

Designing an Electronic Scale for Assessing Students' Attitude towards Mobile education Teaching Methods for Physical Education Courses at Minia University

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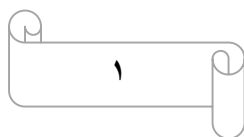
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Introduction and Research Problem:

In recent times, new ideas have emerged in the field of education and the educational process in general. Individuals seeking success and adaptation to these developments in their lives need to rely on orientation. This orientation plays a crucial role in improving the cognitive achievement of students in general and specifically those in the College of Physical Education. The educational process often fails to meet the requirements, preferences, and attitudes of students (٥:١٦).

Teachers must be familiar with the stages of development, knowledge of the orientation towards each age group, and understand the preferences and desires of each age group. This enables them to align with the educational process, forming a comprehensive framework from all aspects and contributing to behavioral changes in students' attitudes. The aim is to promote positive changes in students' orientation and shift from negative to positive attitudes (٧:١٧). Tahawi (٢٠٠٦) highlighted that students with a positive mood and comfort can enjoy and excel in the curriculum, emphasizing the positive orientation towards teaching methods in the College of Physical Education (٥:١٦).

Orientation is defined as an assessment process or idea, including anything a person can hold in their mind, ranging from ordinary to abstract things. It encompasses individuals, groups, ideas, cognitive aspects such as information and knowledge, emotions such as feelings, and behavior such as the inclination to interact with the subject matter (١٢:١٨).



However, orientations may vary from one semester to another, from one school to another, and from one gender to another. Development of orientation towards subjects depends on three factors: student achievement, scientific knowledge of the subject, and teaching methods, available materials, classroom management, social factors, family environment, and parental educational background (٨:٦).

Teaching methods courses are essential for physical education graduates in general and teaching staff in particular. These courses are pivotal in explaining sports-related academic subjects and practical applications, despite the existence of other methods based on explanation (٦٦:١١).

Rabab Jameel in ٢٠١٦ stated that mobile learning is considered a new use in the field of education. Mobile learning involves using wireless devices in the learning process, representing a form of mobile technology-based learning. It provides an open and unrestricted means for everyone, not bound by time or place, making it an extension of e-learning and a form of distance education (٤٥:٦).

Several studies, including those by Ahmed Gamal Hassan (٢٠٢١), Hitler and others (٢٠٠٠), El-Hanawy (٢٠٠٨), Amer and others (٢٠٠٢), Kandil and others (٢٠٠٦), and Jalal Saber (٢٠١٠), indicated that e-learning or mobile learning methods have significantly contributed to improving students' attitudes toward learning academic subjects. This modern approach aligns with technological advancements, especially through the use of mobile devices such as smartphones and tablets.

this presents new challenges for students, necessitating an understanding of their attitudes toward this diversity in learning processes. This requires designing an electronic scale to measure students' orientation toward using mobile learning applications in teaching methods for physical education courses (٧) for students at Minia University. The purpose of this design is to understand the contribution of mobile learning to guiding students' attitudes toward technology-based learning processes.

Research Aim:

The research aim to design an electronic scale for measuring students' Attitude toward using mobile learning in teaching methods for physical education courses at Minia University.

Research Questions:

١. What are the Items of the Attitude scale toward teaching methods courses among students at the Faculty of Physical Education at Minia University?

Research Terms:**Attitude:**

It is the state of nervous and psychological readiness regulated through an individual's experience. It has instructive and guiding effects on an individual's response to all situations and may refer to the acquired preparedness or inclination that appears in an individual's behavior when purposefully evaluating a subject in a coordinated and determined manner (٥٠:٢).

Electronic Attitude:

The Attitude of individuals towards a scale and responding to the requirements in an organized and coordinated electronic manner (procedural definition).

Mobile Learning:

An educational process carried out through a mobile learning device or in a situation where mobile learning devices and tools are available (٩:١٥).

Research Method:

The researchers used a descriptive method by survey method.

Research Population and Sample:

The researchers selected Intentional sampling from fourth-year students majoring in physical education teaching at the College of Physical Education, Minia University. The sample included ٢٠ male and female students in the first semester of the academic year ٢٠٢٣/٢٠٢٤.

Instrument:

The researchers prepared the electronic scale using Google Forms, ensuring that all scale items were suitable for the conditions of testing this type of learning.

A - Scale Objective Definition:

The objective of the scale is to identify the emotional aspects of the sample individuals towards the teaching methods of physical education (٢) course using some mobile learning applications on the students of the Faculty of Physical Education at Minia University.

٢- Scale Item Formulation:

The researchers formulated the scale items initially, with a total of (١٨) statements, including (١٣) positive statements and (٢) negative statements. Care was taken during formulation to ensure that each statement has a specific and correct meaning and does not carry more than one interpretation.

٣- Content Validity for Scale Items:

The statements were compiled into a form and presented to a group of Expert from the faculties of physical education, (٧) with experienced at least (١٠) years, and specialized field curriculum, teaching methods, and sports psychology (Appendix ١). This was done to assess the validity of the statements, and they agreed on (١٥) statements, including (١٣) positive and (٢) negative statements.

