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The Use of Modern Television Technologies and their Impact on Increasing the Follow-up to Watch news Programs on Jordanian Television

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Abstract

The aim of this study was to reveal the level of use of modern TV technology and its impact on increasing viewing of news programs on Jordanian TV - from the perspective of the employees and technicians in the news programs. To achieve the objectives of the study, the questionnaire was used to collect the necessary data. Study's sample consisted of (110) employees and technicians in the news programs on Jordanian TV.

The results showed that the use of modern television techniques enhances the degree of viewing television highly at all dimensions, especially at the dimension of news releases and news programs.

The results also showed that Jordanian Television is still using the old techniques, which came in the last place among all dimensions. in addition to a statistically positive associations exist between the use of modern television techniques in all its dimensions and increasing in the viewing of newsletters and news programs.

According to the results, study recommends the following:

1. Work on the transformation of the system of high-quality broadcast technology (HD) instead of SD system, and work on training to staff on these technologies and modern devices.

2. Using modern and advanced methods in presenting news bulletins and news programs on Jordanian TV, so that multimedia, graphics, info graphic and sound effects are used in each bulletin especially the main ones.
Keywords: Modern television technologies, news programs

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Introduction

The television sector has become an open market seeking freedom from government pressures, who does not want to slip out of his hands, control the news and TV producer, and these technologies have been employed at several levels, such as broadcasting and programming. The number of television news channels has also doubled, and competition has become more intense between the various television channels to attract the largest number of viewers. In light of the rapid and modern changes in the field of media, we find that the television media seeks to compete with these data, using modern television technologies of all kinds in order to improve their performance and increase their follow-up by the audience.

Television channels are one of the aspects of modern development that are competing in various fields of daily life, and in all parts of the world. As these channels came from the depth of the great technological development, and the increasing growth and spread of digital technology helped to strive to direct efforts and exert them towards further development in various aspects of life, especially digital ones.

There is no doubt that the great acceleration in information technology has led to a rapid increase in the volume of competition news in front of the media. This prompted the necessity to reconsider the technologies used by television channels in broadcasting their various programs (Abdul Nabi, 2014).

Modern media are distinguished from traditional media in having the tools of interaction between the sender and the receiver, and the ability to rapidly transfer information and use it for multimedia such as sound, static and moving images, And the exchange of messages between the parties to the communication process, combining the characteristics of the personal, public, cosmic and temporal means of communication at the same time.

From this standpoint, it was necessary to enter modern television technologies represented in both programs and special equipment in sound, image, text and program quality, which have become tools that must be acquired in order to improve the outputs of Arab media, a new and important factor in the development of the work of Arab TV channels in general, and news programs in particular, especially in conjunction with the entry into the twenty-first century with modern television technologies related to broadcasting and audio-visual effects (Abdul Razzaq and Al-Samuk, 2015).

In the same context, Alwan believes that the introduction of modern technologies to television has created an interactive atmosphere between viewers and their TVs. Previously, watching TV over the past decades was limited to staring at a box placed in a corner of their home, and this prompted those in charge of television channels and researchers in this field to exert the necessary effort in developing the technologies that were used to become what they are today (Alwan, 2009).

Accordingly; And from the reality of the development of modern television technologies and their great focus on the viewer, which is the main element in receiving and responding to all that is broadcast through the television screen, we have shown the interest of satellite television in these technologies and spent most of their interest in it due to their role in increasing the number of viewers at the least cost and effort. Through its reliance on digital communication means and advanced computer programs, which now offer various effects that have contributed to attracting viewers' follow-up, and it has worked on communicating information easily and in the shortest possible time.

Al-Dabaa believes that the interest in everything new in modern television technologies increases the distinction of satellite channels and gains the largest possible number of viewers. The inclusion and use of television programs in general and news programs in particular with influences, programs and technologies, contributes positively to the work of satellite channels and contributes to relieving many burdens, the most important of which are the material and human burden (Al-Dabaa, 2011).

