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Advantages of using the Interactive Whiteboard as an Educational Tool from the Point of View of Middle School Teachers in Asir Region

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Abstract

The purpose of this research is to examine middle school teacher views on the advantages of using the IWB in the classroom in the Asir region. The researcher employed a descriptive design and quantitative technique, with the questionnaire serving as the primary data collection tool, to accomplish the study's aims. A convenience sample of 312 teachers was used for the research. The study's findings indicated that the IWB had significant benefits for the classroom in terms of the instructor, the material being taught, the method being used to teach it, and the students themselves. There were also no statistically significant differences between male and female users when it came to the advantages of utilizing the IWB in the classroom.

Keywords: *IWB, educational tool, middle school teachers, Asir region.*

Introduction

The development of contemporary educational technology in recent years has led to a number of improvements that have been crucial in helping educators choose tools that best suit their objectives while also boosting the effectiveness and growth of the educational process (Ersan, 2018). The educational process has evolved from the monotonous memorizing and recitation of textbook passages that it was in the past into a varied activity with a variety of sources that helps the class's preferences and tendencies be met (Al-Rabaani, 2018). It is now vitally necessary to stay up with this technological innovation, accept it, and apply it to the educational process in order to get the desired outcome.

Teaching aids occupy a prominent position among educational inputs due to their numerous benefits and their importance to educational planners due to their role in arousing the student's interest, satisfying his need to learn, and diversifying his experiences in practice, reflection, and thought (Giannikas, 2021). Thus, the school becomes a field for the student's growth in all directions, enriching the fields of experience he passes through and involving all of his senses in the learning processes, which leads to the consolidation and deepening of this learning and an increase in his positive participation in acquiring experience and developing his ability to reflect, accurately observe, and follow scientific thought. It also enables the diversification of teaching methods to accommodate individual differences among students, thereby enhancing the quality of learning and boosting student performance (Muhammadqosimovna & Satvoldiyevna, 2022).

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Utilizing the computer as a modern technological educational instrument has prompted a reevaluation of instructional strategies and acquired knowledge. The introduction of the computer as a teaching tool compelled educators to define the behavioral objectives that needed to be established for the learner, to conduct a thorough analysis of the content of the study material, and to select the methods that should be utilized in the teaching process (Baharudin, 2021). Thus, a greater reliance on the computer in the education process has resulted in a detailed clarification of the study material, so that the goal of education is not only what can be obtained from knowledge, but also to create an element of excitement in the process of transferring knowledge to the learner, which increases the learner's effectiveness because he approaches science in an environment characterized by interaction, focus, individuality, and activation. It neglected the element of human interaction between the instructor and the student despite its widespread use (Herawati et al., 2023).

Because the student learning process requires multiple interactions during the teaching situation, between students and the teacher, students and one another, or students and the educational material (Kirbas, 2018). Consequently, lesson planning took an interest in describing the interactions that are anticipated to occur during the teaching situation, taking into account the objectives of the educational situation, the skills required to achieve the goals, the sufficient time period, and the appropriate location to achieve the goals (Erdener & Kandemir, 2019). From this perspective, those interested in technological sciences and education began to develop means to assist the instructor in planning educational situations and to engage the learner in them, the Interactive WhiteBoard (IWB) being one of these means (Malkaw et al., 2020).

The IWB plays a crucial role in assisting the instructor in identifying and emphasizing the main ideas, as well as in simplifying them so that each presentation slide focuses on a single concept or a well-defined objective, with the option of using it with other educational aides. It combines still and moving images, audio, and video, as well as the ability to display without automatically darkening the room, which makes the display more suitable for observing the reactions and behavior of the students during the lesson (Hendawi & Nosair, 2020). Thus, the instructor receives immediate reinforcement of his work and varied activities, resulting in the availability of an interactive, two-way learning environment with exchange and interaction between the teacher and the student. Noting that teachers frequently serve as information transmitters in educational settings, it is significant to emphasize that the utilization of the IWB alleviates this problem (Rojas-Segovia & Romero-Varela, 2019). Changing the procedures followed in the classroom activity makes the educational situation more interesting, and results in increased learner participation, attention, interest, focus, scrutiny, and follow-up of events. This increases the quantity of knowledge and skill production, contributes to self- and continuous learning, and enhances the effectiveness of learning (Amie-Ogan et al., 2020). In addition to providing the opportunity to learn about hazardous and rare phenomena or complex phenomena that the learner cannot directly observe because of their rarity, severity, delay, or small size. Therefore, it can be exhibited on the IWB using a computer tape, video, or images to be as close to actuality as possible, sparing teachers the time, effort, and energy of verbal explanation (Wujec-Kaczmarek, 2021).

