedures

The study followed these steps:

1. **Theoretical Framework Development**: The researcher reviewed existing literature to define variables, including students' perceptions, Moodle usage, university e-courses, and the learning process.
2. **Survey of Previous Studies** :Relevant Arab and international studies were reviewed to establish a contextual basis. The researcher identified a gap in existing research, as no studies combined all variables in the Kuwaiti context.
3. **Tool Development and Validation**: A study tool was designed, validated by experts in educational technology and curricula, and tested for reliability using test-retest and internal consistency methods.
4. **Data Collection**: The validated tool was distributed to the study sample, and responses were collected.
5. **Data Analysis**: Statistical analyses were performed using SPSS to answer the study questions.
6. **Interpretation and Conclusions**: were interpreted in light of the theoretical framework and previous studies, leading to conclusions and practical recommendations.
7. **Recommendations and Future Research**: Based on the findings, the researcher proposed recommendations for educators and institutions and suggested future research topics to build upon this study.

Statistical Treatment

The researcher used SPSS to perform statistical analyses, including:

- **Arithmetic Means and Standard Deviations**: For analyzing students' responses.
- **Cronbach Alpha Coefficient**: To determine internal consistency reliability.
- **Repeated Measures Analysis**: To ensure tool reliability over time.
- **Two-Way ANOVA (Analysis of Variance)**: To examine the effects of gender and academic level on student trends.
- **Scheffé Post-Hoc Test**: To compare differences between variables.

Results and Discussion

Question 1: *What are the students of the College of Basic Education's trends toward the use of Moodle in managing university e-courses to enhance the learning process in Kuwait?*

Table 3: Arithmetic Means and Standard Deviations

Rank	Domain	Arithmetic Mean	Standard Deviation	Classification
1	The importance of using Moodle	2.93	0.811	Medium
2	Seeking to use Moodle	2.49	0.763	Medium
	Overall Average	**2.74**	**0.756**	**Medium**

- **Findings**:

The overall trend of students toward using Moodle was classified as "medium" with an average score of 2.74. The domain "importance of using Moodle" had the highest score (2.93), while "seeking to use Moodle" was the lowest (2.49).

- **Interpretation**:

Students recognize the importance of Moodle in saving time, effort, and providing an interactive learning environment. However, challenges in using Moodle, such as technical difficulties or unfamiliarity, may have contributed to lower scores in seeking its use.

- **Consistency with Previous Studies**:

These findings align with studies such as **Dahlan (2012)**, **Ashour (2009)**, and **Bremer & Brayant (2004)**, which reported positive student attitudes toward Moodle's role in enhancing the learning process.

Question 2: *Are there statistically significant differences at ($\alpha \leq 0.05$) in students' attitudes toward Moodle based on gender and academic level?*

Table 4: Means and Standard Deviations by Gender and Academic Level

Variable	Category	Seeking to Use Moodle	Importance of Moodle	Total Score
Gender	Male	2.57	2.99	2.81
	Female	2.44	2.88	2.69
Academic Level	First and Second	2.57	3.02	2.83
	Third and Fourth	2.41	2.83	2.65

Table 5: Two-Way ANOVA Results

Source of Variance	Domain	SS	df	MS	F-Value	p-Value
Gender	Seeking to Use Moodle	1.413	1	1.413	2.459	0.118
	Importance of Moodle	1.190	1	1.190	1.834	0.176
	Total Score	1.283	1	1.283	2.277	0.132
Academic Level	Seeking to Use Moodle	2.575	1	2.575	4.483	0.035*
	Importance of Moodle	3.377	1	3.377	5.205	0.023*
	Total Score	3.020	1	3.020	5.361	0.021*

- **Findings**:
  - **Gender**: No statistically significant differences were found between male and female students in all domains and the overall score ($p > 0.05$).
  - **Academic Level**: Statistically significant differences were found in all domains and the overall score, favoring first and second-year students ($p < 0.05$).
- **Interpretation**:

The lack of gender-based differences suggests that Moodle's features are perceived as equally beneficial regardless of gender. The higher scores for first and second-year students may reflect their prior exposure to e-learning environments and familiarity with digital tools before entering university.

- **Consistency with Previous Studies**:

These results are consistent with studies such as **Dahlan (2012)** and **Jackson & Helms (2008)**, which highlighted the positive attitudes of students with prior exposure to e-learning tools.

Conclusion

The study revealed moderate trends among students toward using Moodle for managing e-courses, with greater emphasis on recognizing its importance over actively seeking its use. Gender differences were negligible, while academic level significantly influenced attitudes, favoring first and second-year students. These findings highlight the need for targeted training and support to enhance Moodle's usability and adoption among all students.

References

Abu Khtwa, M. A. (2010). Principles of e-course design derived from learning theories and educational applications. Paper presented at the conference *The Role of E-Learning in The Promotion of Knowledge Societies*, Zain E-Learning Center, University of Bahrain, April 6–8.

Abu Ria, M., & Khashan, K. (2010). An educational website's effectiveness in teaching engineering in the achievement and attitudes of ninth-grade students in Jordan. *Damascus University Journal of Educational Sciences*, 26(3), 593–629.

Al Mezher, S. M. A. (2005). Department of e-learning in public education in Saudi Arabia (proposed organizational model). (Doctoral dissertation, Faculty of Education, King Saud University, Riyadh).

Al-Arifi, Y. A. (2003). E-learning: A promising technique and a pioneering method. Working paper for the e-learning seminar, April 12–23. Riyadh: King Faisal Schools.