Based on the above, the study seeks to introduce modern television technologies and highlight their role in increasing the follow-up and viewing of news programs by viewers on Jordanian television. The fact that news programs are among the most important programs presented on the television screen, which are followed up by all segments of society, because of the function it does in terms of conveying events and informing viewers of everything that is happening around them in terms of events, and everything that is new to them.

The current study also reveals the use of modern television technologies and their impact on increasing the follow-up of viewers of news programs on Jordanian television as a field study aimed at answering a number of questions to reach its desired results and recommendations.

The problem of the study

Modern television technologies have become one of the most important goals that television channels seek to adopt because of their desired benefit, which is witnessed in our present time, which is characterized by the tremendous technical revolution, accordingly, this study seeks to clarify whether the use of modern technologies and their reflection on production work had a role in increasing the number of viewers of Jordanian television, as this study comes as a recent study dealing with this topic and the libraries lack it due to the scarcity of research and studies that dealt with this topic according to the researcher's knowledge.

Study questions

1. What are the modern television technologies used in programs and news bulletins on Jordanian television from the viewpoint of workers and technicians in news programs?
2. Does the use of modern television technologies such as audio effects have an effect on increasing the number of viewers of programs and newsletters on Jordanian television from the viewpoint of workers and technicians in news programs?
3. Does the use of modern television technologies represented in visual effects have an impact on increasing the number of viewers of programs and newsletters on Jordanian television from the viewpoint of workers and technicians in news programs?
4. How do the modern television technologies used in programs and news bulletins on Jordanian television contribute to increasing the quality of the news bulletins and news programs presented as perceived by workers and technicians in the news programs?

The importance of the study

- **Theoretical importance**

The importance of theoretical study stems from the important role that modern television technologies play in the work of satellite channels, as news programs are among the most important programs broadcast through these channels, therefore, this study will seek to demonstrate the effect of using these technologies on increasing the number of Jordanian TV viewers for these programs, as Jordan TV is a governmental institution that represents the state. From here, it is necessary to identify the most important topics related to these technologies in this study through what the researcher will do in terms of tracing literature and previous studies in this field.

- **Applied importance:**

The practical application importance of this study is the results it will reach regarding the use of modern technologies in Jordanian television and their reflection in the increase in the 45 numbers of news program followers, whereas, the use of modern television technologies is considered a competitive advantage that the channels seek because of their evident effects on increasing the number of viewers who follow their programs, and therefore this study gains its importance through identifying the modern technologies used in programs and newsletters on Jordanian television and the importance of their equipment (Audio effects, visual effects, modern technologies used, quality of programs, programs and newsletters) and its role in increasing the number of viewing these programs. The researcher also hopes that the study will provide scientific and practical recommendations for the development of programs, bulletins and news programs on Jordanian television, in order to reach a larger viewing volume, and to be a guide that can guide the work of television.

Objectives of the study

Based on the above, the study aims in general to identify the modern television technologies used in programs and newsletters on Jordanian television and their impact on increasing the follow-up of these programs.

The main objective is divided into the following sub-goals:

1. Identify the effect of using visual effects used in programs and news bulletins on Jordan TV on increasing the number of program viewers.
2. Identify the effect of using audio effects used in programs and news bulletins on Jordan TV on increasing the number of program viewers.
3. Identify the extent to which television technologies contribute to increasing the quality of follow-up programs and newsletters on Jordanian television.

Modern television technologies

The means of communication, since their inception until today, have formed channels of human knowledge, and their importance is constantly increasing as a result of the development of communication technologies, which made it fall in the circle of public attention, which now devotes many hours of its time to receive communicative contents that are broadcast around the clock. The use of modern television technologies to cover news bulletins is an essential task in the television news industry, which gave it a great importance represented in the process of selecting TV events, differentiation between them and broadcasting them, and this is to draw the attention and attention of viewers and those interested in this field, and strive to study and reveal them, and to show the extent of their importance to the environment of the political system from which it emerged, and its ability to meet its needs and its vision for news tasks and the content it carries, the standards adopted for news coverage, and the function of visual media. As a result of the revolution of modern media technology, which is characterized by the technical movement in an upward direction, and with the third millennium, television became one of the first and mass media outlets that came to the throne of media,ب or this reason, those working in the field of television have begun to develop it digitally, and to employ modern programs and technologies to reach the maximum possible degree of interaction, to be in line with human needs in our current time, which is characterized by the great technological acceleration (Rabeh, 2004).

