The Degree to Which Male and Female Arabic Language Teachers at the Secondary Stage Possess Teaching Skills Based on the Dimensions of the Knowledge Economy, and Their Attitudes Towards Them

Wafaa bint Jumaan bin Abdullah Al Manea Al Zahrani[1], Dr. Ali bin Awad bin Mohammed Al Ghamdi[2]
[1]Researcher in Arabic language curricula and teaching methods, Wafa87@windowslive.com
[2]Assistant Professor of Arabic Language Curricula and Teaching Methods
College of Education and Human Development - University of Bisha, Bisha 61922, P.O. Box551, Saudi Arabia   alix1387@hotmail.com

Abstract:
The aim of the research was to identify the degree to which Arabic language male and female teachers at the secondary stage possess teaching skills based on the dimensions of the knowledge economy in -Mecca Education- possess teaching skills based on the dimensions of the knowledge economy, and to investigate their attitudes towards them. The research followed the descriptive analytical approach; using a questionnaire; that included four main dimensions, including (23) sub-indicators., and an attitude scale whose validity and reliability have been verified. The research was applied to a sample of (n=480), and the results revealed that: The sample members had a high level of skill acquisition, with an overall average of (2.73), with education coming first with an average of (2.75), followed by thinking in last place with an average of (2.70). Also, the results showed positive attitudes among the sample members towards these skills. Then the results revealed statistically significant differences in favor of female teachers in the thinking dimension and the total score of the questionnaire at the level of (0.05), also there were significant differences found in the second dimension in favor of those with doctorates at the level of (0.01), while there were no significant differences recorded for the variables: the number of training courses and years of experience, with the exception of the attitudes scale in favor of those with more experience. In light of these results, the study recommended the inclusion of teaching skills based on the knowledge economy in teacher preparation and qualification programs.
Keywords: Teaching Skills, Knowledge Economy Dimensions, Attitudes, Arabic Language Male and Female Teachers.

INTRODUCTION:

The twenty-first century has witnessed scientific and technological advancements across all scientific and knowledge fields. Amid this progress, new factors have emerged that influence the global economy, including knowledge and its applications, which represent key drivers for the growth of the global and knowledge economies. The knowledge economy is considered the third revolution in human history. Historically, knowledge has been the foundation for building human civilizations at all times and places. The importance of knowledge lies in the accumulation of human knowledge and the skills resulting from that accumulation; additionally, the development of information technologies and communication systems, and their widespread availability at reasonable costs, made it essential to benefit from this vast amount of information and to utilize technologies optimally to reach a knowledge economy that achieves sustainable development.

The concept of the knowledge economy revolves around acquiring knowledge, sharing it, working on using, employing, innovating, and producing it to improve the quality of life in various fields by benefiting from rich information services, advanced applications, and using the human mind as a valuable knowledge capital (Mustafa & Al-Kilani, 2011, p. 683).

Recently, educational institutions have witnessed a significant shift towards the era of the knowledge economy due to scientific, technological, and informational revolutions, and finally the knowledge revolution. Knowledge has become the supreme power in this era, driving production and economic growth. The knowledge economy has imposed radical transformations on educational systems in general, including policies, strategies, objectives, administration, curricula, programs, teaching methods, examination systems, and educational assessment (Al-Ahmadi & Al-Anzi, 2016, p. 2).

Accordingly, the educational sector has undergone a radical transformation in leadership patterns, teaching methods, education types, and its fields. This transformation is a response to challenges such as the development of educational technologies, increased demand for them, the huge knowledge explosion, as well as the emergence of economic blocs, globalization, and the growth of new industries that directed investment towards knowledge and scientific research fields (Al-Qaisi, 2011, p. 5).

In line with this direction, the education system must refine its foundations, methods, and goals to graduate individuals capable of entering the labor market with high-performance skills that match its evolving needs by providing them with tools for understanding, using new knowledge, and acquiring the necessary skills (Hassan, 2016, p. 120).

Reflecting on the above, it can be said that the knowledge economy represents a fundamental axis in the development of modern societies. It requires educational institutions to adopt new educational strategies that keep pace with rapid changes. This necessitates developing curricula and teaching methods to enhance individuals' skills and enable them to interact positively with the labor market and meet the requirements of sustainable development.

The knowledge economy is a multi-dimensional concept, and studies agree that knowledge and technology are its fundamental components (Abdullah & Al-Adawi, 2021, p. 186).

The knowledge economy is an economic system that relies on effectively employing knowledge to stimulate social and economic development. This includes utilizing available knowledge, whether from internal or external sources, and developing it as needed. This type of economy is characterized by the production, distribution, and use of knowledge as a key driver for economic growth and wealth creation, with the necessity of having a knowledge-based society to support this transformation (Abu Azzam, 2021, p. 44).

Results from Al-Bassam's study (2018) indicated a close relationship between education and the knowledge economy because both rely on investment in the human and knowledge aspects to achieve progress and growth in society. Therefore, educational institutions must prepare plans to keep pace with this trend and benefit from it. Education is a fundamental system for disseminating knowledge among society's segments, and all its requirements must be met to effect the transformation towards the knowledge economy. Abu Zaid's study (2016) also confirmed that at the forefront of these requirements is identifying, analyzing, evaluating, developing, and updating the foundations and dimensions of the knowledge economy within curricula to align with current developments and updates.

Education is a cornerstone of the knowledge-based economy as it contributes to enhancing individuals' competitiveness in the labor market. Teachers play a pivotal role in transferring knowledge and skills, supporting self-development, and preparing youth for a successful professional future in an increasingly globalized world (Firsova et al., 2021).

The knowledge economy focuses on education as a main driver of societal development, where teachers are essential in transferring scientific knowledge, encouraging lifelong learning, and fostering creativity, leading to enhanced economic growth and increased competitiveness in the labor market (Mahmoud, 2011, p. 34).

Knowledge economy skills refer to the behaviors and performances that teachers must acquire in technological proficiency, financial technology, and professional self-development to deal with knowledge in terms of acquisition, production, dissemination, and efficient employment. This is to raise teacher efficiency and achieve the desired educational outcomes, aiming to graduate learners qualified for various labor market fields according to knowledge era requirements (Al-Muzain, 2023, p. 91).

Afouna (2012, p. 58) believes that the knowledge economy contributes to improving performance, reducing production costs, and enhancing quality through advanced technologies. It also opens new horizons for job opportunities in technology-dependent fields. Additionally, the knowledge economy supports innovation and development in economic activities, enhancing their growth and sustainability by better utilizing current resources and discovering new uses for scarce resources, leading to continuous expansion and development of economic activities.

Accordingly, it can be said that the knowledge economy has become a pivotal turning point in the trajectory of societies, requiring integration between education and technology to enhance investment in human capital. This drives educational institutions to adopt modern visions that incorporate the dimensions of the knowledge economy into their curricula to keep pace with the rhythm of the era and meet its evolving needs.

In this regard, the Ministry of Education in the Kingdom of Saudi Arabia has emphasized a new transformation in the framework of curricula, aiming to implement programs, projects, and initiatives that develop the educational system in all its details according to the requirements of Saudi Vision 2030. It pointed out that updating curricula and developing their scientific content is part of this transformation and is an ongoing process, especially in light of the knowledge and information explosion (Al-Qahtani & Al-Asmari, 2022, p. 27).

Teachers in general, and Arabic language teachers in particular, are considered fundamental pillars with special importance in developing the teaching and learning process, which achieves the educational process's goals. Teachers face many cognitive challenges due to the abundance and breadth of knowledge; therefore, smart and innovative methods must be provided to help teachers adapt to the environment according to defined values and objectives. This support also enables them to help students adapt, solve problems, and utilize learning resources and technologies to acquire knowledge with minimal effort, time, and cost (Atoom, 2014; Shraikh).

The teacher's role within the knowledge economy lies in assisting students to acquire knowledge and develop themselves cognitively and behaviorally. The teacher should be an implementer, developer, and evaluator in producing educational technology. They must possess skills in the art of teaching, people management, self-management, communication, facilitation, technology, critical thinking, innovation, entrepreneurship, social skills, and emotional intelligence (Al-Qarra'ah, 2013, p. 5).

The knowledge economy also requires learners who are keen on lifelong, continuous learning and able to quickly acquire new skills, access knowledge, adapt to it, produce, create, and participate in it throughout their lives (Saeed, 2015, p. 17).

In light of the above, adopting the dimensions of the knowledge economy in educational institutions requires re-evaluating their mission, objectives, and educational strategies. The work of educational institutions should be based on understanding the needs of beneficiaries and identifying the type of education and preparation that meet their social and economic aspirations (Al-Sharrafat, 2016, p. 77).

Therefore, it can be said that the teacher is the cornerstone in achieving educational goals, especially amid the shift towards the knowledge economy, which demands continuous preparation and development of teachers and their skills to keep up with increasing challenges. Using modern technologies and innovative approaches enables enhancing the teacher's role in developing students cognitively, behaviorally, and emotionally, preparing them for a future based on creativity and lifelong learning.

In this context, and due to the importance of this topic, many studies have been conducted addressing the knowledge economy and its relationship to human development, particularly in the field of education. Among these, Aleemat (2013) conducted a study aimed at determining the extent to which primary school teachers in Jordan embody knowledge economy skills and the relationship of these skills to their teaching practices from the perspective of their supervisors. The sample consisted of (80) supervisors. To achieve the study's objective, a tool consisting of (42) items was developed. The results showed that the degree to which primary school teachers represented knowledge economy skills (combined fields) was high. Most fields scored high except for the field of information technology, which was moderate, and the field of evaluation strategies, which was low. The results also revealed a statistically significant relationship between the degree of embodiment of knowledge economy skills by primary school teachers in Jordan and the level of their teaching practices as perceived by their supervisors.

Al-Twaisi (2014) conducted a study aimed at uncovering the degree to which vocational education teachers practice knowledge economy competencies as perceived by educational supervisors in Jordan. The sample included (62) supervisors. A questionnaire consisting of 64 items distributed across nine domains was developed. The results revealed the following: The overall mean score for the practice of vocational education teachers of skills related to knowledge economy competencies, according to their supervisors, was 2.96. The ranking of competency fields practiced by teachers was as follows: communication and interaction with students; leadership and management; personal; vocational guidance and counseling; academic; evaluation and testing; creativity and innovation; self/professional development; and finally, information and communication technology. The results did not reveal statistically significant differences attributable to the educational qualification of the educational supervisor in their estimations of teachers' practice of knowledge economy competencies. However, statistically significant differences were found due to the variable of supervisory experience, favoring the estimations of recently experienced educational supervisors. The results also showed interaction between study variables (educational qualification,

pedagogical qualification, supervisory experience) in the degree of vocational education teachers' practice of skills related to knowledge economy competencies.

Hassan's study (2016) aimed to identify the extent to which Arabic language teachers in Al-Balqa Governorate, Jordan, possess knowledge economy concepts in light of certain variables. The descriptive survey method was used. To achieve the study's objectives, a questionnaire was designed and applied to a sample of (117) male and (71) female teachers. The results indicated a high degree of Arabic language teachers' possession of knowledge economy concepts across the fields of teacher and classroom management; lesson planning and implementation; educational technologies; evaluation; and professional development. The results also showed statistically significant differences in the degree of possession of knowledge economy concepts among Arabic language teachers attributed to gender, favoring males, and educational qualification, favoring those with a master's degree, except in the evaluation domain where no differences were found. Additionally, differences were attributed to teaching experience, favoring longer experience in lesson planning and implementation, teacher and classroom management, professional development, and overall knowledge economy concepts. Differences were also noted in the educational stage variable, favoring secondary education.