Al-Balushi, F. M., & Assiri, I. M. (2005). E-University's foundations and its role in the success of e-learning. Paper presented at the *Second Arab Forum for Education and Education (Higher Education: Visions for the Future)*, Beirut: Arab Thought Foundation.

Al-Desouki, M. I. (2005). Building a program in education technology to develop faculty members and their assistants' abilities. Research presented at the *10th Conference of the Egyptian Society for Education Technology*, Cairo.

Algrab, I. M. (2003). E-learning: An introduction to non-traditional training. Cairo: Arab Organization for Administrative Development.

Algrf, R. S. (2004). The extent to which faculty members at Saudi universities use e-learning: Reality and aspirations. Symposium proceedings, Faculty of Education, King Saud University, Riyadh.

Algrf, R. S. (2008). Requirements for activating model e-courses in public education stages in Saudi Arabia. Proceedings of the *E-Learning Forum*, Ministry of Education, Riyadh, May.

Al-Hadafi, K. F., & Al-Daghaim, K. I. (2005). Computer chemistry teaching and its impact on scientific thinking and trends in secondary school students. *Egyptian Society for Curriculum and Teaching Methods*, 103.

Ali, D. A. (2001). Internet tools and resources for education and learning. In *Computer and Education: The 16th National Conference for Computer* (pp. 300–350), Riyadh: Saudi Computer Society.

Alkhlefa, H. (2008). Employing Web 2.0 technologies in education. Riyadh: King Saud University.

Al-Mutairi, B. M. (2008). The effectiveness of educational software on first-graders in mathematics. (Master's thesis, Um al-Qura University).

Al-Saidi, O. B. S. (2009). Evaluating the quality of online courses in the light of educational design standards (K.A. University model). (Doctoral dissertation, Um al-Qura University).

Al-Saif, M. S. (2009). Availability of e-learning qualifications, constraints, and development methods. (Master's thesis, King Saud University).

Al-Saleh, B. A. (2005). E-learning and educational design: A partnership for quality. Research presented at the *10th Scientific Conference of the Egyptian Society for Electronic Learning Technology*, Ain Shams University, Egypt.

Al-Shahrani, N. A. N. (2009). The demands of using e-learning to teach natural sciences in higher education. (Doctoral dissertation, Um al-Qura University).

Al-Shahri, F. A. (2002). E-learning in Saudi schools: Before we buy the train, did we put the rails? Riyadh: Dar al-Knowledge.

Al-Sofiani, M. O. B. A. (2008). The importance and use of e-learning in teaching mathematics at the secondary level. (Master's thesis, Um al-Qura University).

Alwaley, M. (2005). The quality of statistics subjects in basic education mathematics books in Palestine. (Master's thesis, Islamic University, Gaza).

Amasha, M. A. R. (2009). E-learning and Web 2.0. *Informatics Magazine*, 24, 1–16.

American Society for Training & Development. (2009). E-Learning Glossary. Retrieved from http://www.astd.org/lc/glossary.htm.

Ashour, M. I. N. (2009). Moodle's effectiveness in acquiring 3D design skills among students of education technology. (Master's thesis, Islamic University, Gaza).

Atmizi, J. A. (2009). A flexible framework for evaluating e-courses in Arab universities. *Cybrarians Magazine*, 19.

Bremer, D., & Bryant, R. (2005). A comparison of two learning management systems: Moodle vs. Blackboard. *Proceedings of the 18th Annual Conference of the National Advisory Committee on Computing Qualifications*.

Burrello, C. M., Tracy, E., & Glassman, J. (2001). A national status report on the use of electronic technology in special education management. *Journal of Special Education*, 17.

Clarke, A. (2004). E-Learning Skills. New York: Palgrave Macmillan.

Dahlan, O. (2012). The effectiveness of a Moodle-enhanced program for daily lesson planning skills. (Master's thesis, Al-Azhar University, Gaza).

Eid, I. (2000). Social psychology. Cairo: Zahra Al-Sharq Library.

Harrison, N., & Bergen, C. (2000). Some design strategies for developing an online course. *Educational Technology*, 40(1), 57–60.

Hassan, N. E. S. (2011). An electronic course's effectiveness in developing Moodle skills. Research presented at the *2nd International E-Learning Conference*, Riyadh.

Jackson, M., & Helms, M. (2008). Student perceptions of hybrid courses: Measuring and interpreting quality. *Journal of Education for Business*, September/October.

Mahmoud, S. S. (2007). A proposed model for managing cultural environmental pollution in distance education. Research presented at the *2nd Annual Conference of the Center for Open Education*, Ain Shams University, Cairo.

Mandora, M. M. (2004). E-learning from planning to application. Working paper presented at the *Second Periodic Meeting of the Executive Board Members*, Dubai, UAE.

Masilehi, Z. M., & Mohammed, A. A. K. (2007). Challenges of e-university education in Egypt. *The Future of Arab Education*, 13(46), 11–228.

Mohamed, N. E. S. (2011). An electronic course's effectiveness in developing Moodle skills. (Master's thesis, Faculty of Education, Benha University).

Mohammed, M., Mahmoud, H., Yuns, I., Swedan, A., & Al-Jazazar, M. (2004). Learning technology: Understandings and applications. Amman: House of Thought.

Ryan, S., Scott, B., Freeman, H., & Patel, D. (2000). *The Virtual University: The Internet and Resource-Based Learning*. London: Kogan Page.

Salem, A. (2004). E-learning technology. Riyadh: Al-Rashed Library.

Zaytoun, H. (2005). A new vision in education: "E-learning." Riyadh: The Saltia House of Education.

Zaytoun, K. A. H. (2004). Educational technology in the ICT age. Cairo: The Science of the Book.