

## The Role of Modern Technology in Motivating Individuals with Physical Disabilities to Engage in Adapted Sports Activities

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### **Abstract:**

*The present study aimed to investigate the role of modern technology in motivating individuals with motor disabilities to engage in adapted physical and sports activities. To achieve the study's objectives, the researcher adopted a descriptive approach. A questionnaire consisting of 14 items in its final form was designed to measure the role of modern technology in encouraging individuals with motor disabilities to participate in adapted sports activities. It was administered to a sample of 16 individuals. Using a set of statistical methods, the study concluded that modern technology – through the contribution of social media platforms and online forums – plays a significant role in raising awareness, increasing knowledge, and promoting engagement in adapted sports among people with motor disabilities.*

**Keywords:** *Modern technology – Adapted physical and sports activity – Individuals with motor disabilities*

## **Le rôle de la technologie moderne dans la motivation des personnes handicapées physiques à s'engager dans des activités sportives adaptées**

### **Résumé :**

*La présente étude visait à examiner le rôle de la technologie moderne dans la motivation des personnes souffrant de handicaps moteurs à s'engager dans des activités physiques et sportives adaptées. Pour atteindre les objectifs de l'étude, le chercheur a adopté une approche descriptive. Un questionnaire composé de 14 items dans sa forme finale a été conçu pour mesurer le rôle de la technologie moderne dans l'encouragement des personnes souffrant de handicaps moteurs à participer à des activités sportives adaptées. Il a été administré à un échantillon de 16 personnes. En utilisant un ensemble de méthodes statistiques, l'étude a conclu que la technologie moderne - à travers la contribution des plateformes de médias sociaux et des forums en ligne - joue un rôle important dans la sensibilisation, l'augmentation des connaissances et la promotion de l'engagement dans les sports adaptés parmi les personnes ayant un handicap moteur.*

**Mots-clés :** *Technologie moderne - Activité physique et sportive adaptée - Personnes handicapées moteur*

## Introduction

### Theoretical Framework

In light of rapid technological advancement and the widespread use of the internet, digital platforms—including electronic sports websites and social media—have come to play an increasingly important role in providing information and encouraging individuals to engage in physical activities. However, a significant segment of society continues to face unique challenges in this regard: individuals with motor disabilities. Encouraging this group to participate in adapted physical activities is vital for their overall health and well-being, which requires a specialized knowledge infrastructure and sustainable support.

People with motor disabilities face numerous challenges when it comes to engaging in sports, including limited access to appropriate facilities, a lack of resources, and a scarcity of tailored programs. Here, digital platforms emerge as effective tools for delivering guidance and resources that support this group—ranging from advice on suitable exercises to specialized training programs. In addition, social media platforms offer a valuable means for enhancing interaction and communication, enabling individuals to share experiences and exchange knowledge, thus fostering a sense of belonging and mutual motivation.

Social media platforms such as Facebook contribute to supporting individuals with motor disabilities by creating digital environments that encourage participation in adapted physical activity. These platforms assist in improving both psychological and motor aspects, as adapted sports help reduce isolation and negative emotions while promoting social integration. They

also enhance motor skills and general health, which positively influences self-esteem and personal development.

Accordingly, this study aims to explore the role of digital platforms-whether electronic sports websites or social media-in motivating individuals with motor disabilities to engage in physical activity.

**Adapted Physical Activity**, as well as its contribution to promoting positive attitudes, modifying undesirable behaviors, and ensuring the continuity of sports performance for this important segment of society, is highlighted.

### **Statement of the Problem:**

The problem of the study was identified through the researcher's observation of numerous sports websites that may contribute to encouraging the practice of adapted physical activities. These platforms play a significant role in motivating individuals with physical disabilities to engage in adapted sports. The main challenge faced by people with physical disabilities is accessing appropriate and suitable sports opportunities that match their needs and physical abilities.

Sports websites serve as one of the effective means for providing knowledge resources and guidance on types of suitable sports activities. They offer adapted training programs tailored to individuals' motor abilities. By offering diverse content including stretching exercises, muscle strengthening, and appropriate nutritional guidelines, these platforms can motivate physically disabled individuals to take steps toward improving their health and physical fitness.

Digital platforms also play a vital role in building supportive and encouraging communities, where physically disabled trainees can exchange experiences and motivate one another. This fosters a sense of belonging and ongoing encouragement to maintain regular participation in adapted sports. In this way,

sports websites can be effective partners in boosting the self-confidence of individuals with physical disabilities and reinforcing their belief in their ability to succeed in the field of adapted sports—thus enhancing their overall health and well-being. From this, the following research question arises:

**Do modern technologies play a role in motivating individuals with physical disabilities to participate in adapted physical activities?**

### **Research Questions:**

- Do social media platforms play a role in motivating individuals with physical disabilities to engage in adapted physical activities?
- Do online forums play a role in motivating individuals with physical disabilities to participate in adapted physical activities?