In a related context, Al-Zand and Al-Shanawi (2016) conducted a study aimed at identifying the creative teaching skills necessary for vocational education teachers and their degree of practice in light of the knowledge economy in Irbid, Jordan. To achieve the study's objectives, a special observation checklist was developed, consisting of four main skills: fluency, flexibility, originality, and sensitivity to problems, which include (42) sub-skills. The sample consisted of (40) male and (49) female teachers. The results showed that teachers achieved a creative practice percentage exceeding 75%, which is considered an acceptable level of practice. Statistically significant differences were found between sample members according to gender and educational qualification, while no statistically significant differences were found concerning teaching experience in practicing creative teaching skills in light of the knowledge economy.

As for Al-Samadi's study (2017), it aimed to reveal the extent to which secondary school teachers possess teaching competencies in light of the knowledge economy foundations from their own perspective. The study used the descriptive method to identify the reality of teaching competencies of secondary school teachers according to the knowledge economy foundations, from their own viewpoint, using a specially prepared instrument. The sample consisted of (305) male and female teachers teaching at the secondary stage in Jerash Governorate. A questionnaire was prepared to identify the extent of possession of teaching competencies by secondary school teachers according to the knowledge economy foundations from their perspective. The results indicated statistically significant differences (0.05) between the group with 5 years or less experience and both the 6-10 years and more than 10 years groups, with the differences favoring those with more than 10 years experience in the overall score.

Ahmed's study (2017) sought to identify the requirements of the knowledge economy included in the Arabic language textbook for the sixth grade of primary school in Egypt and the degree to which teachers possess them. The study tools included content analysis of the textbook and an observation checklist for the performance of the Arabic language teacher. The study results confirmed the availability of knowledge economy requirements in the Arabic language textbook for the sixth grade of primary school at a very low degree in the fields of information technology, economy, national domain, leadership, and ethics. The results also showed that the performance of the Arabic language teacher was low in the domain of cognitive growth, while in the cognitive domain and social growth and cooperative work domain, the teacher's performance was moderate.

Masrouria's study (2018) aimed to reveal the degree of availability of knowledge-based economy requirements in the reading lesson activities embedded in the Arabic language textbook "My Beautiful Language" for the seventh and eighth grades in the Sultanate of Oman. To achieve this, an analysis checklist was used. A list of knowledge economy requirements that should be present in the reading lesson activities for the seventh and eighth grades was developed. The study analyzed (644) reading lesson activities in the two textbooks accordingly. The results showed a low degree of availability in the communication and information and communication technology (ICT) domains within the reading activities of both textbooks, where their percentages did not exceed 10%. Additionally, there were differences in the availability of knowledge economy requirements according to the grade level.

Al-Mahasneh's study (2018) aimed to identify the extent to which Arabic language textbooks for the first three grades in Jordan incorporate knowledge economy contents. To achieve this, the researcher developed a questionnaire including (35) knowledge economy contents intended to be included in Arabic language

textbooks. The results showed a total of (946) occurrences of knowledge economy contents in the textbooks studied. The contents with the highest frequencies were: developing scientific thinking, enriching students' linguistic and knowledge wealth, good listening skills, training in expressive oral reading, and employing information and communication technology. The contents with the lowest frequencies were: training students in effective time management, enhancing their self-assessment ability, and helping them develop problem-solving skills. Some contents were not included in the textbooks, such as: respecting work and productivity values, fostering creative ideas and unusual activities, and training in leadership skills.

Al-Kaf and Al-Kaf (2021) sought to identify the extent of employing knowledge economy requirements in Arabic language curricula from the perspectives of teachers and supervisors in Oman. The study sample consisted of (30) supervisors. To achieve the objective, the researchers designed a questionnaire consisting of 65 items distributed over four domains (cognitive, thinking development, communication, information and communication technology, teacher, and evaluation). The results indicated that the employment of knowledge economy requirements in Arabic language curricula was at a moderate level across all study domains. No statistically significant differences were found regarding the extent of employment of knowledge economy requirements in Arabic curricula from the perspective of the sample according to the gender variable. However, statistically significant differences were found according to the educational job variable.

Al-Ahmadi (2022) conducted a study aimed at identifying the knowledge economy skills necessary to be included in the content of linguistic competencies books in the tracks system at the secondary stage in Saudi Arabia, and the degree of their inclusion. To achieve this, a descriptive-analytical approach was used. The study applied a content analysis tool on two linguistic competencies books (1-1) and (1-2). The study reached a list of knowledge economy skills consisting of six domains with (34) indicators. The results showed the degree of inclusion of knowledge economy skill domains in descending order as follows: cognitive domain (26.3%), mental domain (22.3%), evaluation domain (20.2%), social domain (16%), technological domain (8.3%), and economic domain (6.9%).

Al-Mahmadi and Kasnawi (2022) aimed to identify the degree to which early-grade female teachers possess teaching competencies based on the foundations of the knowledge economy from the perspective of supervisors. The study used the descriptive method and developed a questionnaire consisting of (49) items distributed over four domains: academic competencies, professional competencies, personal competencies, and technical competencies. The questionnaire was applied to the study sample consisting of all early-grade supervisors in Makkah, totaling (37) supervisors. The results revealed that teaching competencies based on the knowledge economy foundations were high across all domains and the instrument as a whole, with an overall mean score of (3.79). The results showed no statistically significant differences attributable to the variables of experience or educational qualification.

Similarly, Al-Mahmoud (2022) conducted a study aimed at identifying the degree of practice of applied vocational secondary education female teachers of teaching competencies in light of knowledge economy requirements from their perspective. The study population included all female teachers of applied vocational secondary education in public schools in the Irbid district of Jordan, totaling (50) teachers specializing in home economics and sewing. The entire population was included as the sample. The study considered variables of educational qualification and years of experience. The results showed no statistically significant differences at the 0.05 significance level between the mean scores of teaching competency practices related to knowledge economy requirements attributed to educational qualification. However, significant differences were found in the domains of teaching planning and evaluation. Additionally, no statistically significant differences were found regarding years of experience.

Al-Rubaie (2023) conducted a study aimed at revealing the degree of availability of knowledge economy skills among secondary school Arabic language female teachers from the perspective of educational supervisors in Saudi Arabia. The study used the descriptive method. The sample consisted of (18) educational supervisors specializing in Arabic language. A questionnaire of (42) items distributed over five dimensions was prepared. Results showed the following average scores: "Learning Management Skills" scored (2.313) with a low availability level; "Critical Thinking Skills" scored (2.405) with a medium availability level; "ICT Application Skills" scored (2.595) with a medium availability level; "Creativity, Innovation, and Scientific Research Skills" scored (2.389) with a medium availability level; and "Economic Skills and Preparation for the Labor Market" scored (2.375) with a medium availability level.

Al-Kandari (2025) conducted a study aimed at identifying the extent of inclusion of knowledge economy skills in Arabic language curricula at the secondary stage in Kuwait from the perspective of

teachers and the effect of some variables on that inclusion. The study followed a descriptive-analytical approach. The sample consisted of (326) teachers who completed a questionnaire of (47) items distributed over seven domains. The results showed that the overall degree of inclusion of knowledge economy skills in Arabic curricula at the secondary stage was moderate. The highest-ranked domain was communication skills, followed by social skills, then evaluation skills, all at a high degree. The economic skills domain ranked second to last, followed by the technological skills domain at a moderate degree. The results indicated statistically significant differences in communication and evaluation skills according to gender. No differences were found for cognitive, technological, economic, social, or mental and thinking skills based on gender. No differences were found for social, mental and thinking, or evaluation skills based on experience. No differences were found for technological or economic skills based on educational region, and no differences were found for social, mental and thinking, or evaluation skills based on grade level.

Several studies have also been conducted in English, including: Fox's study (2016), which aimed to investigate the practices of vocational education teachers in implementing the Family and Consumer Sciences curriculum in the United States in light of the knowledge economy. The study adopted descriptive and correlational research methodologies, with a sample of (450) teachers. A questionnaire consisting of (41) items was administered. The results indicated a high level of required practices during teaching among vocational education teachers in Ohio, especially in the domains related to practical practices, technical practices, and behavioral/personal practices.

Naser et al. (2016) conducted a study aimed at identifying the extent to which teachers perform their roles and apply knowledge economy concepts from their own perspective in Palestine. The study used a descriptive-analytical approach, developing a questionnaire of 35 items. Interviews were also conducted to assess teachers' practice of knowledge economy concepts individually and in groups at the secondary level, with a sample of (250) male and female teachers. The main findings showed that teachers' performance of their instructional roles was high in: planning, teaching implementation, self-development, and student learning. No statistically significant differences were found in teachers' practice means based on gender, specialization, or academic qualification. However, statistically significant differences were found related to years of experience favoring (1-5 years), stage of education favoring lower basic education, and supervision favoring private schools. Interview results indicated that some knowledge economy dimensions practiced by teachers depended heavily on teaching strategies and teacher roles.

Similarly, HADAD (2017) conducted a study aiming to explore the knowledge-based economy, its characteristics, and dimensions. The study used a descriptive-analytical method focusing on content analysis of academic articles in Romania. The analysis categories included: dimensions of the knowledge-based economy, means of its evaluation, and analysis of the positive economic trends brought by the knowledge-based economy. Key findings showed the growing need to measure economic knowledge has forced international organizations to develop tools and programs to assess it in every country/region and to compare countries internationally.

Issa (2019) conducted a study to evaluate the teaching practices of physical education teachers in light of knowledge economy trends. The study followed a descriptive approach and used a questionnaire administered to a sample of physical education teachers. The study concluded that the level of teaching practices of physical education teachers based on knowledge economy trends was low.

Ashraah & Yousef (2020) carried out a study aimed at analyzing the knowledge economy skills presented in Islamic education textbooks for secondary stage students in Qatar. The study used a descriptive-analytical approach focusing on content analysis. The study sample included Islamic education textbooks for grades 11 and 12. The analysis covered the entire book from cover to cover, excluding the introduction, references list, and evaluation questions. The researchers developed a content analysis tool based on previous studies and sources of knowledge economy skills. The main findings indicated variability and low percentages of knowledge economy skills embedded in the content of Islamic education textbooks for secondary students. The most comprehensive standards, in descending order, were "Learning how to learn," "Information management," and "Problem-solving."

Al Atoum's study (2020) aimed to identify the extent to which art education teachers in Jordan practice teaching skills in light of the knowledge economy from their supervisors' perspectives. The sample included all art education supervisors in Jordan, totaling (54). The study adopted a descriptive-analytical survey method, using a verified and reliable questionnaire. Key findings showed that art teachers' practice of teaching skills in light of the knowledge economy, from their supervisors' viewpoint, was high. There was inconsistency in the ranking of the four domains used as measurement criteria: planning ranked first,

followed by implementation, then evaluation in third place, and finally technology use in fourth place. No statistically significant differences were found related to years of experience or gender on the general scale of teaching skills practice.

Niaz (2023) conducted a study aimed at identifying knowledge economy skills and the teacher's role in developing them among learners in light of contemporary global transformations. The study used a descriptive-analytical approach. The researcher proposed a framework for developing the teacher's role in fostering knowledge economy skills among learners in light of contemporary global transformations. Key findings indicated that the foundational skills of education — reading, writing, and mathematics — are no longer sufficient to adapt to contemporary global transformations. Learning knowledge economy skills requires adding 21st-century skills including critical thinking, innovation and creativity, collaboration and participation, multicultural awareness, effective communication, proficient use of knowledge and electronic information tools, professionalism, and self-reliance.

Niaz (2024) also conducted a study aimed at identifying learning and teaching skills in the knowledge economy era and the requirements for their achievement at the secondary level from the perspective of a sample of general education experts. The descriptive-analytical method was used, and semi-structured interviews were conducted with (10) experts. Major findings included identifying a set of requirements for achieving competency-based education to keep pace with the knowledge economy era. These requirements were classified into six categories: learning objectives, learners, teacher, educational content, learning environment, and teaching methods and strategies.

In a related context, Elsheikh et al. (2024) conducted a study to investigate the readiness of Sultan Qaboos University students for the knowledge-based economy, focusing on their awareness, perception, and skills. The study used a descriptive-analytical quantitative approach with a questionnaire tool. A sample of students from various colleges and academic levels at Sultan Qaboos University was selected, achieving a response rate of (66.04%). After verifying the tool's reliability and completing data collection, key results showed that some students believe knowledge economy skills are very important, while others do not. Students classified creativity and innovation skills, critical thinking, and problem-solving as the most important knowledge economy skills. A majority (55%) of students viewed the knowledge economy positively.