Accordingly, modern media and communication are the fruit of scientific knowledge and a product of the tremendous technological revolution that the world is witnessing, as this revolution affected the masses of all races, hence, what the world is witnessing as a whole in terms of information revolution, communication satellite technology and media computers, in addition to the development in the use of modern communication technologies that have made the world a small global village, and the limitations of space and time have disappeared, as these technologies result in the merging and interconnection of the world into a single system characterized by cohesion (Ibrahim, 2017).

The word technology comes as an Arabic word synonymous with the word technology, where modern media technology can be defined as a word that combines everything that is written and spoken and both the still and moving image through both wired and wireless communications, whether terrestrial or satellite, using modern technologies to enable the transfer of information in the desired manner, in the appropriate time and with the necessary speed (Bo Moail & Bobakor, 2004).

Haydar believes that modern media technology refers to all types of technologies and devices used in transmitting, operating and storing information in an electronic form, and includes all of the computers, means of communication, linkage networks and other equipment used extensively in communications and media (Haydhar, 2002).

Modern media and television technologies are distinguished by a number of important advantages, the most prominent of which is the ability to transfer information from one system to another through communication systems, and the ability to use a group of special devices to communicate information in several languages, leading

to complementarity and influence on the audiences receiving this information through the television screen (Ibrahim, 2017).

Abu Rostom believes that the most prominent modern technologies used in the field of television, aimed at attracting followers and increasing their numbers, are the programs and special equipment used by the Satellite Channels Department, with the aim of producing media work at the highest levels of quality in order to transmit everything new through these technologies. The most important of these technologies is reflected in visual and auditory effects, as image clarity devices, video recording and display devices, and montage devices, in addition to image mixing devices, digital effects, graphics and design are important devices that contribute to the transmission of images in the best condition to the viewer, as for the audio effects, which can be referred to in microphones, headphones, and sound mixers, in addition to magnetic sound recording devices, sound meters, etc., they have the ability to reach the viewers' ears and influence them as much as possible (Abu Rustom, 2016).

The tremendous technological development has also brought about great and amazing transformations in TV media practices through the changes that occurred in how news information is produced and promoted through news bulletins by editing, installing and disseminating audiovisual information. And also the preparation and broadcasting of various television programs related to the news world, which is the backbone of life at the present time. Television news information is produced according to trends or purposes that serve specific goals for media institutions through accurate technological methods and techniques to shape the television image (Ammar, 2009).

Conceptual and procedural definitions

Modern television technologies: It is defined as a set of systems, equipment and special programs that support the work of satellite channels and that seek to improve the quality of sound and image through an integrated work system (Al-Jamal, 2013).

And it means procedurally: It is all that is used by satellite TV in terms of equipment, software and systems aiming to deliver news bulletins and news programs with all quality and clarity through the effects it achieves on the sound and image in the content of the programs presented to viewers.

News programs: News programs are one of the important pillars of the materials presented on satellite television channels, which aim to connect the audience with the various events taking place in their homeland and in the surrounding world. News programs are directly interested in transmitting news that attracts the attention of viewers and communicating new information to them (Abd al-Nabi, 2014).

And it means procedurally: they are television programs broadcast through satellite channels that aim to publish news and events continuously and updated to viewers in the form of bulletins, edifices and photo reports (news films, figures and illustrations).