٤- Scale in final form:

The researchers finalized the scale by writing its format, which includes a number of statements and specific instructions explaining the response method. They utilized five responses for each statement, as follows:

- Strongly Agree (٥ points)
- Agree (٤ points)
- Neutral (٣ points)
- Disagree (٢ points)
- Strongly Disagree (١ point)
- Thus, the minimum score for the scale became (١٥) points, the maximum score (٧٥) points.

٥- Scientific Coefficients for the Scale:

A- Internal Consistency Validity:

To assess the internal consistency Validity, the scale was administered to a Pilot study, consisting of (٢٠) twenty students. The correlation coefficients between the score of each Item and the total score of the scale were calculated. Table (١) illustrates this.

Table (١)

Correlation Coefficients between the Score of Each Item and the Total Score of the Scale ($n = ٢٠$)

Statement	Correlation Coefficient	Statement	Correlation Coefficient
١	٠,٦٧	٩	٠,٧٦
٢	٠,٧٤	١٠	٠,٧٩
٣	٠,٧٧	١١	٠,٨٤
٤	٠,٦٧	١٢	٠,٧٣
٥	٠,٧٠	١٣	٠,٦٤
٦	٠,٧٤	١٤	٠,٦٤
٧	٠,٧٥	١٥	٠,٧٩

The critical (r) value at a significance level of ٠,٠٥ is ٠,٤٤٤.

From the previous table, it is evident that the correlation coefficients between the total score of each dimension of the Teaching Methods Attitudes Scale and its overall score ranged from (٠,٦٤ to ٠,٨٤). These correlation coefficients are statistically significant, indicating internal consistency of the scale.

B- Scale Reliability:

To assess the Reliability of the scale, the researcher utilized Cronbach's alpha coefficient by administering the questionnaire to a sample of (٢٠) twenty students from pilot study. Table (٢) below illustrates this:

Table (٢)

Reliability Coefficients for the Teaching Methods Attitudes Scale

$n = ٢٠$

Variable	Mean	Variance	Standard Deviation	Cronbach's Alpha
Attitude Scale	٥٤,٩٠	١٨٧,٠٤	١٣,٦٨	٠,٩٤

The critical (r) value at a significance level of ٠,٠٥ is ٠,٤٤٤

The researchers found that the alpha coefficient for the scale was ٠,٩٤, which is a statistically significant correlation coefficient, indicating the reliability of the scale under investigation.



Results and Discussion:

The researchers designed an electronic scale to measure students' attitudes towards the teaching methods of physical education Course. The final version of the scale consisted of ١٥ statements distributed across two categories: positive and negative. The scale demonstrated high internal consistency, as evidenced by the high alpha coefficient of ٠,٩٤. This suggests that the scale is a reliable tool for assessing students' attitudes towards the researched educational program.

Analyzing Table (١), the researchers observed that the validity coefficients for the scale electronic Attitude in the research ranged from ٠,٦٤ to ٠,٨٤. This indicates the correlation of the statements with each other and their correlation with the total score of the scale under investigation. This analysis suggests that the scale has high validity coefficients, making it a valid tool for evaluating the attitudes of the educational program content relevant to the research.

The results also show complete agreement in the selected words that form the Items. The diversity in statements.

Conclusion and Recommendations:

Conclusions:

١. The electronic Attitude scale towards the use of mobile learning in the teaching methods of physical education is valid for use with the research sample.
٢. The electronic Attitude scale using mobile learning applications for the teaching methods of physical education for fourth-year students in the Faculty of Physical Education is highly reliable and stable according to applied statistical standards.

Recommendations

١. Utilize the electronic Attitude scale to assess students' Attitude towards using mobile learning in the teaching methods of physical education.
٢. Encourage educational administrators in the field of physical education to design electronic Attitude scales using mobile learning applications for others physical education courses.

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Abstract

Designing an Electronic Scale for Assessing Students' Attitude towards Mobile education Teaching Methods for Physical Education Courses at Minia University

This research aims to design an electronic scale to assess the attitude towards using mobile learning in teaching the Teaching Methods in Physical Education course for students of the Faculty of Education, Minia University. The descriptive survey method was employed due to the nature of the research. The research community was purposefully and randomly selected from fourth-year students specializing in Teaching Physical Education at the Faculty of Physical Education, Minia University, during the academic year ٢٠٢٣/٢٠٢٤. The total sample size was ٢٠ male and female students.

The researcher utilized statistical software to process the statistical data using mean, standard deviation, median, and skewness coefficient. The research results indicate the final form of an electronic scale for assessing the attitude towards using mobile learning in teaching the Teaching Methods in Physical Education course for students of the Faculty of Education, Minia University. The researchers recommend applying the electronic attitude scale for both practical and theoretical courses to assess students' attitudes towards Teaching Physical Education and evaluate its effectiveness in the assessment process.