Alhassani (2024) conducted a study aimed at developing a list of knowledge economy skills required in English language textbooks for the primary stage in the Kingdom of Saudi Arabia. The researcher employed a descriptive-analytical approach focusing on content analysis. The study's tools and materials covered seven domains: cognitive, economic, technological, communicative, social, environmental, and national. The analysis was conducted on English language textbooks according to these domains. The main findings indicated that knowledge economy skills provide learners with appropriate opportunities for self-directed learning, emphasize knowledge as an economic asset and a fundamental resource in life, and highlight the importance of the human mind in investing various economic resources.

Durazzi and Tonelli (2025) conducted a study aimed at analyzing the impact of knowledge economy skills on collective skill formation systems and other skill formation systems from economic and social perspectives. The researchers used a descriptive-analytical approach with a focus on case studies of several European countries, based on the components of knowledge economy skills and systems of collective skill formation, particularly joint governance, governance among employers, unions, and governments, the nature of technological change in the transition to a knowledge economy, bias towards complex cognitive skills and the cognitive skills produced, and quantitative and qualitative evidence. The sample included European countries such as Denmark, Hungary, Ireland, Switzerland, Slovakia, and Germany, using appropriate statistical methods. The key findings showed that collective skill formation systems remain positively associated with a range of social and economic outcomes; however, integrating the knowledge economy in these countries may face diminishing returns based on social inclusion. Furthermore, job performance faces greater challenges amid high technological intensity. Case studies of Austria, Germany, and Switzerland showed that collective skill formation systems have adapted to the knowledge economy in country-specific patterns.

Through the review of previous studies, the importance of linking education with the knowledge economy is evident. The ultimate goal of education is sustainable human development and producing individuals who contribute effectively to the advancement of their society. This cannot be achieved effectively unless education keeps pace with the knowledge produced, particularly linking education with

economic production, emphasizing investment in human capital, which is the most valuable asset owned by nations.

It also became clear from the review that, to the researcher's knowledge, there is no study in the Makkah region that links teaching skills with the knowledge economy from the perspective of teachers as field practitioners, nor is there sufficient recognition or measurement of their attitudes towards this vital topic. This gives the current research a distinctive advantage and hopes to fill a gap in this field, potentially motivating further research.

Accordingly, the current study primarily aims to investigate the degree to which secondary school Arabic language teachers in Makkah possess teaching skills based on knowledge economy dimensions, as well as their attitudes toward them. The study benefited in problem formulation from the results and recommendations of previous studies, and also in selecting an appropriate methodology and research tools. Finally, it supports its findings by comparing them with those of previous studies.

Research Problem:

Results from some studies have indicated that teachers vary in the extent to which they possess the concepts of the knowledge economy era; some use them to a high degree. For instance, Alimat's study (2013) revealed that the degree to which primary stage teachers embody knowledge economy skills (combined domains) was high. Similarly, Al-Qadara'a's study (2013) showed that the knowledge economy skills presented in the chemistry textbook as a whole were high, with the highest skills related to observation, application, information collection, and analysis. Additionally, the results of Al-Juhani and Mamdouh's study (2024) indicated that female secondary school teachers in Jeddah practiced knowledge economy skills at a frequent level (often) across all its dimensions: "knowledge production and management – technology and communication – education and training – school environment and infrastructure."

On the other hand, some teachers used these skills at a moderate level, such as in Al-Qahtani and Al-Asmari's study (2022), which found that the technological dimension had the highest presence at (53.4%), considered a moderate level. Mustafa and Al-Kilani's study (2011) showed that the degree to which Islamic education teachers practiced the teacher's roles in light of the knowledge economy, from their supervisors' perspectives, was moderate. Additionally, Kafafi's study (2020) revealed that the application of the pillars of the knowledge economy, educational quality requirements, scientific research development, information technology, institutional capacity, and governance at Al-Azhar University were all at a moderate level. Likewise, the results of Al-Kaf and Al-Kaf's study (2021) indicated that the employment of knowledge economy requirements in Arabic language curricula was at a moderate level.

Furthermore, Al-Jamaan's study (2021) recommended holding training courses to develop teachers' skills according to knowledge economy standards. Similarly, Arishi's study (2018) emphasized the necessity of incorporating the required competencies in teacher preparation programs to support the knowledge economy, manage educational technology, oversee assessment systems, and manage the art of teaching.

Despite the efforts made by the Ministry of Education in Saudi Arabia to develop its educational systems to keep pace with rapid contemporary changes, general indicators point to a real gap between what exists and what is desired. Hassan (2016) mentioned deficiencies in education, such as the mismatch between educational outputs and labor market needs, and the decline in the internal and external efficiency of the education system. This necessitates teachers possessing teaching skills based on knowledge economy dimensions, which contribute to reducing the existing gap in the educational system. Therefore, and as a result of the above, this study aims to reveal the extent to which secondary school Arabic language teachers possess teaching skills based on the dimensions of the knowledge economy and their attitudes towards them.Accordingly, the research problem can be identified in its pursuit to answer the main question:

What is the degree to which secondary school Arabic language teachers possess teaching skills based on the dimensions of the knowledge economy and their attitudes towards them?

This will be addressed through answering the following sub-questions:

Research Questions:

1. What is the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Education**)?
2. What is the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Problem Solving**)?

3. What is the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Communication and Information Technology**)?

4. What is the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Thinking**) among the dimensions of the knowledge economy?

5. What are the attitudes of secondary school Arabic language teachers towards teaching skills based on the dimensions of the knowledge economy?

6. Are there statistically significant differences at the significance level of (0.05) in the degree to which secondary school Arabic language teachers possess teaching skills based on the dimensions of the knowledge economy attributable to the variables of (gender, academic qualification, years of experience, number of training courses)?

7. Are there statistically significant differences at the significance level of (0.05) in the attitudes of secondary school Arabic language teachers towards teaching skills based on the dimensions of the knowledge economy attributable to the variables of (gender, academic qualification, years of experience, number of training courses)?

Research Objectives:
The current study aims to achieve the following:

1. Identify the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Education**).

2. Identify the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Problem Solving**).

3. Identify the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Communication and Information Technology**).

4. Identify the degree to which secondary school Arabic language teachers possess teaching skills in the dimension of (**Thinking**).

5. Reveal the attitudes of secondary school Arabic language teachers towards teaching skills based on the dimensions of the knowledge economy.

6. Detect statistically significant differences in the degree to which secondary school Arabic language teachers possess teaching skills based on the dimensions of the knowledge economy, which may be attributed to the variables of (gender, academic qualification, years of experience, number of training courses).

7. Detect statistically significant differences in the attitudes of secondary school Arabic language teachers towards teaching skills based on the dimensions of the knowledge economy, which may be attributed to the variables of (gender, academic qualification, years of experience, number of training courses).

Significance of the Study:
Theoretical Significance:

1. This study is expected to help meet the future needs of Arabic language teachers in teaching the developed Arabic language curricula.

2. It sheds light on the dimensions of the knowledge economy and its applications in teaching the Arabic language in the Kingdom of Saudi Arabia.

3. The current study responds to contemporary trends in the educational field and seeks to provide new mechanisms to measure teachers' teaching skills according to clear standards related to the evolving knowledge development.

Practical Significance:

1. Knowing the level of possession of teaching skills based on the dimensions of the knowledge economy and the attitudes of Arabic language teachers may contribute to a clearer understanding of what is required by the directives of the developed Arabic curricula in Saudi Arabia, in order to face the changes and developments of the era.

2. The results of this study may contribute to providing proposals for those responsible for preparing and professionally developing Arabic language teachers to increase the effectiveness of their teaching skills.

3. The results of this study may open the door for conducting further studies related to the knowledge economy and teaching skills.

Scope of the Study:
The study was conducted within the following boundaries:

- **Subject Boundaries:** The Arabic language teaching skills required for Arabic language teachers at the stages of planning, implementation, and evaluation based on the dimensions of the knowledge economy, as well as revealing their attitudes towards these skills.
- **Human Boundaries:** The study was applied to a random sample of secondary school Arabic language teachers in schools in Makkah.
- **Spatial Boundaries:** The study was conducted in secondary schools in Makkah.
- **Temporal Boundaries:** The study was carried out during the first semester of the academic year 1446 AH.

Definitions of Terms:

- **Arabic Language Teacher:** A person assigned in the school with the task of teaching Arabic and helping students acquire the necessary and important educational skills to master the Arabic language (Hazaymah & Alimat, 2019).
Operational Definition: Refers in this study to Arabic language teachers currently working in government secondary schools during the period of the study application.
- **Teaching Skills:** Defined as "the manner in which the teacher approaches the method of teaching during the teaching process in a way that distinguishes him/her from other teachers who use the same method; it is essentially related to the personal characteristics of the teacher. These skills are classified into cognitive, motor, and social skills" (Nibhan, 2012, p. 21).
Operational Definition: Behaviors that Arabic language teachers exhibit during teaching practice inside and outside the classroom in order to achieve teaching goals quickly, accurately, and efficiently with minimum time and effort.
- **Knowledge Economy:** Defined as "the economy revolving around acquiring a set of knowledge, attitudes, values, participating in them, and employing them in a way that enhances the ability of academic leaders to solve problems, innovate, think, and manage creatively" (Al-Joudah & Al-Shamasi, 2022, p. 36).
Operational Definition: The set of knowledge, processes, and attitudes necessary for secondary school Arabic language teachers in Makkah to enable them to acquire, share, and produce knowledge that allows them to adapt within society and contribute to its progress in light of the dimensions of the knowledge economy.
- **Attitudes:** Defined by Ahmed (2018) as "a feeling that prepares an individual to respond in a certain way—either for or against—things, people, or events" (p. 39).
Operational Definition: The set of concepts, beliefs, predispositions, and practices adopted by Arabic language teachers towards their teaching procedures based on the dimensions of the knowledge economy, measured through an attitude scale designed by the researchers for this study.

Theoretical Framework:

Concept of Teaching Skills:
Teaching skills are defined as cognitive, motor, and social behaviors exhibited by the teacher to achieve specific objectives during planning, implementation, and evaluation stages (Sahebi, 2021; Abdul Rahim, 2018; Al-Mutairi & Hasan, 2016; Al-Sa'ida, 2015). These skills include the teacher's ability to interact positively with educational situations and to utilize various educational resources and activities.

Components of the Educational Process:
Teaching skills depend on the interaction between the learner, the teacher, and the content (Al-Gharbi, 2020).
-The Learner: The center of the process, actively participating in planning, implementation, and evaluation, as well as conducting inquiry and investigation.
- The Teacher: A facilitator, guide, and supporter of knowledge discovery and positive interaction among students.

General Principles in Teaching:
Sahebi (2021) identified the following principles for effective teaching:

- Variety in teaching strategies.
- Remedial teaching to accommodate individual differences.
- Continuous evaluation for improvement.
- Creating a suitable classroom climate.
- Collaboration between students and teacher.
- Integration of knowledge.
- Good planning.

Shaker (2016) emphasized the importance of the teacher having theoretical knowledge, specialization, positive attitudes, and teaching skills.

Characteristics of Teaching Skills:

Teaching skills are characterized by several features, most importantly: practical performance of educational situations, analysis of sub-behaviors, integration of cognitive, motor, and social skills, and the importance of continuous training (Sahebi, 2021).

Components of Teaching Skills:

Teaching skills comprise three main components:

1. **Cognitive:** Scientific content, skill fundamentals, and performance mechanisms (Mama, 2015).
2. **Skill-based:** How to implement teaching skills suitable for the objectives of the subject.
3. **Psychological (Value-based):** The teacher's desire to learn the skill and conviction of its importance.

