

The Effect of the Pentrich Model on the Cognitive Achievement of International Law Subjects of Handball for Students

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Abstract

The importance of the research was to prepare educational units according to the Pinterch model for the subjects of international law handball for students and to identify the effect of those units on the cognitive achievement of the subjects of international law handball for students of the experimental group. As the research problem was represented in the researcher's attempt to delve into and use the Pinterch model to provide students with the knowledge side of the subjects of international law in handball because the law contains overlap and situations that the student cannot master except through the use of modern methods and methods where the learner has the freedom to choose what he learns and in the way that it suits it, so the researcher tried to use this model as a step to address the weakness in the cognitive side of the international law of handball for students. While the objectives of the research were to prepare educational units according to the Pintersch model for the subjects of international law handball for students. As well as identifying the effect of educational units according to the Pinterch model in the cognitive achievement of the subjects of international law handball for students of the experimental group.

Keywords: Cognitive Achievement, International Law, Pentrich, Model

A. Introduction

Recent years have witnessed great progress with a clear development in the various aspects of life, especially in the educational field. One of the areas covered by this development is the diversity in the application of teaching strategies, methods and methods, and the educational bodies have become a great burden to keep pace with this change in the entire joints of the educational process - learning and development, education is no longer based on indoctrination and stuffing minds with information for the purpose of memorization only, but rather it has become based on organizing students' learning and providing conditions conducive to bringing about desired changes in their behavior in a way that ensures their integrated development in all psychological, mental, emotional and social aspects, so it was necessary that the role of the

learner become (The student) is pivotal in the education process and that we teach him how to think, not how to memorize the curriculum decisions without understanding them and thus participate in life in a positive way and be able to simulate the large amount of information. (Al-Harthy, Ibrahim Ahmed Muslim, 1999, p65).

Physical education is an important field of education, as it prepares the individual for physical, skill, intellectual and psychological preparation. The educational models are the means that will help teachers in how to deliver the scientific material to the learners well. When we seek to develop the sciences of physical education, it is necessary to adopt these means and the results of research and studies, which are the mainstay of every purposeful work (Abdel-Maqsood, Ibrahim Mahmoud & Al-Shafei, Hassan Ahmed, 2003, p47). Among these models is the Pentrich model (self-organized learning), which is one of the most important attempts in building processes and activities that help activate self-organized learning, in addition to its clarification of the most important components of self-organized learning from learning strategies, motivational strategies, and behavior. Academic achievement is one of the most important variables that studies of self-organized learning have focused on. In recent studies, attention is directed to a deeper understanding of competencies and strategies. (Al-Khouli, Amin & Adnan, Mahmoud, 1999, p87)

Research Problem

Many researchers emphasized the importance of using educational models and their role in the educational process, including the Pinterch model (self-organized learning), where self-organized learning combines both cognitive and motivational factors, so self-organized learning has become the central structure in modern interpretations of learning. Effective academic, which stems from the premise that the effectiveness of learning is due primarily to the learner himself, which prompted the researcher to delve into and use this model to provide students with the knowledge side of the subjects of international law in handball because the law contains overlap and situations that the student cannot master except through the use of modern methods and methods where the learner has the freedom to choose what he learns in the way that suits him, so the researcher tried The use of this model as a step to address the weakness in the cognitive side of the international law of handball for students.

Research Objective

Preparing educational units according to the Pinterch model of international law articles in handball for students.

Identify the effect of educational units according to the Pinterch model on the cognitive achievement of the subjects of international law handball for students of the experimental group.

Identifying the priority of influence between educational units according to the Pinterch model in the cognitive achievement of the subjects of international law in handball for students of the experimental group and the curriculum of the control group.

Research Hypotheses

There is a positive effect of the effect of the educational units according to the Pinterch model in the cognitive achievement of the subjects of international law handball for students of the experimental group and the method followed for the control group.

There is an effect preference between the experimental and control groups and in favor of the experimental group in the cognitive achievement of the subjects of international law in handball for students.

B. Methods

The researchers used the experimental method by designing two equal groups with a pre- and post-test due to its suitability to the nature and objectives of the research work, and as the appropriate means to prove a hypothesis, as shown in Table 1.

Table 1. Shows the experimental design of the research.

Groups	Pretest	Experimental processing	Posttest
Experimental group	Cognitive achievement of international law subjects in handball	Implementation of educational units according to the Pinterch model (independent variable)	Cognitive achievement of international law subjects in handball
Control group	Pre test	Application of the curriculum followed by the subject teacher	Post test
	Cognitive achievement of international law subjects in handball		Cognitive achievement of international law subjects in handball

The research community and its sample, the selection of the research community and its sample is one of the most important priorities that falls on the shoulders of the researcher, because the sample is “the part that represents the community of origin or the model that the researcher conducts as a whole and the focus of his work” (Mahjoub, Wajih, 2000,p.164).