Thus, the focus has shifted from the teacher, who previously controlled the educational process, to the pupil, who now dominates the process. This is accomplished through his participation in preparing and explaining portions of the course material, using instructional aides, conducting experiments himself, conducting independent research, and evaluating his performance (Reguera & Lopez, 2021). The purpose of this study is to determine the advantages of employing an IWB in the classroom and how teachers feel about it as a teaching tool.

Research Questions

The research sought to provide answers to the following questions:

1. What are the advantages of using the IWB in the educational process?

2. Are there statistically significant differences between the advantages of using the IWB in the educational process due to the variables of gender, and years of experience?

Literature Review

David Martin and Nancy Knowlton of one of the leading education technology companies in Canada and the United States began thinking about the design of the smart board in 1987, and research on the smart board's viability continued until 1991, when Smart began manufacturing the first smart board (Kühl & Wohninsland, 2022). The IWB represents a radical departure from the conventional whiteboard, as it is an electronic board that is connected to the computer and projector. Where it permits unlimited uses for writing and drawing, or the incorporation of audio snippets, video clips, and graphics, so that the external image from the projector is directed to the IWB, and where this image is generated by the computer (Aldhafiri, 2020). In other words, the content of the computer screen is transmitted to the IWB in an enlarged form, allowing the user to control the computer via the touch feature that characterizes the whiteboard's sensitive surface, using either his own markers or his finger (Aflalo et al., 2018).

Similar technology is utilized by both the IWB and PDAs. This allows them to analyze the movement of a finger or stylus upon contact with a surface. There are additional varieties that can visually detect finger movement using motion sensors implanted in specific locations (Shi et al., 2021). The IWB is a flat electronic panel that may be used with computers and a data projector to make it an excellent teaching tool and to provide the computer a clear image. In order for it to be easily adjusted to its huge size by touch and for the computer's operation as well as the usage of a pen to be controlled from the pen holder itself (Anatürk Tombak & Ateşkan, 2019). According to Hassan (2017), the IWB is a big display screen connected to a computer and a projection device that projects the computer desktop onto a whiteboard, allowing users to interact with the computer using a pen, finger, or other device. The engagement is made possible by various attachments, including student response devices, and a whiteboard often lifted off the ground or mounted on a wall (Zhou & Wijaya, 2022).

The smart board consists of tangible components, including four electronic pens, a computer-connected electronic space, a data display device (LCD), and a program to operate the interactive board and its numerous tools (Tosuntaş, et al., 2021). In the event that a Net meeting conference or Video is desired, a camera, computer, speakers, and printing tools must be installed on the smart board. As for the new iteration of IWBs, they do not require a device (LCD) because the viewer is available on the whiteboard's screen. It also includes a set of programs, the most important of which is the Notebook program, which allows writing, adding pictures, moving them, coloring them, or changing backgrounds according to the teacher's needs. It is similar to the Great power point program, but has distinguishing features, such as the ability to move pictures; the Recorder program is used to record everything the teacher does during the explanation (Kutluca et al., 2019).