Basic Teaching Skills:

1. **Planning**   **Skill:**
Refers to the teacher's prior conceptualization of what will be done to achieve learning goals while considering students' needs (Al-Azazi, 2016; Saada & Ibrahim, 2014; Jerry et al., 2018; Najm, 2019).
2. **Implementation**   **Skill:**
Includes several sub-skills such as:
- Introduction and preparation
- Reinforcement (positive and negative)
- Feedback
- Motivating students
- Lesson closure
- Managing   discussions
(Abu Al-Nadi, 2016; Muhyi, 2019)
3. **Evaluation**   **Skill:**
Means following up on the achievement of objectives, addressing weaknesses, and reinforcing strengths through various evaluation tools (Al-Shujairi & Al-Zuhairi, 2022; Al-Ya'qoubi, 2013).

Researchers' View: Teaching skills are not limited to knowledge transmission but include building deep understanding and encouraging students to interact and think critically, which enhances learning quality, especially in teaching the Arabic language.

Knowledge Economy:

Origin and Development of the Concept of Knowledge Economy:

Knowledge has long been the main driver of human activities; however, it was not sufficiently invested in until the end of the last millennium with the emergence of the knowledge economy (Jaradat et al., 2011). World War II marked a major turning point through what is called the scientific-technological knowledge revolution, which led to a series of transformations including: the integration of science into production, narrowing the gap between invention and its application, the shift to institutionalized production, and the growth of automated production enabled by knowledge power (Dhahshan, 2023).

Additionally, the revolutions in computing, information, and communications have accelerated the economy's development, integrating it with modern technology across all its dimensions (Alyan, 2012). Yofiesco from the OECD sees information and communication technology (ICT) boosting growth rates through three channels: the sector's own contribution, increased production efficiency, and cost reduction via e-commerce and internet proliferation (Kafi, 2009). The philosophy of the knowledge economy rests on two main pillars: rapid access to and utilization of knowledge, and linking knowledge to market needs

through investment in human intellect via scientific research and strategic transformation (Mustafa & Al-Kayali, 2011).

Concept of Knowledge Economy:

Various definitions of the knowledge economy exist. Abu Azzam (2021, p.43) defines it as focusing on designing and producing knowledge to achieve sustainable development. Abdullah (2018, p.11) describes it as the study of producing and utilizing knowledge to improve individuals' welfare. Abdulhadi (2019, p.153) views it as an economy based on generating and investing knowledge through innovation and technology. Mahna (2022, p.2137) adds that it is the investment of human intellect through education and technology to improve quality of life.All these definitions agree that the knowledge economy is a system based on the production and employment of knowledge for sustainable development, with human intellect being the most important capital in all economic and social sectors.

Driving Forces of the Knowledge Economy:

Several forces contributed to the emergence of the knowledge economy, including globalization that expanded markets, the information revolution that made knowledge the core of production, the spread of computer networks that shrank the world into a small village, and demographic and social changes that increased the need for knowledge (Jaradat et al., 2011). Policy liberalization and rapid technological development have also helped expand international production and integrate global economic processes (Al-Maddaha & Al-Walyabat, 2014).

Importance of the Knowledge Economy:

The knowledge economy forms a fundamental source for achieving comprehensive development and economic growth, especially in developed countries, by integrating information technology across various fields (Salman, 2020). It enables individuals to acquire and produce knowledge to improve quality of life (Dimmock & Goh, 2011) and influences growth, production, employment, and the skills required (Hasan, 2016).

Boran (2016) states that its importance lies in improving performance, reducing costs, increasing quality, and boosting national income through modern knowledge technologies. Moreover, the knowledge economy enhances competitiveness and sustainable development, raising individuals' efficiency to keep pace with rapid economic changes.

Objectives of the Knowledge Economy:

The objectives of the knowledge economy align with those of education according to UNESCO as follows (Al-Khushnawi & Al-Rubaie, 2018):

1. **Learning for Knowledge:** Acquiring tools for building knowledge.
2. **Learning for Work:** Applying knowledge practically while improving communication skills.
3. **Learning to Participate with Others:** Enhancing social relationships and adapting to society.
4. **Learning to Be:** Developing the individual in all aspects and achieving lifelong learning.

Thus, the knowledge economy aims to prepare a generation capable of continuous learning and active participation in modern knowledge societies.

Elements of the Knowledge Economy:

The knowledge economy rests on four main pillars:

- Innovation and creativity through effective research institutions (Monshi, 2019).
- Knowledge-based education integrating creative skills with information technology in curricula.
- Technological infrastructure that facilitates information management to support the economy.
- Good governance providing incentives and economic policies supporting innovation and information technologies.

Its elements include qualified labor with intellectual capital able to innovate within institutions, effective innovation systems based on research and development, advanced infrastructure in information and communications, and a supportive institutional framework that fosters a conducive environment for technical and productive industries (Abdulhadi, 2019).

Characteristics of the Knowledge Economy:

The knowledge economy is characterized by adaptability to new developments, the continuous generation of new knowledge and products, and a fundamental focus on trained human capital capable

of converting information into practically employable knowledge. It works within collaborative professional teams with high communication skills (Abdullah, 2018; Abdulhadi, 2019; Monshi, 2019). It also relies on ongoing scientific research and aims to provide interactive work environments supporting sustainable development through creativity and innovation.

Dimensions of the Knowledge Economy:

The knowledge economy comprises multiple dimensions including:

- Technological, related to the spread of information technologies.
- Research, based on research and development.
- Cultural, reshaping behavioral patterns.
- Economic, integrating knowledge into productive activities.
- Social, enhancing education and health.
- Political, supporting transparency and participation.
- Environmental, ensuring resource sustainability.
- Cognitive dimensions of thinking and problem-solving that promote knowledge-based decision-making (Saleh, 2019).

Knowledge Economy in Education:

Education is fundamental for the transition to a knowledge economy through investment in developing knowledge capital capable of creativity and contributing to intellectual wealth generation (Barakati, 2022). This requires reshaping educational policies by increasing educational opportunities, integrating technology into curricula, and enhancing continuous learning and ongoing assessment (Abu Azzam, 2021).It also demands stable economic policies, advanced training programs, and creating a motivating environment for innovation and investment in human talents (Abdulhadi, 2019; Al-Kubaisi, 2011; Saeed, 2015).

Competencies Required for Teachers in the Knowledge Economy:

The knowledge economy requires teachers with comprehensive competencies including educational and scientific skills, personal skills, effective communication abilities, encouragement of research and innovation, mastery of modern teaching strategies and classroom management, as well as effective evaluation skills (Al-Khushnawi & Al-Rubaie, 2018).The teacher transforms into a collaborative partner and reflective practitioner who manages a flexible learning environment supporting critical and creative thinking and employs multiple knowledge sources to serve educational goals—this is the aim of the present research.

Attitude:

Concept of Attitude:

Attitude is defined as a mental readiness or predisposition formed as a result of various factors in an individual's life that leads them to take a stance toward ideas based on their moral or social value (Kamash & Hassan, 2018, p. 28). It is also the degree of positive or negative emotional response associated with a specific psychological object, such as a symbol, person, or idea (Al-Adwan & Dawood, 2020, p. 108). Malham (2012, p. 318) views it as a hypothetical construct representing a learned neuropsychological readiness to respond positively or negatively to specific environmental stimuli.

Elements of Attitudes:

Attitudes consist of three interconnected elements:

- **Emotions:** reflecting feelings resulting from past experiences.
- **Cognitions:** representing beliefs based on experiences and knowledge.
- **Behavior:** reflecting the individual's response to stimuli (Mohammed, 2017).

Types of Attitudes:

Types of attitudes include: general, specific, individual, collective, public, private, positive, negative, strong, and weak (Al-Shujairi & Al-Zuhairi, 2022).

Characteristics of Attitudes:

Attitudes are acquired rather than inherited, measurable, and related to various social stimuli. They have both emotional and cognitive aspects and are relatively stable but can be modified under certain conditions (Malham, 2012).

Functions of Attitudes:

Attitudes serve multiple functions: mediating, adaptive, utilitarian, ego-defensive, expressing personality and growth, and cognitive function to understand the surrounding world (Al-Adwan & Dawood, 2020).

Conditions for Forming Attitudes:

Attitudes form through three components:

- **Cognitive:** beliefs and information.
- **Affective:** feelings and emotions.
- **Behavioral:** practical responses (Omar et al., 2010).

Alport explained that attitude formation depends on the accumulation of learned responses, unique experiences, dramatic events, and adopting attitudes from influential figures (Ahmed, 2018). Al-Subaie and Al-Ruwaili (2023) highlighted the role of cultural, functional, and informational factors in attitude development.

Measuring Attitudes:

Attitudes are measured by direct methods relying on explicit responses, and indirect methods including cognitive tests, perception and memory assessments, and judgment tests (Al-Turairi, 2014). Measurement tools include:

- **Guttman Scale:** measures attitude strength through deterministic responses (Saleh, 2021).
- **Thurstone Scale:** classifies positions on a continuum from extreme positivity to negativity.
- **Likert Scale:** relies on degrees of agreement and disagreement due to its ease of application.
- **Bogardus Scale:** measures tolerance or prejudice toward specific groups.

Methodology and Procedures:

Research Method:

This study utilized the descriptive-analytical method as it is the most suitable for its nature. It is defined as "a method for collecting and analyzing both quantitative and qualitative data to understand a specific research problem" (Abu Allam, 2013, p. 329).

Research Population and Sample:

The research population consisted of Arabic language teachers at the secondary level in the education system of Makkah Al-Mukarramah, totaling 795 teachers. A random sample of 500 teachers was selected, and responses were retrieved from 480 participants. The following table illustrates the characteristics of the sample:

Table (1) shows the characteristics of the research sample

S	Variable Category	Subcategory	Frequency	Percentage
1	Gender	Teachers (Males)	293	38.96%
		Teachers(Female)	187	61.04%
	Total		480	100%
2	Educational Level	Diploma	49	10.20%
		Bachelor's Degree	357	74.38%
		Master's Degree	43	8.96%
		Doctorate (PhD)	31	6.46%
	Total		480	100%
3	Years of Experience	Less than 5 years	50	10.41%
		From 5 to less than 10 years	48	10.00%
		10 years or more	382	79.52%
	Total		480	100%
4	Training Courses	One Course	71	14.88%
		Two Courses	79	16.46%
		Three courses	63	13.13%
		More than three courses	267	55.63%
	Total		480	100%

The results in Table (1) indicate a balanced distribution of the sample, which allows for the use of parametric statistical methods.

Research Instruments:

The research instruments consisted of:

1. The questionnaire.
2. The attitude scale.

Sources for Developing the Two Instruments:

• Relevant books and scientific references.

• Previous studies and their instruments.

• Attitude measurement tools in the Saudi context.

Procedures for Approving the Two Instruments:

Four dimensions of teaching skills based on the knowledge economy were identified: (teaching, problem-solving, information and communication technology, and thinking).

The questionnaire included (24) items, while the attitude scale included (16) items.

Psychometric Properties of the Two Instruments:

Face Validity (Expert Judgment):

The two instruments were reviewed by (10) experts from university professors and field teachers, and some items were modified accordingly. The experts agreed on the validity of the instruments with an approval rate exceeding 90%.

Construct   **Validity:**

The instruments were applied to a pilot sample of (50) male and female teachers. The correlation coefficients showed a high statistical significance, ranging between (0.44) and (0.71), which confirms strong construct validity.

Reliability:

A. Questionnaire Reliability:

- Using Cronbach's Alpha:

Table (2) Cronbach's Alpha reliability coefficients for the questionnaire

S	Dimension	Number of Items	Cronbach's Alpha	Variance	Total Variance	Stratified Alpha
1	Teaching	6	0.77	40.53	492.43	0.94
2	Problem-Solving	5	0.85	41.69		
3	Information and Communication Technology (ICT)	6	0.86	33.55		
4	Thinking	6	0.89	40.98		

The stratified alpha coefficient for the total score reached **(0.94)**, which indicates a strong reliability index for the questionnaire in its current form. This confirms the reliability and validity of the instrument in measuring what it was designed to measure.