Study limits

This study is limited to the following determinants:

- Geographical boundaries: Jordan TV in the Hashemite Kingdom of Jordan.
- Time limits: This study will be conducted during the summer semester (2016/2017).
- Applied Frontiers: Staff and technicians in the news bulletins section of Jordan TV.

Previous studies

The study of Shaqroun (1990) "The audiovisual media and its areas of development using the achievements of modern communication technology" showed that the possibilities available through the new communication technology affect the development of the media, while this technology remains hostage to the profession and special experiences of those in charge of the media. The audiovisual media benefits from new innovations with many benefits across their various capabilities.

While Ibrahim's study (2000) titled "Satellite Broadcasting Technology and the Development of Television Production, an Applied Study on Al-Jazeera Channel," confirmed that 63% of the increase in the spread of satellite channels was not according to a strategic study, and that the future of Arab satellite channels will be in improving the use of technology in light of communication Accompanying the live broadcast, the study also emphasized the need to define a scientific approach and standards for analyzing and evaluating the performance of channels and programs according to the scientific foundations and professional honor, and that the success of Al-Jazeera news channel was in imposing a distinct pattern and style, and that it formed new policies and systems compared to the rest of the Arab channels.

As for Al-Mikhlafi's study (2005), "Media institutions in the era of information technology with a study of the reality of Yemeni press institutions," it concluded that there is a shortage in holding training courses at the radio institution for journalists working on using modern technology, and this made the use of computers in journalistic work not exceeding half of the employees, and the absence of a modern and technical information center for the institution made it lack the capabilities to obtain the technology for storing and retrieving information in an accurate and fast manner.

The Sheikh (2006) study indicated: "Technical development and its impact on the performance of media institutions: An analytical descriptive study on the Sudanese Broadcasting and Television Corporation "to a number of results, the most prominent of which is that the human cadre does not keep pace with the technical development as required in Sudanese television, in addition to the lack of interest in the job satisfaction of workers. The study indicated that the channels' failure to take advantage of modern technologies may expose them to a number of problems.

Alawin's study (2009) "Communication Technology and its Relationship with the Performance of Media Institutions: The Jordanian Radio and Television Corporation as a Model" reached a number of results, the most prominent of which was the presence of statistical significant differences between the estimates of the study sample individuals attributable to some demographic characteristics and the existence of a statistically significant effect of the use of communication technology in some administrative areas.

As for the study of Jamal al-Din and Bouazza (2015), "The use of modern communication technology in Algerian television: An analytical descriptive study of the Ouargla regional station", and it concluded that there is an impact of modern communication technology on the effectiveness of the employees performance and the institution itself, as it changed the equipment and equipment by 80% through the development of the institution's performance, while its results also showed that the employees of the Algerian Television Corporation in Ouargla depend on the computer in their work by 100%, in addition to that the modern technologies used in the institution had a positive impact on improving the performance of employees, especially since 76% of them received special training courses in this the field.

The Methodology of the Study

This study relies on the descriptive survey method, which tries to analyze and explain the phenomenon of the subject of the research and explain it in the hope of generalizing its results.

Study population

The study population consisted of workers and technicians in Jordanian television, represented by (Editor-in-Chief, Editor, Director, and Technician) as they have expertise and knowledge of the role of using modern television technologies and their impact on increasing follow-up watching news programs, as the results indicated in 2017 that the total number of employees and technicians in the news programs section of Jordan TV reached (145) employees, and the study sample will be intentional, thus, the sample number will be (110) of workers and technicians in the news programs of the Jordanian TV.

The study sample

The sample of the study consisted of (110) workers and technicians working in news programs on Jordanian television out of the total number (145), and the sample number was chosen according to Shukrun theory by choosing the sample, and no questionnaire was deleted due to the completion of all the conditions in it. And they were chosen by the intentional, facilitated way, as most of the workers and technicians were represented in the news programs of Jordan TV. The diversity of the sample was also taken into account (academic level, gender, and nature of work on Jordanian television). The questionnaires were distributed to a specific number of employees and technicians of Jordan TV, who are workers and technicians only in news programs. Table (2) shows the distribution of the study sample according to demographic variables (gender, age, academic qualification, nature of work in news programs).