The Ideo player program plays video files on the computer, regardless of whether they were recorded from the board, downloaded from the Internet, or saved from educational programs. The program also permits drawing over the video and can be used to display stored lessons or markers that the instructor wishes to display, remark on, or write on (Beucher et al., 2020). In addition to the Screen keyboard program, on the smart board screen allows the instructor to convert handwriting on the board into printed writing as

well as print words, numbers, and symbols. In addition to the Control panel, it is also used to alter the color of any electronic stylus, the font size, and the size of the electronic workspace. It enables the user to save, print, and email activities, educational programs, and other content. This is regarded as one of its advantages and benefits, as no absent student loses access to the program's material (Dweck, 2019).

This board provides the instructor with multiple options for explanation and elucidation, obviating the need for a large number of additional teaching techniques. On the IWB, it is possible to write, draw, or display images and transparencies for all students to see (Ghanem & Al-Otaibi, 2019). It is also possible to display educational resources related to the lesson, such as presentation files, pdf files, images, and audio files, as well as explanations and comments since the electronic board provides the instructor with all the necessary instruments for explaining and writing (Alrahbi & Saad, 2022). The most important advantages of using the IWB:

Reducing time: A teacher who is proficient with computer applications will save a great deal of time and effort when creating educational materials. The teacher uses cards and images to display the words he finds in periodicals and computer clipping programs, which he then adheres to flash cards for use in displaying scientific material. Additionally, he offers a wall tool for an entire instruction. In addition to needing models, photos, and maps, the teacher must devote considerable time to these tasks. In contrast, when using an IWB, the teacher only needs to click on the notebook program and insert the image or write the word to be explained. Furthermore, if he is connected to the Internet, he can easily access the Google site to view millions of images or maps related to the lesson to be explained (Ersan, 2018). The financial cost of the educational aids that a teacher requires each year and that he may charge his students for is not a secret; therefore, by utilizing the IWB, we will eliminate the problem of the large number of educational aids used and concentrate on using one effective method in the teaching process, namely the IWB (Al-Rabaani, 2018). Also, the virtual keyboard feature saves time while typing by eliminating the need to search for each letter individually. When writing with a finger or an electronic stylus, handwriting is converted to printed text (Giannikas, 2021).

Solve the problem of shortage of staff: By introducing smart classrooms in our schools, we can address the issue of a yearly lack of teaching staff. We would not have had this ongoing issue if this technology had been available in our schools or in schools where there is a scarcity of teaching personnel (Muhammadqosimovna & Satvoldiyevna, 2022). An academic year is not without a shortage of female instructors or teachers in specific subjects. Some people could argue that the instructor needs to connect with the students. In this case, we counter that the sensitive cameras mounted on the IWB allow any student to ask the teacher any question during the presentation (Baharudin, 2021). The subject matter expert can walk between each of his classes as the cameras turn toward the people who want to ask the inquiry. For instance, if there is a teacher shortage for English in one of the schools, the teacher can enter class A there while students from classes B and C follow him to the school that lacks teachers, ensuring that the teacher is present in all of these classes. in accordance with a planned timeline (Herawati et al., 2023).

Presenting lessons in an interesting way and teaching computer skills: The instructor can write on most Microsoft Office products, explore websites that are obviously relevant to the teachings, and deliver the lessons to his pupils utilizing the IWB using the PowerPoint program. A virtual keyboard (also known as an on-screen keyboard) may be used to teach typing as an example of how computer skills can be taught (Kirbas, 2018).

Record and replay lessons: In order to ensure that no absent student misses any lessons, we may use the IWB to record lessons, save them, and then replay them for absent students. We can even print out the full lesson for them or give it to them through e-mail over the Internet (Erdener & Kandemir, 2019).

Distance learning: The most important feature that increases the value of IWB technology is the ability to use it for distance learning via the video conference feature, which allows us to display seminars, workshops, and conferences between different countries over the Internet (Malkaw et al., 2020).

The IWB represents a fundamental departure from the conventional whiteboard. The interactive nature and visual impact of the IWB while displaying the material increases the rationalization of their behavior and increases their focus and attention while performing tasks as a result of their active participation in learning, which effectively contributes to the retention of the material (Hendawi & Nosair, 2020). The significance of the smart board in the field of education lies in its ability to increase students' motivation to learn and their ability to pay attention during class, as well as in its ability to increase participation in distance education and the possibility of implementing cooperative education, which enables new teaching methods. The usage of an IWB increases the effectiveness of the learning environment and frees up a significant amount of time for the teacher, enabling him or her to improve the course material (Wujec-Kaczmarek, 2021).