-Using the corrected split-half method:

Table (3) Corrected split-half reliability coefficients for the questionnaire

S	Dimension	Number of Items	Before Correction	| After Correction
1	Teaching	6	0.65	0.73
2	Problem-Solving	5	0.53	0.71
3	Information and Communication Technology (ICT)	6	0.64	0.76
4	Thinking	6	0.61	0.72
	Total Score	23	0.69	0.87

The reliability coefficient for the total score of the questionnaire reached **(0.87)**, which indicates a strong reliability index. This confirms the reliability and validity of the instrument in measuring what it was designed to measure.

B. Reliability of the Attitude Scale:
- Using Cronbach's Alpha and the Split-Half Method:
Table (4) Reliability Coefficients of the Attitude Scale

Variable	Number of Items	Cronbach's Alpha	Before Correction	After Correction
Total	17	0.95	0.87	0.91

It is evident from Table (4) that the reliability coefficients of the attitude scale reached 0.95 using Cronbach's alpha and 0.91 using **the corrected split-half method. This indicates a strong reliability index for the scale, which** supports and reinforces the reliability and validity of this instrument in measuring what it was designed to assess.

Scale for Judging the Results:

Table (5) Scale for Judging the Degree of Possession Reported in the Ques

S	Degree of Possession	Average Range
1	Weak	From 1.00 to less than 1.67
2	Moderate	From 1.67 to less than 2.34
3	High	From 2.34 to 3.00

Table (6) Scale for Judging the Degree of Agreement for the Attitude Scale

S	Degree of Agreement	Average Range
1	Disagree	From 1.00 to less than 1.67
2	Neutral	From 1.67 to less than 2.34
3	Agree	From 2.34 to 3.00

Statistical Methods:

The study employed the following analyses using the SPSS program: Pearson's simple correlation coefficients, Cronbach's alpha and stratified alpha, corrected split-half reliability (Spearman-Brown and Guttman), mean and standard deviation, independent samples t-test, one-way analysis of variance (ANOVA), and Scheffé test for post-hoc comparisons.

Presentation, Discussion, and Interpretation of Results:
Presentation of the Results for the First Question:
The question states: "What is the degree of possession of teaching skills in the dimension of (Education) among male and female Arabic language teachers at the secondary stage?"
The responses of the research sample (N = 480) regarding the Education dimension were analyzed, as shown in Table (6):
Table (6) Means and Standard Deviations of the Research Sample's Responses on the Education Dimension

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
3	work on creating a learning environment that encourages students to work in teams.	2.77	0.46	High	1
5	design teaching activities that accommodate individual differences among students.	2.77	0.45	High	2
6	carry out activities to develop language communication skills.	2.75	0.45	High	3

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
2	achieve integration among the subjects I teach.	2.74	0.46	High	4
1	develop teaching plans that help students with research and discovery.	2.72	0.48	High	5
4	plan to develop communication skills among students.	2.72	0.49	High	6
Overall Score in the Education Dimension		2.75	0.46	High	

The results presented in Table (6) concerning the Education dimension showed a high degree of possession (mean = 2.75, standard deviation = 0.46). The item related to encouraging teamwork ranked first, followed by considering individual differences. The researchers attributed this to the recognition of the new role of the teacher as a guide and facilitator of learning in the knowledge economy. The classroom environment requires activities that accommodate individual differences and support communication, research, and discovery skills.

These results are consistent with the studies of (Alimāt, 2013; Hassan, 2016; and Al-Mahmadi & Kasnawi, 2022), while they differ from the findings of Al-Rabee' (2023), which showed a low possession of teaching skills in learning management. They also differ from the studies of Alhassani (2024) and Durazzi & Tonelli (2025).

The researchers attribute the current findings, which reveal a high level of teaching skills in the Education dimension of the knowledge economy, to the research sample's awareness of the importance and position of this dimension within the knowledge economy. This is evidenced by the fact that this dimension ranked first among the four measured dimensions of the knowledge economy. It is viewed as consistent with the new role of the teacher as a guide and evaluator of the teaching-learning process, as well as being directly related to the desired learning outcomes for students

Presentation of the Results for the Second Question:
The question states: "What is the degree of possession of teaching skills in the (Problem Solving) dimension among male and female Arabic language teachers at the secondary stage?"
The responses of the research sample (N = 480) regarding the Problem Solving dimension were analyzed, as shown in Table (7):
Table (7) Means and Standard Deviations of the Research Sample's Responses on the Problem Solving Dimension

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
5	implement activities that train students to choose the best solutions.	2.75	0.46	High	1
4	provide activities that require applying knowledge in real-life situations.	2.74	0.45	High	2
1	design activities that stimulate students' problem-solving skills.	2.70	0.49	High	3

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
2	design activities that encourage students to conduct research and inquiry.	2.70	0.50	High	4
3	implement activities that include problem situations to motivate providing multiple solutions.	2.69	0.51	High	5
Overall Score in the Problem-Solving Dimension		2.72	0.48	High	

Discussion and Interpretation of the Results Related to the Second Question:

The results in Table (7) revealed that the Problem Solving dimension attained a high degree of possession (mean = 2.72, standard deviation = 0.48). The item "Implementing activities that train students to choose the best solutions" topped the list of statements. This is attributed to teachers' awareness of the necessity to integrate critical thinking and problem-solving skills into their teaching, in alignment with the characteristics of secondary stage students.

The researchers interpret the current findings of a high level of teaching skills in the Problem-Solving dimension of the knowledge economy among the research sample as reflecting an advanced understanding and strong adoption of problem-solving skills at the secondary education stage. It also indicates the necessity to incorporate these skills in their teaching competencies to suit the developmental stage of learners, whose cognitive abilities are evolving and maturing. At this stage, students ask many questions about what they learn, and their critical thinking grows. Therefore, teaching skills based on problem solving enable teachers to confront this situation and help learners achieve the desired educational outcomes.

Furthermore, this high degree reflects the research sample's awareness and recognition of the importance of including teaching practices related to the Problem-Solving dimension of the knowledge economy during planning, implementation, or assessment of their lessons. Consequently, members of the research sample strive to provide activities and exercises that require students to apply knowledge in various real-life situations, as well as design diverse activities that stimulate problem-solving skills and enable students to conduct research and inquiry to effectively enrich their knowledge. Since the research sample actively applies these aspects in their teaching, they rated their availability at a high level.

These results are consistent with the studies of: Al-Mahasneh (2018); Alimat (2013); Al-Zand & Al-Shanawi (2016); Al-Samadi (2017); Al-Mahmoud (2022); and Elshaiekh et al. (2024), while they differ from the study by Al-Rabee' (2023), which reported a decline in critical thinking skills related to problem solving, and from the study by Niaz (2024).

Presentation of the Results for the Third Question:

The question states: "What is the degree of possession of teaching skills in the (Communications and Information Technology) dimension among male and female Arabic language teachers at the secondary stage?"

To analyze the sample's responses on the Communications and Information Technology dimension, means and standard deviations were calculated for each item and the overall score, as shown in Table (8):

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
1	encourage students to use technology in their communication and interaction with each other.	2.79	0.43	High	1

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
2	strive to highlight the role of technology in the teaching and learning processes.	2.79	0.44	High	2
5	employ technology in designing tests and evaluation activities.	2.75	0.45	High	3
3	plan to utilize various educational platforms in the teaching process.	2.75	0.47	High	4
6	plan to employ electronic learning resources to enhance student learning.	2.73	0.49	High	5
4	train students to use technology in managing and utilizing linguistic knowledge.	2.69	0.53	High	6
	for the Third Dimension Communications and Information (Technology)	2.75	0.47	High	

Discussion and Interpretation of the Results Related to the Third Question:

The results presented in Table (8) indicate that the degree of possession of teaching skills related to Communications and Information Technology among Arabic language teachers is high according to the score interpretation scale used in this study, with an overall mean of (2.75). The item (1) "Encouraging students to use technology in communication and interaction" ranked first with a mean of (2.79), followed by item (2) "Highlighting the role of technology in teaching and learning" with the same mean, while item (6) "Training students to manage linguistic knowledge using technology" ranked last with a mean of (2.69).

The researchers believe that the high degree of teaching skills in the Communications and Information Technology dimension of the knowledge economy reflects the sample's awareness of the current reality, in which technological means—and the innovations or applications associated with them—have become an integral part of societal culture. These tools are easily used and employed because they are widely accessible to everyone from an early age. The concept of illiteracy has changed; it no longer only refers to inability to read or write, but rather to those who lack technological skills. Therefore, teachers are motivated by ongoing cultural and technological changes to incorporate and develop their teaching skills to keep pace with the outputs of the communications and information technology revolution.

This high degree can also be attributed to the efforts exerted by teachers in planning, implementing, or evaluating their teaching. These efforts include focusing on highlighting the role of technology in teaching and learning, applying advanced technological attempts in designing tests and evaluation activities, employing various educational platforms in the teaching process, and utilizing electronic learning resources to enhance student learning. All these contribute to developing and advancing teaching skills related to the Communications and Information Technology dimension.

The elevated rating by teachers is due to their awareness of the importance of integrating technology in education as part of modern societal culture, where technological skills are a necessity in daily and educational life, prompting them to develop their teaching competencies to keep up with technological advances.

The leading position of the item encouraging students to use technology in communication is because this technical use is common and familiar to students, motivating teachers to leverage it in the educational process. Conversely, the lower rank of the item related to managing linguistic knowledge is attributed to the greater focus of teaching efforts on emphasizing technology's role in education and evaluation compared to linguistic knowledge management skills.

These results agree with the studies of Hassan (2016), Al-Samadi (2017), Al-Mahmadi & Kasnawi (2022), and Fox (2016), which reported a high level of teaching skills related to this dimension. However, they differ from the studies of Alimat (2013), Al-Twaisi (2014), Ahmed (2017), Al-Masrouriya (2018), and Al-Kaf & Al-Kaf (2021), which recorded medium or low levels in the same field.

Presentation of the Results for the Fourth Question:

The question states: "What is the degree of possession of teaching skills in the (Thinking) dimension among male and female Arabic language teachers at the secondary stage?"

The responses of the research sample were analyzed for the fourth dimension of the knowledge economy (Thinking) by calculating the weighted mean and standard deviation for each item and its overall score. The results are shown in Table (9):

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
1	utilize linguistic content to train students on higher-order thinking skills.	2.74	0.46	High	1
2	direct teaching procedures to enable students to use higher-order thinking skills to meet their linguistic needs.	2.73	0.47	High	2
3	formulate stimulating questions for different thinking patterns among students (such as creative or critical thinking).	2.70	0.51	High	3
5	design activities and exercises that encourage students to showcase their talents and intellectual abilities.	2.70	0.52	High	4
6	use assessment tools that develop students' thinking skills.	2.68	0.49	High	5
4	implement teaching activities that help students derive creative ideas.	2.68	0.55	High	6
	Overall score for the fourth dimension (Thinking)	2.70	0.50	High	

Discussion and Interpretation of the Results Related to the Fourth Question:

The results indicate that male and female Arabic language teachers possess high teaching skills in the (Thinking) dimension, as the overall score was high (mean = 2.70). Item (1) ranked first with a mean of (2.74), reflecting their awareness of the importance of utilizing linguistic content to develop higher-order thinking skills. It was followed by item (2), which focuses on directing teaching procedures to enable students to use thinking skills. Item (6), related to implementing teaching activities to derive creative ideas, ranked last (2.68). This may be due to teachers focusing more on directly guiding thinking skills through content and stimulating questions before carrying out creative activities.