### **Research Hypotheses:**

- Social media platforms play a role in motivating individuals with physical disabilities to participate in adapted physical activities.
- Online forums play a role in motivating individuals with physical disabilities to participate in adapted physical activities.

### **Research Objectives:**

To understand the role of modern technology in motivating individuals with physical disabilities to engage in adapted physical activities.

- To identify the role of social media platforms in encouraging individuals with physical disabilities to participate in adapted physical activities.
- To explore the role of online forums in motivating individuals with physical disabilities to engage in adapted physical activities.

### **Significance of the Study:**

Practicing adapted sports is essential for improving the health of individuals with physical disabilities, as they can access suitable training programs specifically designed to meet their unique needs. This is made possible through the information and guidance available on sports-related websites. By participating in sports communities via these digital platforms, individuals feel a sense of belonging and ownership, which fosters interaction, experience-sharing, and mutual motivation.

Additionally, offering rich sources of information about the importance of adapted physical activity for individuals with physical disabilities – along with guidance on how to overcome challenges and achieve success in this field – contributes to increased awareness and enhanced self-confidence. Through support and encouragement provided by sports websites, individuals with physical disabilities can build self-trust and strengthen their belief in their abilities, which motivates them to achieve greater success in participating in adapted sports activities.

## **1. Definition of Concepts and Terms:**

### **1.1 Modern Technology :**

**Terminological Definition:** A set of tools and methods resulting from scientific and cognitive advancement, used to improve individuals' lives and facilitate various processes.

**Operational Definition:** Modern technology refers to all digital devices such as smartphones, computers, tablets, and the associated digital applications used to provide information.

To improve communication or facilitate access to activities and services, with the aim of enhancing the participation of individuals with physical disabilities in adapted sports activities.

## 1.2 Adapted Physical Activity

**Terminological Definition:** It is a set of advanced and diverse programs of sports and games tailored to the abilities of individuals with special needs, enabling them to fulfill their desire to engage in sports activities that benefit them and help them utilize their capabilities. (Zeroual Mohamed, Nawasir Mostafa, 2021, p. 44)

**Operational Definition:** It is a type of sports activity that has been modified or adapted to be suitable for individuals with special needs or disabilities. The goal of adapted physical activity is to provide equal opportunities for all individuals to participate in sports and benefit from its health and social advantages.

## 1.3 Individuals with Physical Disabilities

**Terminological Definition:** It refers to a person's inability to perform a task that others can do. Disability becomes a limitation when it restricts a person from performing expected activities at a certain stage of life. (Aliwa Alaa El-Din, Riyadh Osama, 2006)

**Operational Definition:** It is a condition that affects an individual's movement and limits their ability to move naturally or transition easily. This disability can result from issues in the musculoskeletal or nervous system.

## Applied Aspect:

### 2. Exploratory Study :

The exploratory study is the first step in the research process. It helps the researcher gain a comprehensive understanding of the aspects of the field study. The purpose of this study is to ensure the appropriateness of the research location and the validity of the tools used for collecting information about the research topic.

- For this reason, the researcher conducted this exploratory experiment to identify the following:
- Obtaining consent from the study sample.
- Understanding the study population and potential challenges.
- This requires conducting a field survey and interacting with individuals from the target community.
- Assessing the suitability and validity of the tool: The researcher must evaluate the tool used in the study to ensure its appropriateness and effectiveness.

### 3. Research Methodology:

The methodology refers to the framework followed by the researcher to conduct the study or research in order to understand the problem and reach desired solutions or conclusions. The choice of methodology depends on the nature of the topic and the goal of the research, and may vary from one study to another based on these factors.

-The researcher employed the **descriptive method**, which is suitable for this study.

#### 3.1 Study Population:

The study population refers to the group or community that constitutes the core of the research and includes all individuals

or elements related to the studied phenomenon. Exploring the entire research population is a challenging and costly task, requiring significant effort and resources. For this reason, the researcher may narrow the scope of the study by selecting a sample from the population that is adequately representative and effectively serves the research objectives. This approach helps reduce costs, time, and required effort while ensuring accurate and reliable results.