Previous Studies

Dweck (2019) examined the benefits of IWBs in the classroom The purpose of this study is to understand the procedure and the patterns among instructors who use it as a teaching tool. 156 instructors who were specifically picked from the scientific community made up the sample. A descriptive methodology called "which depends on the Questionnaire accomplish the goals, that have been verified" has been used for analysis. Results show that teachers have a strong tendency to use the interactive board and that utilizing it has several benefits. Additionally, it demonstrates that there are ratios in the trends of instructors referring to the sex variable and the state level in favor of Males and the fundamental elementary stage that are suggested for statistical significance. The preference for the diploma level is indicated by the lack of credentials in all sectors in statistically significant variances in teachers' trends. Additionally, the years of experience variable is included. Furthermore, there is no statistically significant link between the benefits of employing an IWB as a teaching aid.

Al-Dulaim (2020) examined teachers' and students' perceptions of the interactive board's use in the classroom at the Irbid Directorate of Education, as well as teachers' and students' attitudes toward it. To accomplish this, a questionnaire was designed and distributed at random to (30) instructors and (113) students. The results indicated that IWB use in the classroom was moderate. In addition, the results indicated that the degree of barriers to using an IWB in the classroom was moderate. The results also revealed that instructors' attitudes toward the use of IWBs in the classroom were indifferent, while students' attitudes were positive. In addition, the results indicated that there were significant disparities in the degree of obstacles perceived by instructors in favor of humanitarian specialization when using IWBs in the classroom. In addition, the results indicated that there were no significant differences in teachers' attitudes regarding the use of IWBs in the classroom based on teachers' areas of expertise.

Ghanem and Al-Otaibi (2020) provided a model for incorporating IWBs into the educational process in public schools, and determined the extent to which public school instructors use and incorporate IWBs. In addition, this study seeks to identify the skills required for public school instructors to utilize the IWB, as well as the obstacles that may impede the incorporation of IWBs into the educational process. The descriptive method and survey data collection were employed to attain these objectives. 296 teachers belonging to the Bureau of Alnahdah in Riyadh's public middle schools were selected at random. Due to the fact that the sample size only uses the IWB as a display tool, this study came to the conclusion that the implementation of the IWB into the educational process is done to a moderate extent by the individuals in the sample. One of the most

significant obstacles to the incorporation of an IWB into the educational process is the fact that these teachers have not been trained on how to incorporate the IWB into it.

Alrahbi and Saad (2022) The purpose of this study was to determine the attitudes of teachers of programs for students with learning disabilities toward the use of IWBs, as well as to identify the benefits and drawbacks of using IWBs to teach students with learning disabilities. Throughout her investigation, the researcher has adhered to scientific methodologies. Using the descriptive method, the researcher administered a questionnaire to 106 teachers with learning disabilities in order to examine their attitudes towards the interactive board, the benefits of using it with students with learning disabilities, and the challenges teachers face when using the interactive board. The investigation yielded a number of findings, the most significant being: The cumulative average of the teacher's perspective on the magnitude of the trend was (4.13), Teachers with learning disabilities have a very positive attitude toward the IWB, the IWB facilitates the use of visual, kinesthetic, and auditory teaching aids, there is support for the spread of the IWB in all schools, and the use of the IWB improves teachers' computer skills.-Teachers feel confident using the IWB because it is suitable for all grade levels and curriculums. And the total average of teachers' evaluations of the benefits of using the IWB in teaching students with learning disabilities was 4.24, which is extremely positive, and contributed to their increased learning speed, interaction, and motivation. The average teacher rating of these obstacles was 4.10, including the slow internet required to use the IWB, the lack of manuals for teachers explaining how to use the IWB, and the lack of maintenance required in the event of a technical failure.