The researchers attribute the current findings of a high degree of teaching skills in the Thinking dimension of the knowledge economy among secondary stage Arabic language teachers to the efforts they exert in considering the developing mental and cognitive abilities of their students at this advanced educational stage. Therefore, the research sample strives to provide teaching practices in planning, implementation, and evaluation stages that include: delivering an appropriate and engaging introduction to the lesson, ensuring logical sequencing during lesson presentation that motivates students to follow and continue learning attentively and with focus, and encouraging them to engage in higher mental processes including critical and creative thinking. Thi   s deep awareness among the research sample has driven

them to make qualitative efforts in this regard, achieving the desired quality of educational outcomes at this stage. Hence, their self-assessment of possessing teaching skills related to this dimension was high.

This high score also reflects the research sample's awareness of the importance of incorporating teaching practices related to the Thinking dimension of the knowledge economy during planning, implementation, or evaluation of their lessons. Consequently, Arabic language teachers at the secondary stage are keen to direct teaching procedures to enable students to use higher-order thinking skills to meet their linguistic needs. They work on formulating stimulating questions for different thinking patterns among students (such as creative, critical, productive, or reflective thinking), as well as designing activities and exercises that encourage students to showcase their talents and intellectual abilities, in addition to using assessment tools that develop students' thinking skills. The high evaluation is due to teachers' awareness of the development of students' mental abilities in secondary education, as they strive to employ linguistic content in ways that enhance critical and creative thinking, alongside designing stimulating questions and assessment activities.

These results agree with studies by Alimat (2013), Al-Zand & Al-Shanawi (2016), Al-Samadi (2017), Al-Mahasneh (2018), and Al-Mahmoud (2022), which showed a high level of teaching skills in the Thinking dimension. They differ from studies such as Al-Twaisi (2014), which recorded a medium level according to supervisors' perspectives, and from Al-Rabee' (2023), which found a medium level in creative thinking skills.

Presentation of the Results for the Fifth Question:

The question states: "What are the attitudes of male and female Arabic language teachers at the secondary stage toward teaching skills based on the dimensions of the knowledge economy?"

The responses of the research sample to the attitudes scale were analyzed by calculating means and standard deviations, as shown in Table (10)

S	Paragraph	Mean (Average)	Standard Deviation	Degree of Possession	Rank
3	encourage students to express their opinions and ideas clearly.	2.88	0.46	Agree	1
7	train students to acquire various life skills.	2.88	0.47	Agree	2
10	link teaching activities to students' lives to achieve learning objectives.	2.88	0.48	Agree	3
12	implement activities that stimulate students to provide multiple solutions.	2.84	0.55	Agree	4
6	stimulate higher-order thinking skills when presenting linguistic competencies.	2.78	0.62	Agree	5
9	Linking technology to teaching empties the educational process of its content.	1.61	0.79	Disagree	16
11	Avoiding the use of educational platforms due to their ineffectiveness.	1.56	0.83	Disagree	17
	Overall score of the scale	2.72	0.67	Agree	

Discussion and Interpretation of the Results Related to the Fifth Question:

The results showed that the attitudes of male and female Arabic language teachers toward teaching skills based on the dimensions of the knowledge economy were generally positive, with an overall agreement level (mean = 2.72). The highest-ranked items were those related to encouraging students to

express their opinions (item 3), training students in life skills (item 7), and linking teaching activities to students' lives (item 10), each with a mean of (2.88). Meanwhile, item (11), which relates to avoiding the use of educational platforms, ranked lowest with a mean of (1.56).

Due to the novelty of research on attitudes toward teaching skills grounded in the dimensions of the knowledge economy, there were no previous studies available for direct comparison. This makes the findings of the current study a valuable basis for future research in this area.

The positive attitudes observed among the sample can be attributed to several factors, including:
-Teachers' awareness of their students' developmental characteristics and the need to harness their growing capabilities through technology and knowledge.
- Recognition of knowledge as a fundamental tool in modern education, coupled with a commitment to empower students with skills to produce and develop knowledge.
- Adaptation to societal and educational changes, especially within the framework of Saudi Vision 2030, which emphasizes education as a key driver of development and well-being.

Presentation of the Results for the Sixth Question:

The question states: "Are there statistically significant differences at the significance level of 0.05 in the degree of possession of teaching skills based on the dimensions of the knowledge economy among male and female Arabic language teachers at the secondary stage attributable to the variables of gender, academic qualification, years of experience, and number of training courses?"

This question was answered based on the following steps:

First: Significance of Differences According to the Variable of Gender: Differences between male and female teachers' responses were analyzed using the t-test, as shown in Table (11):

Dimension	Groups	N	Mean	Standard Deviation	Degree of Freedom	t-value	Significance
Education	Male Teachers	187	16.33	1.83	478	-1.39	Not significant
Education	Female Teachers	293	16.56	1.66			
Problem Solving	Male Teachers	187	13.45	1.79	478	-1.30	Not significant
Problem Solving	Female Teachers	293	13.66	1.59			
Communications	Male Teachers	187	16.44	1.89	478	-0.47	Not significant
Communications	Female Teachers	293	16.53	1.84			
Thinking	Male Teachers	187	16.95	2.13	478	-2.13	0.05
Thinking	Female Teachers	293	16.36	1.98			

Dimension	Groups	N	Mean	Standard Deviation	Degree of Freedom	t-value	Significance
Overall Score	Male Teachers	187	62.20	5.07	478	-1.99	0.05
Overall Score	Female Teachers	293	63.12	4.87			

The results in Table (11) revealed the following:
-There are statistically significant differences favoring female teachers in the dimension of **"Thinking"** and in the **overall score**.
- No significant differences were found in the other dimensions.
Second: Significance of Differences According to the Variable of Academic Qualification: The means and standard deviations of the research sample responses (N = 480) according to academic qualification are shown in Table (12).

Dimension	Academic Qualification Categories	Number	**Mean**	Standard Deviation
Education	Diploma	49	16.36	1.98
	Bachelor's	537	16.48	1.35
	Master's	43	16.46	1.84
	PhD	31	16.54	1.73
Problem Solving	Diploma	49	13.89	1.26
	Bachelor's	537	13.61	1.66
	Master's	43	13.62	1.58
	PhD	31	12.64	2.27
Communications and Information Technology Thinking	Diploma	49	16.83	1.32
	Bachelor's	537	16.53	1.85
	Master's	43	16.34	1.82
	PhD	31	15.80	2.53
Thinking¹	Diploma	49	16.42	1.64
	Bachelor's	537	16.25	2.08
	Master's	43	16.83	2.02
	PhD	31	15.77	2.29
Overall Score of the Questionnaire	Diploma	49	63.53	3.80
	Bachelor's	537	62.89	4.99
	Master's	43	62.27	4.90
	PhD	31	60.77	6.00

It appears from Table (12) that there are apparent differences in the responses of the research sample on the questionnaire (overall score and dimensions) according to the variable of academic qualification. To determine whether these differences in the mean responses are statistically significant and attributable to this variable, the following procedure was undertaken:A one-way analysis of variance (ANOVA) was used to test for significant differences between more than two means. Table (13) shows the results of this procedure.
Table (13) presents the results of the one-way ANOVA for differences between the mean responses of the research sample (N = 480) on the questionnaire (overall score and dimensions) according to the academic qualification variable.

Dimension	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Squares	F-value	Statistical Significance	
Education	Between Groups	0.77	3	0.26	0.08	Not	— 0.96 Significant
	Within Groups	1444.92	476	3.03			
	Total	1445.70	479				
Problem Solving	Between Groups	32.67	3	10.89	3.92		0.0
	Within Groups	1321.82	476	2.77			
	Total	1354.94	479				
Communications and Information Technology Thinking	Between Groups	21.82	3	7.27	2.10	Not	— 0.9 Significan
	Within Groups	1642.18	476	3.45			
	Total	1664.00	479				
	Between Groups	15.01	3	5.00	1.18	0.31	— Not Significant
	Within Groups	2003.57	476	4.20			
	Total	2018.58	479				
Thinking	Between Groups	167.63	3	55.87	2.27	0.08	— Not Significant
	Within Groups	11672.23	476	24.52			
	Total	11839.86	479				

The results of Table (13) show statistically significant differences at the (0.05) level in the responses of the research sample to the questionnaire attributed to the variable of academic qualification, in all four dimensions of the questionnaire and in its overall score, except for the second dimension, for which the value of (F) was statistically significant at the (0.01) level.

The Scheffe post-hoc multiple comparison test was used to determine the significance and direction of the differences between the subgroups of the academic qualification variable on the second dimension, and Table (14) presents the results of this procedure.

Table (14) Scheffe test results for the significance and direction of the differences between the subgroups of the academic qualification variable on the second dimension.

Dimension	Group (A)	Group (B)	Mean Difference	Significance Level	(Significant in favor of)	Dimension
Problem-Solving	Diploma	PhD	1.25*	0.05	PhD	Problem-Solving

The results in the previous table indicate that the direction of the differences in the score of the second dimension (Problem-Solving) is mainly in favor of those with the highest qualification (PhD) compared to those with the lowest qualification (Diploma), and not in comparison with the other academic qualification categories.

Third: Significance of the differences according to the variable of years of experience:

Table (15) The means and standard deviations of the responses of the research sample (n = 480) to the questionnaire (overall score and dimensions) according to the variable of years of experience.

Dimension	Academic Qualification Categories	N	Mean	Standard Deviation
Teaching	Less than (5) years	50	16.64	1.48
	From (5) to less than (10) years	48	16.50	1.67
	(10) years or more	382	16.45	1.77
Problem-Solving	Less than (5) years	50	13.64	1.57
	From (5) to less than (10) years	48	13.58	1.80
	(10) years or more	382	13.57	1.68
Communication and Information Technology	Less than (5) years	50	16.36	1.80
	From (5) to less than (10) years	48	16.79	1.87
	(10) years or more	382	16.48	1.87
Thinking	Less than (5) years	50	15.98	2.03
	From (5) to less than (10) years	48	16.31	2.09
	(10) years or more	382	16.22	2.05
Overall Questionnaire Score	Less than (5) years	50	62.62	4.99
	From (5) to less than (10) years	48	63.18	5.12
	(10) years or more	382	62.73	4.95

Table (15) shows apparent differences in the responses of the research sample on the questionnaire (overall score and dimensions) according to the variable of years of experience. To determine whether these differences in the mean responses are statistically significant and attributable to this variable, the following step was taken.

A one-way analysis of variance (ANOVA) was conducted to test the significance of differences among more than two means, and Table (16) presents the results of this analysis.

Table (16) presents the results of the one-way ANOVA analysis of the differences between the mean responses of the research sample (n = 480) on the questionnaire (overall score and dimensions) according to the variable of years of experience

Dimension	Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-value	Statistical Significance
Teaching	Between Groups	1.63	2	0.81	0.26	0.76 Not significant
	Within Groups	1444.7	477	3.02		
	Total	1445.70	479			
Problem-Solving	Between Groups	0.16	2	.008	0.02	0.97 Not significant
	Within Groups	1354.33	477	2.83		
	Total	1354.49	479			
Communication and Information Technology	Between Groups	5.20	2	2.59	0.74	0.47 Not significant
	Within Groups	1658.80	477	3.47		
	Total	1644.00	479			
Thinking	Between Groups	3.20	2	1.60	0.37	0.68 Not significant
	Within Groups	2015.37	477	4.22		
	Total	2018.57	479			

Overall Questionnaire Score	Between Groups	10.01	2	5.00	0.20	0.81 Not significant
	Within Groups	11829.58	477	24.80		
	Total	11839.68	479			

Results of Table (16) indicate the absence of statistically significant differences at the level ($\alpha \leq 0.05$) in the responses of the research sample to the questionnaire attributed to the variable of years of experience, across all four dimensions of the questionnaire as well as in the overall score, since the F-values did not reach statistical significance.

Discussion and Interpretation of Results Related to Question Six:

The results reveal the following:

- Statistically significant differences appeared in favor of female teachers in the dimension of Thinking and in the overall score. These findings are consistent with the studies of Alkandari (2025) and Al-Zand & Al-Shanawi (2016), but differ from Hassan (2016). This result can be attributed to female teachers' motivation to prove themselves and to develop their teaching practices, alongside their higher drive to enhance students' thinking skills, which aligns with the new teacher roles in the knowledge economy as indicated by Al-Shammari (2023).