The selection of the sample is closely related to the objectives, as Raysan Khreibet sees, “The objectives set by the researchers and the procedures used by him will determine the nature of the sample that he will choose” (Majeed, Raysan Khouribet,1988, p. 41). Accordingly, the research population and sample were identified as follows:

The researchers identified the research community with third-year students in the College of Physical Education and Sports Sciences / University of Karbala for the academic year 2021-2022 because the law of handball is among their annual curriculum, where the research community included (100) students divided equally into four sections (A, B, C) , D), and the main research sample was chosen from the original community by random method (lot) and represented by (15) students from Division (A) as an experimental group and (15) students

from Division (B) as a control group, where the main sample constituted a percentage of (33.33%). From the original community.

Research Tools

Arab and foreign sources and references; the International Information Network (Internet); opinions of experts and specialists; resolution; observation; and tests and measurements.

Devices and means used a legal handball court; hand balls (10) type kempa; chinese-made (10) colored (yellow, red and blue) arbitration cards; canadian whistle (FOX40), number (20); colored plastic cones (20); stationery (papers, pens, colored tapes, hand-held electronic calculator, blackboard); manual stopwatch (3), chinese origin; discs (DVD) type (RI data), number (10); a tape measure; personal calculator, type (hp), Chinese origin, number (1); camera (CANON), of Japanese origin, number (2); camera stand number (2); arbitration uniform number (10); and 14-video clips of arbitration cases.

C. Results and Discussion

Legal Knowledge Scale

Legal knowledge is one of the important and basic variables for the process of selecting handball referees, as it is the basis on which the referee depends in interpreting playing cases and issuing his decisions. For the steps and sample of the research, and after informing the researcher of the previous studies and research and in line with the objectives of the research, the researcher relied on the scale prepared by (Abbas Abdulhamza Kadhem).

The Exploratory Experience of the Legal Knowledge Scale

The researchers conducted the first exploratory experiment of the legal knowledge scale on Thursday 12/12/2021 at exactly ten o'clock in the morning on a sample of (10) students of the third stage in the College of Physical Education and Sports Sciences - University of Karbala to identify the validity of the scale used in the research; the readiness of the equipment, tools and stadiums used to carry out the basic experiment; the time it takes to answer the paragraphs of the scale; detecting the appropriateness of the educational curriculum vocabulary with the level of the research sample; obtaining data in order to extract the scientific bases of the scale; and ensuring the size and efficiency of the assistant work team members, in accomplishing their tasks in the correct manner.

Then the researchers conducted the second reconnaissance experiment on Monday 16/12/2019 on the same first reconnaissance experiment, to obtain data on the measures of stability of knowledge scale.

Scientific Basis for the Tests

First, the legal knowledge scale with handball: Scale validity, this type of honesty was achieved by presenting the test items to the game specialists as mentioned above, and the validity of the hypothetical configuration or the validity of the constructivist was used by finding the discrimination coefficients for the items of the legal knowledge scale by the two peripheral groups, which in light of these transactions were accepted the distinct items to express their sincerity In measuring the phenomenon (legal knowledge in handball).

Reliability, therefore, the researcher relied on the concept of reliability in using the method of testing and re-testing to obtain reliability for the knowledge scale, as it was detailed in the first and second exploratory experiment, and finding the correlation relationship between the test results for both exploratory experiments, where the knowledge scale enjoyed high reliability.

The objectivity of the scale, the researcher reached the objectivity of the legal knowledge scale through the following: choosing the nature of the paragraph's formulation method (multiple choice), which belongs to the objective tests free of bias in correcting the answer; writing the instructions for performing the test for the laboratory as mentioned previously, as well as the instructions for the debugger; correcting the results of the legal knowledge scale by two assessors, the first representing the corrector and the second the checker for the results of the scale, and in light of this, the results of the objective were complete for the scale of legal knowledge in handball, and in light of the procedures that were taken to prepare the scale of legal knowledge, the scale of legal knowledge in handball was reached. For students in its final form.

The Exploratory Experiment of the British model

The researchers conducted his reconnaissance experiment on the Pentrich model on Sunday 3/12/2021 at exactly ten o'clock in the morning on his sample of (10) students from the third stage, and as indicated to them in the details of the samples, and the purpose of the experiment was as follows applying a special educational unit to the British model, knowing the difficulties and obstacles facing the researcher in the presentation and application, and the sample in the extent of response to the method.