Study tool

- **A scale of the use of modern television technologies**

The researcher referred to the relevant theoretical literature, benefiting from the opinions of specialists in this field, and some studies that the researcher looked at during his review of previous studies related to modern television technologies, including; Shaqroun's study (1990), Ibrahim (2000), Al-Mikhlafi (2005), Al-Sheikh (2006), Alawin (2009), Abduh (2015), and others. Then the researcher built the scale to collect data on the subject of study.

Description of scale

The scale of modern television technologies consisted of two parts: The first part: includes general information about the members of the study sample, in light of variables (gender, age, academic qualification, the nature of your work in news programs). As for the second part, it consists of (25) paragraphs, divided into five axes, which are: the axis of news releases and programs, and it consists of (7) paragraphs, the axis of modern television technologies consists of (5) paragraphs, the audio effects axis consists of (6) paragraphs, the audio effects axis consists of (3) paragraphs, and the program quality axis consists of (4) paragraphs.

The level of the answer to each of the paragraphs has been graded according to the five-point Likert scale, and it has been identified with five levels, which are: Strongly agree (5 degrees), agree (4 degrees), neutral (3 degrees), disagree (2 degrees), strongly disagree (1 degree), and accordingly, the score ranged on each paragraph of the scale between one and five degrees, Since the scale consists of (25) items, the total score of the scale ranged between (25) degrees, which is the lowest score that the subject can obtain, and (125) degrees, which is the highest score that the subject can obtain. The arithmetic averages were classified according to the following criteria: (2.33 or less low), (2.34 - 3.66 average), and (3.67 - 5 high), in order to determine the level of use of modern television technologies in news programs among the individuals of the study sample.

Validity of modern television technologies scale

The following validity indicators were extracted:

A. Content validity

After preparing the scale in its initial form, which consisted of (25) paragraphs, and Appendix (1) showing the scale in its initial form, it was presented to 8 referees from the faculty of the Middle East University, who are specialists in the media, radio and television, journalism, propaganda and public opinion, And education technology, with the aim of judging it in terms of its relevance to the subject of the study, the accuracy and clarity of the linguistic wording of the paragraphs, and the extent of their suitability for the goal that is being measured. The comments of the judges about the scale were taken, then adjustments were made based on the observations provided by the arbitrators.

B. Construct validity

To calculate the construct validity, the scale was applied to a sample of (30) employees and technicians of the Jordanian TV from outside the members of the study sample. The values of the correlation coefficients of Pearson were calculated between the paragraph, the dimension to which it belongs, and the total degree of the scale.

Reliability of modern television technologies scale

The reliability of the scale was verified by calculating the values of the internal consistency coefficients using the (Cronbach Alpha) equation, and the value of the internal consistency of the scale as a whole was (0.60), which is 60%. Given this value, it is considered acceptable to use the scale for the purposes of the study.

Study procedures

In order to achieve the objectives of the study, the researcher followed the following procedures in carrying out his study:

1. The sample of the study was determined, and they are the workers and technicians (Editor-in-Chief, Editor, Technician) of Jordanian TV and those registered in the Jordan TV Records for the year 2017.
2. The researcher distributed the study questionnaire personally to employees and technicians of the Jordanian TV, and the process of implementing the study questionnaire was followed up through personal follow-up by the researcher with clarification of the necessary instructions needed to answer the paragraphs of the study tools.
3. The sample members were informed that their answers to the paragraphs of the study questionnaire will be used for scientific research purposes only and will be treated with complete confidentiality.
4. The study sample was given sufficient time to answer the paragraphs of the study tools, and an assurance that there was no specific time to answer, in addition to following up their inquiries.
5. The study tools were applied to the entire sample, and it was ensured that the questionnaires met all the conditions, such as (mentioning the initial data that pertains to information about individuals such as gender, age, educational qualification, or the nature of your work in news programs, and making sure that no more than one answer is given to the paragraphs, Or not to leave the paragraphs blank). Thus, the actual study sample consisted of (110) workers and technicians distributed according to the study variables.