Methodology

This study used both a quantitative approach and a descriptive technique to give a comprehensive, accurate, and systematic description of the demographics and other data of the population under consideration. Saunders et al. (2016) claim that the goal of descriptive quantitative research is to "characterize or describe the elements of the subject or situation under investigation." We look at the data and give our findings.

Population and Sample

As reported in the Saudi Ministry of Education's annual statistics report, all 4,780 instructors in the Asir region's preparatory schools were included in the study population. The sample size was determined using Morgan's table, and the data was collected from 357 different educators who were picked using a random selection process. Out of a total of 357 questionnaires, 320 were returned for processing, 8 were discarded owing to incomplete replies, and the remaining 312 were usable.

Research Instrument

The researcher used a variety of prior studies, including those carried out by Dweck (2019) and Ghanem and Al-Otaibi (2020), as the drive for the construction of the questionnaire as the study instrument. A two-part survey was conducted. In the first section, details on the respondents' "gender, and years of experience" are gathered. The second part of the survey has four dimensions to gauge the advantages of using the IWB, including 28 items.

Instrument Validity

Ten Saudi experts in educational technology assessed the study instrument for language formulation, scientific validity, and clarity, and they found it to be adequate. The findings indicate that all that needs to be done is to make some minor changes to the text.

Instrument Reliability

Measurement reliability may be checked by confirming that measurements can be repeated with the same sample and circumstances while keeping all other factors constant. The reliability of the replies was assessed using Cronbach's alpha. A survey may be trustworthy if it receives a score of 60% or higher (Saunders et al., 2016).

Table 1: Cronbach Alpha Test

The advantages of using the IWB	Value
In terms of the teacher	0.832
In terms of educational content	0.842
In terms of the learning process	0.798
In terms of the student	0.851
Total	0.802

Table 1 displays the results of the test, showing that the values obtained from the measurements were very trustworthy and fell within the range (0.798-0.851). Cronbach's alpha values for each questionnaire subscale are above.60, indicating good levels of internal consistency reliability. There is complete consistency throughout the items of the research instrument.

Data Analysis

The researcher looked at the open-ended questions in the study using the means, independent sample t-tests provided by the SPSS program. The independent sample t-test is utilized to compare the means of the two groups (Cuevas et al., 2004). The results, as decided by the methods used to define them, are described in the paragraphs that follow. The item was given a poor grade because the mean score was 2.33 or below. The item's moderate rating is based on its mean score, which runs from 2.34 to 3.66. The item had a good grade; its mean score was more than or equal to 3.67.

Findings and Discussion

The demographic data of the respondent, including "Gender" and "years of experience," were characterized using the descriptive-analytic approach. The following table shows that 64.1% of respondents were male and 35.9% were female, making males the majority of respondents. Regarding teachers with 6-10 years of experience, 45.2% of respondents were in this category, 26.9% were teachers with 1-5 years of experience, 17.3% had more than 10 years of experience, and 10.6% had less than one year of experience.

Table 2: The respondents profile

Variables	**Category**	**N**	**%**
Gender	Female	112	35.9
	Male	200	64.1
Years of experience	Less than 1 years	33	10.6
	1-5 years	84	26.9
	6-10 years	141	45.2
	More than 10	54	17.3

The mean and standard deviations for all items relevant to the advantages of using the IWB in the educational process were calculated in order to answer the first study question.

Table 3: Mean scores and standard deviation

N	**Items**	**Means**	**St.devs**	**Results**
	In terms of the teacher			
1	Helps define the overall goal and highlight and simplify ideas	3.85	0.85	A
2	Display the educational material in a logical and simple sequence	4.09	0.75	A