- Differences according to academic qualification were found in the Problem-Solving dimension, favoring PhD holders. This can be explained by their advanced research experience in problem analysis and formulation. These results agree with studies by Al-Tuwisi (2014), Al-Mohamadi & Kasnawi (2022), and Al-Mahmoud (2022), but differ from Hassan (2016) and Al-Zand & Al-Shanawi (2016). The researchers suggest this is because the knowledge economy requires advanced teaching roles involving all teachers regardless of their qualification, in addition to the impact of Vision 2030 in raising awareness about knowledge-based education across all schools.

- The results showed no statistically significant differences in all dimensions and the overall score, which aligns with findings from Al-Zand & Al-Shatnawi (2016), Al-Mohamadi & Kasnawi (2022), and Al-Mahmoud (2022), but contradicts studies by Al-Tuwisi (2014), Hassan (2016), and Al-Samadi (2017). The researchers believe that the spread of technology and the development of training programs have narrowed the gap among teachers regardless of their years of experience, by providing equitable professional development opportunities.

- No statistically significant differences appeared in all dimensions and the overall score. This might be due to the scarcity of specialized courses in the knowledge economy within training plans, which contributed to the convergence of teacher levels in this area. The lack of sufficient time to integrate the knowledge economy as a core focus in training programs could explain this finding.

Results for Question Seven: The question states: "Are there statistically significant differences at the 0.05 significance level in the attitudes of secondary school Arabic language teachers (male and female) towards teaching skills based on the dimensions of the knowledge economy, attributed to the variables of (gender, academic qualification, years of experience, and number of training courses in Arabic language teaching)?"

-Significance of Differences According to Gender Variable: The means were calculated and a t-test was conducted to assess the significance of differences. The results are presented in Table (16).

Dimension	Groups	N	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance
The total score of the scale	Male teachers	187	45.96	4.55	478	-1.27	0.20 Not significant
	Female teachers	293	46.48	4.32			

The results in Table (16) revealed that there were no statistically significant differences between male and female teachers in their attitudes toward teaching skills based on the dimensions of the knowledge economy, attributable to the gender variable

Significance of Differences in the Academic Qualification Variable:
The means and one-way analysis of variance (ANOVA) were calculated, and the results are shown in Tables (17) and (18).

Table (17) presents the arithmetic means and standard deviations for the academic qualification variable

Academic Qualification Categories	N	Mean	Standard Deviation
Diploma	49	46.24	4.22
Bachelor's	537	46.25	4.47
Master's	43	46.86	4.79
PhD	31	45.83	3.56

Table (18) presents the one-way analysis of variance (ANOVA) for the academic qualification variable

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Squares	F-value	Statistical Significance
Between Groups	20.75	3	6.91	0.35	0.78 Not significant
Within Groups	9332.70	476	19.60		
Total	9353.46	479			

It is evident from Tables (17) and (18) that there were no statistically significant differences in the attitudes of male and female teachers attributable to the academic qualification variable

Significance of Differences in the Years of Experience Variable:
The statistical analysis was conducted as shown in Tables (19) and (20).

Table (19) presents the arithmetic means and standard deviations for the years of experience variable

Academic Qualification Categories	N	Mean	Standard Deviation
Less than (5) years	50	45.74	4.48
From (5) to less than (10) years	48	44.91	4.72
(10) years or more	382	46.52	4.34

Table (20) presents the one-way analysis of variance (ANOVA) for the years of experience variable

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Squares	F-value	Statistical Significance
Between Groups	126.94	2	63.94	3.28	0.05 significant
Within Groups	9226.52	477	19.34		
Total	9353.46	479			

The results in Tables (19) and (20) revealed statistically significant differences in attitudes according to the years-of-experience variable. To determine the direction of these differences, the Scheffé test was applied to identify the significance and direction of differences among the three years-of-experience groups, as shown in Table (21)

Table (21) presents the Scheffé test to identify the significance and direction of the differences among the three years-of-experience groups.

Group (A)	(Group (B)	Mean Difference	Significance Level	Decision
5 to less than 10 years	10 years or more	1.60	0.05	In favor of 10 years or more

Significance of Differences in the Number of Training Courses Variable:
The statistical analysis was conducted as shown in Tables (22) and (23).

Table (22) presents the arithmetic means and standard deviations for the number of training courses variable.

Training Courses	N	Mean	Standard Deviation
One course	71	47.07	3.82
Two courses	79	47.02	4.07
Three courses	63	46.39	4.08
More than three courses	267	45.82	4.69

Table (23) presents the one-way analysis of variance (ANOVA) for the number of training courses variable

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Squares	F-value	Statistical Significance
Between Groups	143.71	3	47.90	2.47	Not 0.06 significant
Within Groups	9209.75	476	19.34		
Total	9353.46	479			

The results in Tables (22) and (23) indicate that there were no statistically significant differences in the attitudes of male and female teachers according to the number of training courses attended.

Discussion and Interpretation of the Results Related to Question Seven:

Gender Variable:

results showed no statistically significant differences between male and female teachers in their attitudes toward teaching skills based on the dimensions of the knowledge economy. This can be attributed to the fact that these skills represent a shared objective of the Saudi educational system under Vision 2030 and its programs. Since teachers have not received direct prior training on these skills, their responses were similar and consistent in evaluating them regardless of gender.

Academic Qualification Variable:

The results revealed no statistically significant differences attributable to academic qualification, as positive attitudes were similar among holders of diplomas up to doctorates. This may be explained by the Ministry of Education's focus on developing teachers' skills regardless of their academic background, through continuous professional development programs such as the Human Resources Development Initiative, which promotes lifelong learning and ensures alignment with knowledge economy requirements and contemporary technological and educational developments.

Years of Experience Variable:

The results indicated statistically significant differences in favor of teachers with higher experience (10 years or more). This is likely due to the accumulation of professional and cognitive experience, which enables more experienced teachers to comprehend and apply knowledge economy skills flexibly and effectively. Their awareness of the importance of creativity and innovation in achieving sustainable development and enhancing both teacher and learner performance is reflected in their positive attitudes toward these skills. This result contrasts with the findings of Naser et al. (2016).

Number of Training Courses Variable:

The results showed no statistically significant differences attributable to the number of training courses attended. This may be due to the fact that many of the training programs provided for Arabic language teachers do not explicitly or systematically cover knowledge economy topics, making the impact of training roughly equal for all participants, regardless of the number of courses they attended.

Summary of the Results:

1-The results showed that the participants' overall rating for the first dimension of the questionnaire (Education) was high, with a mean of 2.75 and a standard deviation of 0.46.

2-The overall rating for the second dimension (Problem Solving) was high, with a mean of 2.72 and a standard deviation of 0.48.

3-The overall rating for the third dimension (Communication and Information Technology) was high, with a mean of 2.75 and a standard deviation of 0.47.

4-The overall rating for the fourth dimension (Thinking) was high, with a mean of 2.70 and a standard deviation of 0.50.

5-The results revealed:

a. Statistically significant differences at the 0.05 level between male and female teachers in the fourth dimension and the overall questionnaire score, in favor of female teachers. No statistically significant differences were found between males and females in the first, second, and third dimensions, where the *t*-values were not statistically significant.

b. Statistically significant differences at the 0.05 level in the participants' responses attributable to the academic qualification variable in all four dimensions and the overall score, except for the second dimension.

6-Additionally, the results showed:

a. No statistically significant differences at the 0.05 level between male and female teachers in the overall attitude scale, as the *t*-value was not statistically significant.

b. No statistically significant differences at the 0.05 level attributable to the academic qualification variable in the attitude scale, as the F-value did not reach statistical significance.

c. Statistically significant differences at the 0.05 level in the overall attitude scale attributable to the years of experience variable, favoring teachers with higher experience (10 years or more) compared to those with medium experience (from 5 to less than 10 years).

Research Recommendations:

-Encourage Arabic language teachers to pursue professional development related to applying teaching skills based on the dimensions of the knowledge economy, to fully benefit from these skills in enhancing their teaching practice.

- Guide school principals to assist secondary school teachers in supporting and strengthening knowledge economy–related skills among their students.

- Promote a culture of continuous learning among Arabic language teachers to keep pace with rapid developments in the knowledge economy, thereby enriching their teaching skills and enhancing student learning.

Research Suggestions:

-Conduct a study to investigate the extent to which Arabic language teachers possess knowledge economy skills from the perspective of supervisors.

- Develop a proposed enrichment program aimed at improving the performance of Arabic language teachers in general education stages in applying teaching skills based on the dimensions of the knowledge economy.

- Conduct a predictive study to identify the factors influencing Arabic language teachers' attitudes in general education toward fostering knowledge economy skills in their students.

REFERENCES:

1. A bell Rahim, D. M. (2018). Effectiveness of using virtual classrooms in teaching the Methods of Teaching course to develop effective teaching skills. Journal of the Service Center for Research Consultations, 20(58), 1–22.
2. Abdelhadi, M. F. (2019). Knowledge economy in Arab literature: An analytical study and lessons learned. Scientific Journal for Libraries, Documents, and Information, 1(1), 151–185.
3. Abdullah, A. S., & Al-Adawi, M. S. A. (2021). Developing science and social studies curricula at the basic education stage in light of knowledge economy dimensions. Educational Sciences, 29(Special Issue), 181–243.
4. Abu Al-Nadi, J. (2016). The effectiveness of micro-teaching in developing some teaching skills for students in the General Education Diploma program. Educational Journal of the Faculty of Education, Sohag University, 46, 85–111.
5. Abu Azzam, M. K. (2021). Knowledge Management and Knowledge Economy. Zohdy Publishing and Distribution.
6. Abu Allam, R. M. (2013). Quantitative, qualitative, and mixed research methods. Al-Massira Publishing and Distribution.
7. Abu Zaid, S. M. (2016). A proposed unit for developing knowledge economy dimensions and some life skills through the geography curriculum for first-year secondary students. Journal of the Educational Association for Social Studies, 80, 52–116.
8. Ahmad, S., Batool, A., Iqbal, S., & Shah, M. H. (2021). Knowledge economy concepts and roles in perspectives of university teachers of Asian and European states.
9. Ahmed, M. A. (2018). Thinking methods of teachers. Academic Book Center.
10. Ahmed, S. M. H. (2017). Knowledge economy requirements included in the Arabic textbook for sixth-grade primary and teachers' degree of mastery. Journal of the Faculty of Education, Assiut University, 33(7), 596–645.
11. Al-Adwan, Z. S., & Dawood, A. (2020). Modern teaching strategies. De Bono Center for Thinking Education.
12. Al-Ahmadi, R. A. K. (2022). Knowledge economy skills included in the content of secondary tracks competency books in Saudi Arabia. Arab Studies in Education and Psychology, 142, 53–80.
13. Al-Ahmadi, S. M., & Al-Anzi, N. S. (2017). Availability of knowledge economy skills in middle school mathematics textbooks in Saudi Arabia. World of Education, 53, 1–49.

14. Al-Atoum, M. S. (2020). The practice degree of art education teachers in Jordan for teaching skills in view of knowledge economy from the point of view of their supervisors. International Journal of Education and Learning Research, 3(1), 29–40.

15. Al-Azazi, N. M. (2016). Teaching compass in Arabic language. Dar Ghidaa Publishing.

16. Al-Bassam, N. S. (2018). Evaluation of developed Islamic education textbooks for upper primary grades according to the knowledge economy from the perspective of teachers and educational supervisors in Makkah. Journal of Psychological and Educational Sciences, 2(6), 19–32.

17. Al-Candari, A. A. (2025). The extent of inclusion of knowledge economy skills in Arabic language curricula at the secondary stage in Kuwait from the teachers' perspective. Journal of Educational Studies and Research, 5(13), 1–44.