Pretest

After the researchers applied two introductory units to the experimental group on Sunday 22/12/2021 to acquaint them with how to answer the paragraphs of the legal knowledge scale, as well as to find out the suitability of the scale to the main research sample. During the two units a quick review was made to the first (5) articles in the law Handball, that is, the subjects that were taught in the previous study stage for students, and the pre-test was conducted on the research sample of (30) students, for legal knowledge:

A Scale of Legal Knowledge of Handball on Monday 4/12/2021

In light of the results of the pre-test, the researcher conducted the homogeneity and equivalence of the research sample in order to initiate one point experimentally for the research, as in Table 2 which shows the homogeneity and equivalence of the sample.

Table 2. The Homogeneity and Equivalence of the Two Research Groups

Variables	Experimental		Control		T value	Sig level	F	Sig	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation					
Legal knowledge	20.13	4.10	19.73	2.65	0.317	0.754	60	0.44	Non sig

The value of (sig) was not significant, i.e. greater than (0.05), which indicates the homogeneity of the sample in the variables investigated, as well as the value of (t) was not significant, i.e. greater than (0.05) at the degree of freedom (28), and at the level of significance (0.05), and this It means that the differences are random among the sample members, which indicates the parity of the sample.

The Main Experiment of the British Model

Educational units according to the British model, in light of the preparation of the educational curriculum with the British model that was mentioned previously, the researcher presented the curriculum for the period from Sunday 5/12/2021 to Sunday 27/2/2022 for the experimental group, and the control group kept the method of teaching followed by the subject teacher, and in Below are the details of the educational units according to the British model in developing legal knowledge and performance in handball for the experimental group: the educational curriculum falls within the first semester of the third stage of the academic year (2021-2022); the educational curriculum is prepared for the vocabulary of the third stage of the College of Physical Education and Sports Sciences / University of Karbala, and is specific to the development of legal knowledge; the duration of application of the curriculum (12) educational units within (12) weeks at the rate of one educational unit during the week, according to the schedule established by the college; the time of the educational unit of the British model in the educational unit is (90 min), by (18 d) the preparatory section, and (25-35) the main section, (12 d) the final section; the main section included a part (educational 25 d) and a part (practical 35 d); in the educational aspect, the stages of the British model were interlocked and organized as much as possible and according to the learning process and according to the learning stage (arbitration). The theoretical aspect of legal knowledge was given because it is the basis of learning, on the educational side, by offering a set of methods, means and tools, including audio-visual materials and Sensory audio, posters, concept maps, programmed educational program, programmed brochure and presentation, as well as presentation of arbitration cases here. Sensory preparation is done through video clips placed on a CD, after looking at the teaching aids, the students ask their questions because of the mental conflict that occurred with them and the teacher answers these questions Here, the student has a formation of concepts after receiving the answer to his question from the teacher.

Posttest

The researchers conducted the post-test on the research sample of (30) students for legal knowledge and arbitration performance in handball within three days as well, taking into consideration the conditions of conducting the pre-test as follows the achievement test for legal knowledge of handball on Sunday 27/2/2022.

Statistical Methods Used in the Research

The researcher used the statistical methods in the statistical package (spss), including arithmetic mean; standard deviation; coefficient of skewness; simple correlation coefficient (Pearson); t-test for independent samples; the t-test for related samples.

Presentation, Analysis and Discussion of the Results

This section included the presentation of the results of the pre-tests and the post-tests for each of the experimental and control groups, and these results were analyzed and discussed for the purpose of achieving the objectives of the research and verifying the validity of the hypothesis.

Presenting and Analyzing the Results of the Differences Between the Pre and Posttest of Legal Knowledge for the Two Research Groups (Experimental and Control) and Discussing Them

Presentation and analysis of the results of the differences between the pre and posttest of legal knowledge for the two (experimental) research groups: For the purpose of describing the results of the sample members, the researcher processed the data statistically using the arithmetic mean and standard deviation, and for the purpose of knowing the significant differences between the two tests, the pre and posttests, and for the two research groups, the (t) test was used for the interconnected and equal samples as shown in Tables 3 and 4.

Table 3. The Description and Statistical Inference of the Results of the Pre and Posttest in the Research Variables of the Experimental Group

Variables	Pre-test		Post-test		T value	Sig level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation			
Legal knowledge	20.13	4.10	38.44	3.88	13.42	0.000	Sig

Table 3 shows that there are differences in the arithmetic means and standard deviations between the pre and posttests of the experimental group and in (legal knowledge), as the value of the arithmetic mean and standard deviation of the legal knowledge variable in the tribal test was (20.13), as for the post-test, it reached (38.44), and in order to know the reality of these differences, the researcher used the (t)-test for samples that are related and equal in number. Significance level (0.05) and degree of freedom (14), and this confirms the significance of the differences between the two-arithmetic means.