Then the data were collected and analyzed by computer processing, and the Cronbach Alpha coefficient was used to calculate the validity, consistency and internal consistency of the study tool. Pearson was also used to calculate the correlation coefficients between the paragraphs of the study axes, and the statistical package (SPSS) was used to measure the ratios as (mean, median, and standard deviation), and the T-Test to test the study hypotheses.

Presentation and discussion of study results:

First: Findings related to the first question: "What are the modern television technologies used in programs and news releases on Jordanian television from the viewpoint of workers and technicians in news programs"

To answer this question, the arithmetic averages and standard deviations of the axes of using modern television technologies at Jordanian television were extracted from the viewpoint of workers and technicians in news programs, as shown in Table (1).

Table 1: The arithmetic average and standard deviations of the level of modern television technologies at Jordanian television

Rank	Axes	Arithmetic average*	Standard deviation	General level
1	Newsletters and news programs	4.86	.417	High
2	Modern television technologies	4.70	.524	High
3	Visual effects	4.77	.476	High
4	Audio effects	4.80	.561	High
4	Software quality	4.80	.561	High
*	Modern television technologies as a whole	.445	4.79	High

Table (1) shows that the arithmetic averages ranged between (4.86 - 4.70), so the axis of bulletins and news programs came in first place, with the highest arithmetic average of (4.86), while the axis of modern television technologies came with a mathematical average of (4.70), and the axis of visual effects came with an average of (4.77), the audio effects axis came with an arithmetic average of (4.80), and the axis of program quality came with an arithmetic average (4.80). The arithmetic average of the level of modern television technologies as a whole was (445.), where it came at a high level. As for the second axis in the study tool, the axis (modern television technologies), which included (5) paragraphs, the arithmetic averages and standard deviations were calculated for each paragraph in the field of modern television technologies, and the rank for each paragraph with the degree of practice of modern television technologies in Jordanian television from the viewpoint of workers and technicians in news programs.

Second: The results related to the second question: Does the use of modern technologies such as audio effects have an effect on increasing the number of viewers of news programs on Jordanian television from the viewpoint of workers and technicians in news programs?

To answer this question, the arithmetic averages and standard deviations were calculated for each paragraph in the audio effects axis in Jordan TV, which consisted of (3) paragraphs, arranged in descending order with the degree of practice, and Table (2) illustrates this:

Table 2: The arithmetic averages and standard deviations of the practice of modern television technologies represented by the audio effects in Jordanian television from the viewpoint of workers and technicians in news programs arranged in descending order

N	Items	Mean	Standard deviation	Practice degree	Arrangement
20	The audio effect has the effect of capturing the viewers' attention	4.83	0.57	High	1
21	Jordan TV includes advanced sound effects in broadcasts and news programs	4.79	0.60	High	2
19	Jordan Television uses modern and sophisticated special audio effects in its broadcast news programs	4.78	0.53	High	3
	The axis as a whole	4.80	0.54	High	

Table (2) shows the arithmetic averages, standard deviations, and the rank for each paragraph of the audio effects axis, and the axes as a whole. And it is noted that the arithmetic averages range between (4.78 - 4.83) with a high degree of practice for all the paragraphs. As for the axis as a whole, it obtained an arithmetic average (4.80), a standard deviation (0.54) and a high degree of practice. Paragraph No. (20) came in first place, which states "Audio effects have an effect in attracting viewers' attention, "with an average (4.83), a standard deviation (0.57), and a high degree of practice. And paragraph No. 21 came in second place, which states "Jordanian television includes advanced sound effects in newscasts and news programs," with an average (4.79), a standard deviation (0.60), and a high degree of practice. And paragraph No. (19) came in last place, which states: "Jordanian television uses modern and sophisticated special audio effects in broadcasting news programs significantly," with an average (4.78), a standard deviation (0.53), and a high degree of practice.