18. Al-Jamman, F. A. (2021). Teachers' mastery of social studies and national education in Qasbat Al-Mafraq schools in light of knowledge economy requirements. Jordanian Educational Journal, 6(1), 306–330.

19. Al-Juhani, N. S., & Mamdouh, A. A. (2024). Reality of knowledge economy practices in secondary schools in Jeddah from the perspective of female teachers. Al-Madina International University Journal for Educational and Psychological Sciences, 14, 1–37.

20. Al-Kaf, F. M., & Al-Kaf, N. M. (2021). Employing knowledge-based economy requirements in Arabic language curricula from the perspective of teachers and supervisors in Oman. Educational Sciences – Cairo University, 29, 23–45.

21. Al-Kandari, A. A. (2025). The extent of inclusion of knowledge economy skills in Arabic language curricula at the secondary stage in Kuwait from the teachers' perspective. Journal of Educational Studies and Research, 5(13), 1–44.

22. Al-Khushnawi, Y. B., & Al-Rubaie, I. H. (2018). Social studies teachers' practice of knowledge economy competencies from the perspective of school principals. Arab Journal of Educational and Psychological Sciences, 2(2), 9–46.

23. Al-Kubaisi, S. (2011). Knowledge management: Research and studies. Arab Organization for Administrative Development.

24. Alimat, M. M. (2013). The extent to which primary school teachers in Jordan represent knowledge economy skills and their relationship to their teaching practices from the perspective of their supervisors. Al-Manara Journal for Research and Studies, 19(3), 383–411.

25. Al-Maddahha, A. N., & Al-Walybat, H. A. (2014). Information and knowledge economics. Arab Society Library Publishing and Distribution.

26. Al-Mahmoud, T. A. E. (2022). Vocational secondary education teachers' practice of teaching competencies in light of knowledge economy requirements from their perspective. [Unpublished master's thesis], Faculty of Education, Yarmouk University.

27. Al-Mahasneh, R. F. (2018). The degree of inclusion of knowledge economy concepts in the first three grades' Arabic language textbooks in Jordan. Jordanian Journal of Educational Sciences, 14(2), 127–141.

28. Al-Mohamadi, M. E., & Kasnawi, N. M. (2022). Primary grade teachers' mastery of teaching competencies in light of knowledge economy pillars from the supervisors' perspective. Diyala Journal for Humanitarian Research, 94, 635–679.

29. Al-Muzain, W. A. (2023). Proposed design of a mobile training program to develop knowledge economy skills among commercial science teachers. Educational Innovations Journal, 24, 87–108.

30. Al-Masrouria, N. S. (2018). Availability of knowledge economy requirements in reading lesson activities included in the Arabic language textbook "My Beautiful Language" for grades seven and eight. [Unpublished master's thesis], Faculty of Education, Sultan Qaboos University.

31. Al-Qahtani, I. A., & Al-Asmari, N. A. (2022). Evaluation of high school computer science curricula in light of knowledge economy dimensions. Arab Studies in Education and Psychology, 143, 23–50.

32. Al-Qaisi, M. (2011). Features of the knowledge economy embedded in the content of Sharia science curricula in the secondary education development project in Saudi Arabia. [Unpublished master's thesis], Mutah University, Al-Karak, Jordan.

33. Al-Qar'ah, A. A. (2013). Knowledge economy skills in the second secondary grade chemistry textbook and teachers' mastery of them. Journal of Humanities and Social Sciences, 13, 1–22.

34. Al-Saeideh, M. J. (2015). University teaching skills required for faculty members at Al-Balqa Applied University from their students' perspective. [Unpublished master's thesis], Graduate School of Education, Middle East University.

35. Al-Sharafat, A. T. (2016). Training needs based on knowledge economy standards for Arabic language teachers in the Directorate of Education in the North Eastern Badia region. Tishreen University Journal for Research and Scientific Studies – Arts and Humanities Series, 38(6), 75–100.

36. Al-Shujairi, Y., & Al-Zuhairi, H. (2022). Modern trends in psychological and educational assessment. Dar Al-I'sar Al-Ilmi Publishing.

37. Al-Subaie, M., & Al-Ruwaili, N. (2023). Attitudes of Islamic studies teachers in Al-Nairiyah Governorate towards alternative assessment. Faculty of Education Journal – Menoufia University, 38(1), 120–160.

38. Al-Tariri, A. S. (2014). Psychological and educational measurement: Theory, foundations, applications (2nd ed.). Al-Rushd Publishing.

39. Al-Twaisi, A. (2014). Teachers' practice of vocational education competencies in light of knowledge economy from the perspective of educational supervisors in Jordan. Jordanian Journal of Educational Sciences, 10(1), 37–54.

40. Al-Ya'qoubi, H. (2013). Assessment and measurement in educational and psychological sciences: An applied perspective. Al-Murtada Center for Social Development, Baghdad.

41. Alhassani, W. S. M. (2024). Building a list of knowledge-economy skills required in English language textbooks for the elementary stage in Saudi Arabia. Arab Journal for Scientific Publishing, 7(69).

42. Amer, A. K. (2014). Knowledge capital. Dar Kitab Publishing and Distribution.

43. Ashraah, M., & Yousef, A. (2020). The extent to which knowledge-based economy skills are included in the secondary level curriculum in Qatar. International Journal of Learning, Teaching and Educational Research, 19(7), 80–100. https://doi.org/10.26803/ijlter.19.7.5

44. Barakati, H. (2022). An analytical study of knowledge economy indicators in Arab countries: The UAE experience as a model. Economic Notebooks Journal, 13(1), 185–200.

45. Bouran, S. A. (2016). Knowledge management as an approach to competitive advantage in contemporary organizations. Academic Book Center.

46. Dehshan, A. I. (2023). Transition towards the knowledge economy as a driver for modern economic development in light of selected international experiences. Tanta University Journal of Sharia and Law, 38(1), 550–623.

47. Dimmock, C., & Goh, J. W. (2011). Transformative pedagogy, leadership and school organisation for the twenty-first-century knowledge-based economy: The case of Singapore. School Leadership & Management, 31(3), 215–234.

48. Durazzi, N., & Tonelli, S. (2025). Onward and upward? Occupational upgrading, social inclusion and collective skill formation in the transition to the knowledge economy.

49. Elfeky, A. I. M., Hassanein, M. S. E. A. A., Zayed, A., Khalladi, Y. M., & Elbyaly, M. Y. H. (2025). Sustainable Education Systems: A Future Vision for Developing Higher-Order Thinking Abilities. International Journal of Environmental Sciences, 11(1s), 73-78.

50. Elfeky, A. I. M., Hassanein, M. S. E. A. A., Zayed, A., Mahmoud, S. M., & Elbyaly, M. Y. H. (2025). Project-Based Learning's Impact on Fostering The Socio-Environmental Attitude. International Journal of Environmental Sciences, 11(2s), 97-104.

51. Elshaiekh, N. E., Shehata, A., & Al Hosni, N. (2024). Enhancing students' knowledge-based economy skills at Sultan Qaboos University. Education Sciences, 14, 1141. https://doi.org/10.3390/educsci14111141

52. Firsova, I. A., Lukashenko, I. V., & Azarova, S. P. (2020). The socio-economic importance of education in a knowledge-based economy. In Frontier Information Technology and Systems Research in Cooperative Economics (pp. 231–238). Cham: Springer International Publishing.

53. Fox, C. (2016). Practices of vocational education teachers in implementing the family and consumer science curriculum in the United States of America in light of the knowledge economy. Education That Works, 4(3), 47–69.

54. HADAD, S. (2017). Knowledge economy: Characteristics and dimensions. Management Dynamics in the Knowledge Economy, 5(2), 203–225. https://doi.org/10.25019/MDKE/5.2.03

55. Hamdi, A. S., & Badawi, A. (2018). Statistics in education and psychology. Alam wa Al-Iman Library.

56. Hassan, R. N. S. (2016). Teachers' mastery of knowledge economy concepts in Arabic language in Al-Balqa Governorate from their perspective. Studies in Curriculum and Teaching Methods, 212, 118–152.

57. Issa, E. S. A. A. (2019). Evaluation of teaching practices for physical education teachers in the light of trends based on knowledge economy in Menoufia in Egypt. Journal of Applied Sports Science, 9(1), 20–28.

58. Jaradat, N. M., Al-Ma'ani, A. I., & Al-Saleh, A. R. (2011). Knowledge management. Ithraa Publishing.

59. Jari, K. A., Abd Al-Abbas, Q., Al-Saadi, S. S., Al-Jabri, A. K., Al-Zaidi, R. R., Al-Taie, Y. A., & Al-Zaidi, A. G. (2018). General teaching methods: Theoretical and applied concepts. Ministry of Higher Education and Scientific Research.

60. Mekkaoui, M., Aissaoui, S. B., & Henni, T. K. (2022). Innovative teaching and knowledge economy in universities from the perspective of academics at Mascara University.

61. Mama, D. (2015). Teaching skills between practice and competence: Primary stage as a model. Rafouf Journal – University of Adrar, Algeria, 7, 260–282.

62. Monshi, F. A. (2019). Knowledge economy: A vision for sustainability in the Arab world. Professional Expertise Center for Management.

63. Muhammad, B. Z. (2017). The general manager's pen. Dar Amjad Publishing.

64. Mohni, M. M. M. (2022). Knowledge economy skills among Fayoum University students from the perspective of faculty members. Educational Journal – Sohag University, 77, 2123–2160.

65. Najm, M. A. (2019). Effectiveness of a training program to develop basic stage teachers' skills in teaching mathematical thinking. [Unpublished master's thesis], Faculty of Education, Islamic University of Gaza.

66. Naser, I., Awajneh, A., & Sabbah, S. (2016). Degree of the teachers' practice of their roles and knowledge economy concepts from their perspective in Palestine. Journal of Emerging Trends in Educational Research and Policy Studies, 7(5), 371–382.

67. Niaz, H. A. M. (2023). A proposal to develop the role of teachers in developing learners' knowledge economy skills in the light of contemporary global transformations. Revista Iberoamericana de Psychology del Ejercicio y el Deporte, 18(5), 515–522.

68. Niaz, H. A. M. (2024). Requirements for achieving competency-based education to keep pace with the era of the knowledge economy. International Journal of Religion, 5(11), 2331–2343.

69. Nibhan, Y. M. (2012). Teaching skills. Al-Yazouri Publishing.

70. Nugrahani, R., Prasetyo, A., & Iswari, S. (2018). Authentic assessment of fungi for vocational school students: Concept map, self-assessment and performance test. Journal of Innovative Science Education, 7(1), 10–24.

71. OECD. (2001). Competences for the knowledge economy. Paris: OECD.

72. Salman, S. (2020). The role of the knowledge economy in human development with special reference to Iraq. Journal of Faculty of Administration and Economics for Economic Studies, 12(1), 234–269.

73. Sahabi, N. A. H. (2021). University professors' use of teaching skills: A field study in the Department of Social Sciences at Oum El Bouaghi University. [Unpublished master's thesis], Faculty of Education, Oum El Bouaghi University.

74. Saleh, A. M. (2019). The role of the knowledge economy in sustainable development with special reference to the Iraqi experience. Baghdad College of Economic Sciences Journal – Special Issue of the 8th International Scientific Conference, 147–166.

75. Saleh, S. M. (2021). Effect of using alternative assessment on scientific thinking and attitudes toward science among students in Nablus. [Unpublished master's thesis], Graduate School, An-Najah National University.

76. Sabbah, S. S. M., Naser, I. A. S., & Awajneh, A. M. H. (2016). The teacher's roles in light of knowledge economy from the perspective of the educational supervisors' in Palestine. Journal of Education and Practice, 7(26), 88–98.

77. Shaker, S. (2016). Evaluation of teaching skills for trainees in mathematics and physics from the perspective of subject teachers. University of Babel Journal, 24(4), 25–58.

78. Shraikh, S. D. A., & Atoom, M. S. (2014). The degree of teachers' commitment to the national teacher professional standards in the provinces in Jarash and Ajloun, from the perspective of schools principals