3	Helps explain difficult concepts and dangerous, rare and complex natural phenomena	4.07	0.78	A
4	Works to reduce the time, effort and energies of teachers	3.75	0.91	A
5	Can be used with different teaching styles and techniques	4.23	0.65	A
6	Help to organize and manage educational time effectively	3.90	0.82	A
7	Helps to follow the reactions and behavior of the students during the lesson	4.15	0.68	A
8	Can be used in all subjects taught	4.00	0.80	A
	Total	**4.00**	**0.59**	**A**
	In terms of educational content			
9	Help interact with content by writing, moving, and moving shapes	3.72	0.96	A
10	Availability of visual dimension advantages for educational content	3.91	0.90	A
11	Enhance educational content with its presentation tools	3.76	0.95	A
12	It makes it easy to save educational content and return to it easily	3.87	0.91	A
13	Facilitate discussions about educational content in class	3.82	0.92	A
14	Helps translate educational content into actual reality	3.95	0.89	
	Total	**3.84**	**0.76**	**A**
	In terms of the learning process			
15	Contribute to overcoming all that results from the use of chalk	3.82	0.92	A
16	Generate the need for learning through the diversity of educational means	3.73	0.96	A
17	It helps students to understand and assimilate the required educational content	3.77	0.94	A
18	It works to cut the monotony of the educational situation while learning	3.95	0.87	A
19	It is used in a variety of learning environments, including those that cater to people with special needs	3.87	0.90	A
20	Contribute to creating a dynamic of joint learning	4.02	0.83	A
21	Provide new opportunities for individual learning	4.10	0.77	
22	It helps to use groups in learning.	4.00	0.80	
	Total	**3.91**	**0.70**	**A**
	In terms of the student			
23	It attracts students' attention and stimulates their motivation during learning	4.10	0.70	A
24	The use of the whiteboard increases student motivation and engagement	3.73	0.91	A
25	It removes fear from students and forces them to engage in learning	3.77	0.90	A
26	It works to increase the student's self-confidence and break the barrier of shyness	3.72	0.93	A
27	Teach students to accept group work	3.90	0.80	A
28	Contribute to addressing individual differences among students	3.91	0.79	A
	Total	**3.86**	**0.75**	**A**
	All instrument	**3.90**	**0.49**	**A**

The mean score of the advantages of using the IWB in the educational process was 3.90, with a standard deviation of 0.49, as shown in Table 3. In other words, there is a high degree of advantages to using the IWB in the educational process. This result is consistent with Dweck (2019) and Alrahbi and Saad (2022), but inconsistent with Al-Dulaim (2020), and Alrahbi and Saad (2022) findings.

Regarding the advantages of using the IWB in the educational process in terms of the teacher, the mean score was 4.00, with a standard deviation of 0.59, the item with the highest mean value is "Helps to follow the reactions and behavior of the students during the lesson" (item 7), with a mean score of 4.15. Followed by item (2) which state "Display the educational material in a logical and simple sequence" with a mean value

(4.09). While item (3) which state "Helps explain difficult concepts and dangerous, rare and complex natural phenomena" came in the third rank of the mean score with (4.07). The lowest mean score is item 4 "Works to reduce the time, effort and energies of teachers" with a value of (3.75).

In addition to the advantages of using the IWB in the educational process in terms of educational content, the mean score was 3.84, with a standard deviation of 0.76, the item with the highest mean value is "Helps translate educational content into actual reality" with (3.95) (item 14). Followed by item (10) which state "Availability of visual dimension advantages for educational content" with a mean value (3.91). While item (12) which states "It makes it easy to save educational content and return to it easily" came in the third rank of the mean score with (3.87). the lowest mean score is item 9 "Help interact with content by writing, moving, and moving shapes" with a value of (3.72).

Also for the advantages of using the IWB in the educational process in terms of the learning process, the mean score was 3.91, with a standard deviation of 0.70, the item with the highest mean value is "Provide new opportunities for individual learning" with (4.10) (item 21). Followed by item (20) which state "Contribute to creating a dynamic of joint learning" with a mean value (4.02). While item (22) which states "It helps to use groups in learning" came in the third rank of the mean score with (4.00). the lowest mean score is item 16"Generate the need for learning through the diversity of educational means" with a value of (3.73).