-The study population consists of **physically disabled individuals undergoing training in vocational training and apprenticeship centers.**

### **3.2 Study Sample:**

The study sample is defined as a specific part selected from the original population. It may include a group of individuals or elements that represent the population as a whole. The researcher relies on the selected sample to build the research, aiming to ensure that the sample is representative of the overall population. This allows for accurate and reliable results that can be generalized to the original population. General patterns or findings can then be confidently inferred from the sample to the broader population.

- The sample consisted of 16 physically disabled individuals undergoing training in vocational training and apprenticeship centers.

## **4. Research Tool:**

### **4.1 Questionnaire Form:**

-The questionnaire was used as the data collection tool in this study due to its availability and ease of use, in addition to being the most suitable tool for achieving the research objectives.

-The questionnaire consists of a set of questions related to the specific topic and is either sent or handed directly to the targeted individuals to obtain their responses. (Kounda Salma,2018, p22)

The final version of the questionnaire consists of two main sections, each section divided into a set of questions.

**The following table illustrates the questionnaire's axes and the questions under each section.**

**Table (01): Number of Questionnaire Sections**

No	First Section: Sports Electronic Articles
01	Your subscription to social media platforms contributes to raising awareness about adapted physical activities.
02	Using the most popular social media platforms helps in introducing and promoting adapted activities.
03	You spend a lot of time on social media following adapted physical activities.
04	You use social media to learn about the value of adapted physical activities.
05	Social media platforms provide insight into the value of engaging in adapted physical activities.
06	Social media platforms enhance knowledge about participating in adapted physical activities.
07	You encourage your peers on social media to get involved in adapted physical activities.
No	Second Section: Sports Electronic Forums
01	You participate in online sports forums to gain information about engaging in adapted physical activities.
02	You find that sports forums inspire and motivate you to start practicing adapted physical activities
03	You believe that sports forums provide sufficient and accurate information about suitable sports activities

	<b>for you.</b>
<b>04</b>	<b>You feel that sports forums contribute to positively changing your sports lifestyle.</b>
<b>05</b>	<b>You find that participating in sports forums motivates you to continue practicing adapted physical activities regularly.</b>
<b>06</b>	<b>You find that sports forums provide you with an opportunity to interact with others who share their experiences and motivations</b>
<b>07</b>	<b>You would like to see more sports-related content on forums aimed at motivating you toward practice.</b>

#### 4.2. Scoring Method:

The researcher relied on the **Likert scale** method to evaluate the responses of the participants. The scores obtained by each individual for each statement in the questionnaire can be accumulated. The **three-point Likert scale** was used in this study.

### 5. Psychometric Properties of the Study Tool:

#### 5.1. Validity:

In research context, **validity** refers to the reliability or accuracy of the tool or test in measuring what the researcher intends and achieving the study's objectives. Therefore, a high level of validity means that the tool is capable of providing accurate and reliable measurements of the phenomenon the study aims to examine. This allows the researcher to confidently use the obtained data to guide interpretations and conclusions towards reality. (Al-Mashhdani, Saad Salman, 2019, p. 15)

**-To calculate the validity of the study tool, the researcher relied on the validity of experts.**

##### 5.1.1 Expert Validity:

The initial version of the questionnaire was presented to a group of **three experts** who specialize in adapted physical activities to evaluate its validity.

### 5.1.2 Self-Validity:

Self-validity is defined as the square root of the reliability coefficient. Since the reliability of our tool was 0.79, its self-validity is 0.88.

$$\sqrt{0.79} = 0.88$$

### 5.2 Reliability:

In a research context, **reliability** refers to the stability of the measurement or test results over multiple applications. In other words, if a measurement or test is repeated for an individual, the results will be similar or consistent each time. When a test is reliable, it demonstrates high objectivity, meaning it measures the intended property consistently and objectively, so that any researcher applying or evaluating the test will obtain the same results, regardless of the circumstances surrounding the test. (Al-Mashhdani, Saad Salman, 2019, p. 10)

-To calculate the reliability of the study tool, the researcher relied on Cronbach's Alpha coefficient.

**Table (02): Shows the reliability coefficient result using the Cronbach's Alpha formula.**

Variable	Number of Statements	Cronbach's Alpha Coefficient	Significance Level
First Section	07	0.76	0.05
Second Section	07	0.82	

The **Cronbach's Alpha coefficient** was high, with a value of **0.80**, which indicates strong reliability for the tool.