Third: Results related to the second question: Does the use of modern technologies represented in visual effects have an effect on increasing the number of viewers of news programs on Jordanian television from the viewpoint of workers and technicians in news programs?

To answer this question, the arithmetic averages and standard deviations for each paragraph were calculated in the axis of modern television technologies represented in the visual effects in Jordanian television from the viewpoint of workers and technicians in news programs. This axis included (6) paragraphs, arranged in descending order with the degree of practice, Table No. (3) explains that:

Table 3: The arithmetic averages and standard deviations for practicing modern television technologies represented by visual effects in Jordanian television from the viewpoint of workers and technicians in news programs arranged in descending order

N.	Items	Mean	Standard deviation	Practice degree	Arrangement
16	Jordanian television uses modern techniques in image clarity	4.80	0.50	High	1
18	Jordan TV is cutting out parts of the image to focus on specific aspects	4.78	0.54	High	2
17	Jordan TV uses modern montage programs and effects	4.78	0.51	High	3
15	Jordan TV displays up-to-date digital graphics in bulletins and news programs	4.76	0.50	High	4
13	Jordan Television uses modern visual effects and graphics technologies to display illustrations	4.75	0.56	High	5
14	Jordan TV uses modern infographics for its news bulletins and programs	4.72	0.60	High	6
	The axis as a whole	4.76	0.47	High	

Table (3) shows the arithmetic averages, standard deviations, and the rank for each paragraph of the axis, and the axis as a whole, and notes that the arithmetic averages range between (4.72 - 4.80) with a high degree of

practice for all paragraphs, as for the axis as a whole, it obtained an arithmetic average (4.76) and a standard deviation (0.47) with a high degree of practice and came first in Paragraph No. (16), which states: "The use of modern technologies in Jordanian television contributes to the clarity of the picture" with an arithmetic average (4.80) and a standard deviation (0.50) With a high degree of practice. Paragraph No. (18) came in second place, which states: "Jordanian television cuts parts of the image to focus on certain aspects," with an arithmetic average (4.78), a standard deviation (0.54) and a high degree of practice. Paragraph No. (13) was ranked before last, which states: "Jordanian television uses modern visual effects and graphics techniques to display illustrations," with an arithmetic average (4.75), a standard deviation (0.56), and a high degree of practice.

Results related to the fourth question: How do the television technologies used in news programs on Jordan TV contribute to increasing the quality of the news bulletins and programs presented as perceived by the workers and technicians in the news programs?

To answer this question, the correlation coefficient (Pearson) was calculated, and the arithmetic averages and standard deviations were extracted for all four axes of modern television technologies, with the fifth axis represented by the quality of news programs, as shown in Table (4).

Table 4: Correlation Coefficient / Pearson) and the arithmetic means and standard deviations for the fifth axis "Program Quality" with the rest of all the main axes as a whole

The main axes		Software quality	Newsletters and news programs	Modern television technologies	Visual effects	Audio effects	Axes as a whole
Software quality	Correlation coefficient	1	**0.735	**0.742	**0.741	**0.853	**0.884
	Arithmetic mean	4.79	4.86	4.70	4.76	4.80	4.78
	Standard deviation	0.56	0.41	0.52	0.47	054	0.44
	Indication level	0.00	0.00	0.00	0.00	0.00	0.00

According to Table No. (4), the following is explained, and the detailed explanation is based on the highest arithmetic average:

There is a correlation relationship between the fifth axis, the quality of programs, the first axis, news releases and programs, and the value of the correlation coefficient (0.735), which is a positive and strong relationship, the arithmetic average (4.86), a standard deviation (0.41) and at a level of significance (0.00), which is a statistically significant.