Finally, for the advantages of using the IWB in the educational process in terms of the student, the mean score is 3.86 with a standard deviation of 0.75, the item with the highest mean value is It attracts students' attention and stimulates their motivation during learning" with (4.10) (item 23). Followed by item (28) which state "Contribute to addressing individual differences among students" with a mean value (3.91). While item (27) which states "Teach students to accept group work" came in the third rank of the mean score with (3.90). the lowest mean score is item 26 "It works to increase the student's self-confidence and break the barrier of shyness" with a value of (3.72).

This result can be explained by the fact that the use of the IWB contributes to the success of the educational process, which is predicated on the teacher's ability to prepare and present the educational material in a sequential and straightforward manner in order to achieve the desired educational outcomes. This result can also be explained by the fact that the use of the IWB contributes to overcoming many obstacles in the educational process when presenting educational content, and provides flexibility in presenting educational content in an engaging and appealing manner, thereby facilitating the absorption and comprehension processes. In addition, the advantages of the IWB and its use in the learning process, according to the respondents, were intended to deviate from the routine and generate a kind of change from the variety of educational means and overcome some of the problems of the traditional blackboard, as it makes learning more effective than other methods by motivating the student to learn and making him attentive and aware of everything that is going on in the classroom. According to the respondents, the IWB aids in defining the overall objective, highlighting and simplifying ideas, displaying educational content in a logical and straightforward sequence, and explaining difficult concepts and hazardous, uncommon, or complex natural phenomena. It also helps students interact with the content by writing, moving, and animating shapes, provides the advantages of the visual dimension of the educational content, contributes to overcoming all that results from the use of chalk, generates the desire to learn from the diversity of educational means, and breaks up the monotony of the educational situation by attracting the students' attention and stimulating their motivation during learning.

The independent sample 't-test was employed to determine the statistically significant differences in the advantages of using the IWB in the educational process due to the variables of gender in order to address the second research question.

Table 4. Independent Samples T- test

Variables	N	Mean	St.dev	df	t	Sig
Female	112	3.95	0.46	311	1.135	0.093
Male	200	3.98	0.43			

According to Table (4), the mean male replies for the advantages of using the IWB in the educational process were (3.98), while the mean female responses were (3.95). Also, the Sig of two groups divided by gender is (0.093), indicating that neither gender significantly affects the advantages of using the IWB in the educational process. This result is inconsistent with the study of Dweck (2019). This indicates an interest in modern technological means that receives more attention from both genders than the use of the traditional blackboard.

Also, the one-way analysis of variance was employed to determine the statistically significant differences in the advantages of using the IWB in the educational process due to the variables of years of experience in order to address the second research question.

Table 5. ANOVA

Variable	Gropus	Sum of Squares	df	Mean Square	F	Sig
Years of experience	Between groups	0.25	3	0.050	0.815	0.420
	Within groups	22.033	309	0.092		
	Total	22.283	312			

According to Table 5, there are no disparities between categories in terms of years of experience. Where the Sig is (0.420), which indicates that years of experience have no statistically significant on the advantages of using the IWB in the educational process.

Conclusions

This study sought to determine the advantages of using the IWB as an educational tool from the point of view of middle school teachers in the Asir region. The advantages of using the IWB as an educational tool were evaluated based on four dimensions that are the in terms of the teacher, educational content, the learning process, and the student. According to the respondents, the benefits of the IWB and its use in the learning process were designed to break the routine and generate a sort of change from the variety of educational means and overcome some of the problems of the traditional blackboard. This makes learning more effective than other methods by motivating the student to learn and making him attentive and aware of everything that is happening in the classroom. Respondents noted that the IWB was helpful in establishing clear goals, emphasizing key points, arranging material in an understandable fashion, and breaking down complicated ideas and potentially dangerous or puzzling natural events. It also encourages engagement with the material by allowing students to draw, manipulate, and animate forms. offers the benefits of the visual dimension of the educational content, aids in overcoming all that results from the use of chalk, creates a desire to learn from the diversity of educational means, and breaks up the monotony of the educational situation by attracting the attention of the students and stimulating their motivation while learning.

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