### 5.3. Objectivity:

The **objectivity** of the test refers to the minimal or absence of variation in the evaluation of the performance of the participants, regardless of differences among the evaluators. The lower the variance between the evaluators, the more objective the test is, meaning it exhibits a high degree of objectivity. (Al-Mashhdani, Saad Salman,2019,p.23)

## 6. Statistical Methods Used in the Study:

In the current study, the **SPSS software (version 25)** was used to process the data and information. The following statistical methods were employed:

- **t-test for a single sample.**
- **Cronbach's Alpha coefficient for reliability.**
- **Mean and standard deviation** to assess the level of the variable among the sample participants.

## 6.1. Analysis of Results and Discussion:

### 6.1.1. *Presentation and Analysis of the First Hypothesis:*

**Text of the First Hypothesis:**

**Social media plays a role in motivating individuals with physical disabilities to engage in adapted physical activities.**

To verify this hypothesis, we used the **t-test for a single sample** to check for significant differences between the mean scores of the overall score for the first section.

**Table (03): Represents the Mean Scores and Standard Deviations for the First Section**

Sample	Mean Score	Hypo- thetical Mean	Stan- dard Devia- tion	Signifi- cance Level	T-test	Sig	Deci- sion
16	15.59	1.47	0.05	9.77	0.00	14	Signi- ficant

Source: Prepared by the researcher based on SPSS outputs.

### **Analysis of the Results in Table 03:**

The table represents the mean scores and standard deviations of the responses from the study sample on the questionnaire. The mean score of the responses was **15.59**, with a **standard deviation** of **1.47** and a **significance level (sig)** of **0.00**. Upon examining the significance of these differences, we find that the **sig** value is less than the significance level we set, which is **0.05**, and even at **0.01**.

- -Therefore, the alternative hypothesis is accepted: Social media plays a role in motivating individuals with physical disabilities to engage in adapted physical activities.
- -The study showed that individuals spend a significant amount of time on social media following adapted physical activities, which contributes to raising awareness about the importance and health and psychological benefits of these activities.
- -These platforms allow individuals to access valuable information on how to practice these activities, where they are available, and the necessary equipment, which increases users' knowledge base.
- -Through sharing successful experiences and motivational videos, social media encourages individuals, including those with physical disabilities, to engage in these activities.

**Social Media Platforms** are no longer just tools for entertainment or communication; they have become powerful instruments for social and positive change in the context of adapted physical activities. These platforms play a central role in raising awareness, disseminating knowledge, and encouraging participation in adapted physical activities. **This supports the validity of our hypothesis:**

Social media plays a role in motivating individuals with physical disabilities to engage in adapted physical activities.

*6.1.2. Presentation and Analysis of the Second Hypothesis: Text of the Second Hypothesis:*

**Electronic forums play a role in motivating individuals with physical disabilities to engage in adapted physical activities.**

To verify this hypothesis, we used the **t-test for a single sample** to check for significant differences between the mean scores of the overall score for the second section.

**Table (04): Represents the Mean Scores and Standard Deviations for the Second Section**

Sample	Hypo- thetical Mean	Mean Score	Stan- dard Devia- tion	Si- gnifi- cance Level	T- test	Sig	Deci- sion
16	14	14.42	1.86	0.05	6.30	0.01	Si- gnifi- cant

Source : Prepared by the researcher based on SPSS output.

**Analysis of the Results from Table 04:**

- This table represents the mean scores and standard deviations of the responses from the study sample on the

questionnaire. The mean score of the responses was 14.42 with a standard deviation of 1.86 and a significance level of sig 0.00.

- By examining the significance of these differences, we find that the value of sig (significance level) is less than the significance level we used, which is 0.05 and even at 0.01.
- -Thus, the alternative hypothesis is accepted: Electronic forums play a role in motivating individuals with physical disabilities to engage in adapted physical activities.

## **7. Discussion of the Results:**

- Electronic sports forums play a significant role in motivating individuals with physical disabilities to engage in adapted physical activities.
- -This is attributed to the role these forums play in highlighting the importance of adapted physical activities for individuals with physical disabilities.
- -These forums provide profound positive aspects, beyond being just a physical exercise and sport for them.
- They go beyond being a successful means of recreation for individuals with mobility impairments; they also play an important role in restoring self-realization, patience, and the desire to gain experience and enjoy life.
- Additionally, through these forums, individuals can exchange advice and experiences on how to overcome challenges and difficulties they may encounter while practicing adapted physical activities.
- This allows participants to feel supported and motivated by a community that understands their challenges, shares their goals, and helps them integrate into it. Online social interaction and participation in electronic sports communities provide this space.

- -This confirms the validity of our hypothesis: Electronic sports forums play a role in motivating individuals with physical disabilities to engage in adapted physical activities.