There is a correlation relationship between the fifth axis, the quality of the programs and the fourth axis, the audio effects and the value of the correlation coefficient (0.853), which is a positive and strong relationship, the arithmetic average (4.80), a standard deviation (0.54) and at the level of significance (0.00), which is a statistically significant.

There is a correlation relationship between the fifth axis, program quality, and the fifth axis, program quality and the value of the correlation coefficient (1), which is a positive, strong and complete relationship, the arithmetic average (4.79), a standard deviation (0.56) and at a level of significance (0.00), which is a statistically significant.

There is a correlation between the fifth axis, the quality of the programs, with the axes as a whole, the value of the correlation coefficient (0.884), which is a positive and strong relationship, the arithmetic average (4.78), a standard deviation (0.44), and at a level of significance (0.00), which is a statistically significant.

There is a correlation relationship between the fifth axis, program quality, and the third axis, visual effects and the value of the correlation coefficient (0.741), which is a positive and strong relationship, the arithmetic average (4.76), a standard deviation (0.47) and at a level of significance (0.00), which is a statistically significant.

There is a correlation relationship between the fifth axis, program quality, and the second axis, modern television technologies and the value of the correlation coefficient (0.742), which is a positive and strong relationship, the arithmetic average (4.70), a standard deviation (0.52) and at a level of significance (0.00), which is statistically significant.

The arithmetic averages and standard deviations were also extracted for each paragraph of the axis of quality of news programs on Jordanian television, which was divided into (4) paragraphs and ranked in descending order for each paragraph with the degree of practice, as shown in Table (5).

Table 5: The arithmetic averages and standard deviations of the paragraphs for the quality axis of news programs on Jordanian television from the viewpoint of workers and technicians in news programs arranged in descending order

N.	Items	Mean	Standard deviation	Practice degree	Arrangement
24	The visual effects achieve its goal of attracting viewers' attention to satellite channels	4.84	0.51	High	1
22	The quality of programs on Jordan TV contributes to improving the quality of news programs	4.80	0.58	High	2
25	It is noticed that there is a development in the use of modern technologies in Jordanian television	4.78	0.61	High	3
23	Multimedia on Jordan TV contributes to increasing the quality of bulletins and news programs	4.77	0.61	High	4
	The axis as a whole	4.79	0.56	High	

Table No. (5) shows the arithmetic averages, standard deviations and the rank for each paragraph of the Program Quality Axis, and the field as a whole. It is noted that the arithmetic averages range between (4.77 - 4.84) with a high degree of practice for all paragraphs, as for the field as a whole, it obtained an athematic average (4.79), a standard deviation (0.51), and a high degree of practice.

Paragraph No. (24) came in first place, which states: "Visual effects achieve its goal of attracting viewers' attention to satellite channels," with an average (4.84), a standard deviation (0.51), and a high degree of practice.

Paragraph No. (22) came in second place, which states "The quality of programs on Jordanian television contributes to improving the quality of news programs," with an average (4.80), a standard deviation (0.58) and a high degree of practice.

Paragraph No. (25) was ranked before last, which states: "It is noted that there is an evolution in the use of modern technologies in Jordanian television," with an average (4.78), a standard deviation (0.61) and a high degree of practice.

Paragraph No. 23 came in last place, which states: "Multimedia in Jordanian TV contributes to increasing the quality of broadcasts and news programs," with an average (4.77), a standard deviation (0.61), and a high degree of practice.

Recommendations

Based on the findings of the study, the researcher can recommend the following:

1. Providing training programs that enable workers and employees to train in the use and mastery of the latest television technologies (infographic, graphics, audio effects, and visual effects).
2. Work on switching to the HD broadcasting technology system instead of the SD system, and working on training workers and employees on these modern technologies and devices.
3. Benefiting from the experiences of other satellite channels (Russia Today, Sky News, MBC ...) in using modern technologies through joint training programs with these satellite channels.
4. Using modern and sophisticated methods of presenting news bulletins and programs on Jordanian television, so that every bulletin, especially the main ones, has a use of multimedia, graphics, infographics and sound effects.

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