### 7.1. General Hypothesis:

**Text of the General Hypothesis: Modern technology plays a role in motivating individuals with physical disabilities to engage in adapted physical activities.**

To test this general hypothesis, we used the one-sample t-test to check for significant differences between the mean scores for the overall survey.

**Table 05: Represents the mean scores and standard deviations of the responses from the study sample for the overall score on the questionnaire.**

Sample Size	Hypo- the- tical Mean	Mean Score	Standard Devia- tion	Signifi- cance Level	T-Test	Sig	Deci- sion
16	14	30.01	3.32	0.05	8.24	0.00	Si- gnifi- cant

**Source: Prepared by the researcher based on SPSS output.**

### Analysis of Results from Table 05:

The results from Table 05 represent the overall mean scores and standard deviations of the responses from the study sample. The overall mean score for the responses was **30.01** with a standard deviation of **3.32** and a significance level (sig) of **0.00**. By analyzing the significance of these differences, we find that the **sig** value (significance level) is less than the significance level we used, which is **0.05**, and even at **0.01**. Therefore, we accept the alternative hypothesis: **Modern technology plays a**

**role in motivating individuals with physical disabilities to engage in adapted physical activities.**

## **7.2. Discussion:**

- -Modern technology plays a strong role in motivating individuals with physical disabilities to engage in adapted physical activities. Social media and online forums, as part of modern technology, provide effective tools to increase awareness, spread knowledge, and offer psychological and social support. This integrated effect of technology helps individuals with mobility impairments engage in adapted physical activities, enhancing both their physical and psychological well-being.
- -Social media and online forums play a crucial role in encouraging individuals with mobility impairments to participate in adapted physical activities.
- -These roles complement each other to form part of the broader impact of modern technology. When combining the role of social media (which provides quick access and motivational content) with that of online forums (which offer specialized knowledge and psychological support), the effect of technology becomes more comprehensive and effective in motivating individuals with mobility impairments.

This proves the validity of our hypothesis: Modern technology plays a role in motivating individuals with physical disabilities to engage in adapted physical activities.

## Conclusions

**Sports Websites** play a role in motivating individuals with physical disabilities to engage in adapted physical activities by providing an interactive environment for them to communicate with others who share similar challenges. They can exchange experiences, provide emotional support, and motivate one another.

**Electronic Sports Articles** also play a role in motivating individuals with mobility impairments to engage in adapted physical activities by providing valuable information about suitable activities and the necessary adjustments to accommodate their needs, allowing them to make informed decisions.

**Online Sports Forums** contribute to motivating individuals with mobility impairments to engage in adapted physical activities. These forums may feature success stories and challenges overcome by others, which can inspire and encourage participants to continue their efforts.

**Online Sports Communities** can create a supportive environment where individuals feel a sense of belonging and motivation. This can significantly encourage participants to achieve their fitness goals.

## Suggestions and Recommendations:

**Develop Special Platforms for Disabled Individuals:** Launch electronic sports platforms specifically targeting individuals with mobility impairments, providing customized content and tips on suitable activities for different types of disabilities.

**Encourage Active Participation in Forums:** Encourage participants to actively engage in forums by asking questions and

sharing their personal experiences, which will help build a strong interactive community.

**Include Content on Benefits and Overcoming Challenges:** Add content that focuses on educating participants about the benefits of adapted physical activities and how to overcome individual challenges.

**Organize Virtual Sports Events:** Organize virtual fitness challenges or online sports competitions to motivate participants and promote healthy competition.

**Provide Information on Assistive Technology:** Provide information on assistive technology and tools that can enhance the experience of individuals with mobility impairments during physical activities.

**Social Media's Role:** Social media plays a role in introducing adapted physical activities since the majority of respondents use and follow sports-related content on their smartphones through social media platforms.

**Promote Awareness Through Social Media:** Social media platforms, by following sports pages, motivate participants to engage in and seek out adapted physical activities.

**Influence through Influencers:** Social media also contributes to shaping participants' attitudes and increasing awareness by following active sports coaches and trainers through these platforms.

### **Additional Suggestions:**

**Electronic Applications:** Propose electronic applications developed by specialists that contribute to highlighting the importance of adapted physical activities from various perspectives (e.g., awareness, involvement).

**Create Online Pages and Websites:** Establish websites that focus on promoting methods for practicing adapted physical activities for individuals with special needs.

**Strengthen Social Organizations:** Activate the role of social organizations by raising awareness among individuals with special needs about the importance of practicing adapted physical activities at an early age.

**Enhance Social Media Usage:** It is essential to focus on social media to improve the work presented and ensure it aligns with the needs of this specific group.

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