Table 4. The Description and Statistical Inference of the Results of the Pre and Posttest in the Research Variables of the Control Group

Variables	Pre-test		Post-test		T value	Sig level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation			
Legal knowledge	19.73	2.65	30.30	4.22	8.90	0.000	Sig

Table 4 shows that there are differences in the means and standard deviations between the pre and posttests of the control group in (legal knowledge), as the value of the arithmetic mean and the standard deviation of the legal knowledge variable in the pre-test, respectively (19.73) (2.65), as for the post-test, it reached (30.30) (4.22) and when inferring the significance of the differences between the two means, it was found that the calculated t-value amounted to (8.90), which is greater than its tabular value at the significance level (0.05) and the degree of freedom (14), and this It confirms the significant differences between the two means.

Discussing the Results of the Differences Between the Pre and Posttest of Legal Knowledge for the Two Research Groups (Experimental and Control)

Through the presentation and analysis of the results of the tribal and posttest of legal knowledge for the two research groups (experimental and control) as shown in Table 3 and 4, it was found that there are differences, in both groups and in favor of the experimental group, as for the differences in the results of the experimental group between the two tribal tests and dimensional, the researcher attributes the reason for these differences in the variables investigated to the students' response to all learning requirements during the educational units of the proposed curriculum, as it is one of the most effective means to highlight energies and achieve goals. Presenting the educational material through multiple methods, and symbolically through technological means (Al-Khouli, Amin Anwar & Al-Shafei, Jamal, 2000, p.94). The researcher also attributes these differences to the principle of using questions and answers, explanation and presentation and for each part of the legal materials in handball, and the combination of theoretical and practical aspects in the educational curriculum, which was able to raise the level of legal knowledge for students through the ability to develop and think. The degree of change in knowledge depends on The nature of the situation in which the individual obtains the information, its source, method, and degree of mastery. (Abdel Rahim, Talaat Hassan, 1981, p. 112).

The researchers believe in the development of the control group for the results of its post-tests in comparison with its tribal results in (legal knowledge), that the control group practiced the educational volume of the educational content specific to the subject teacher and his method of teaching to achieve the educational goals also for the third stage of handball (Abu Hijleh, Amal Hamad Sharif, 2007, p.48). As the continuity of learning leads to the development of knowledge in general by making changes in the behavior of the learners day after day and with the presence of the educational material and the teacher and the accumulation of experience for the learner and it may be at levels according to the nature of the teacher and his method and the response of the learner from the researcher's point of view and last but not least that the development at the level of the group The control group was not at the level of ambition for what the experimental group achieved in comparison to the results of the post tests for both groups, where the high moral differences for the effectiveness of the independent variable by the researcher and its impact on the field on the legal knowledge of students' handball. (Al-Sheikhly, Saad Moneim, 2003, p25).

Presenting and Analyzing the Results of the Differences Between the Posttests of Legal Knowledge and the Two Research Groups (Experimental and Control) and Discussing Them

Presenting and analyzing the results of the differences between the post-tests of legal knowledge and the two research groups (experimental and control): In order to achieve the objective of the study, the researcher sought to extract the values of the mean and standard deviation of the data of the members of the two research groups (experimental and control) in the post-tests as shown in Table 5.

Table 5. The Description and Statistical Inference of the Results of The Posttest in the Research Variables of the Experimental and Control Groups

Variables	Experimental		Control		T value	Sig level	Sig type
	Mean	Std. Deviation	Mean	Std. Deviation			
Legal knowledge	38.44	3.88	30.30	4.22	5.72	0.000	Sig

It is through table 5, that there is a discrepancy and a difference between the values of the means and the standard deviations in the dimensional measurements between the individuals (the experimental group and the control group), as the value of the arithmetic mean and the standard deviation of the legal knowledge variable for the members of the experimental group, respectively (38.44) (3.88), while the values of the arithmetic mean and standard deviation of the legal knowledge variable for the members of the control group, respectively (30.30) (4.22), and the calculated (t) value was (5.72) which is greater than its tabular value at the level of significance (0.05) and the degree of freedom (28), and this confirms the existence of differences Significant difference between the post tests for the members of the two groups and in favor of the experimental group.

Through the presentation and analysis of the results of the posttests for the two research variables (legal knowledge) and for both research groups (experimental and control), which are shown in Table 5, it turns out that there are significant differences between the two research groups and in favor of the experimental group, and the researcher attributes these differences in development to the fact that the superiority of The students of the experimental group, to whom the educational curriculum under study was applied to the control group, was due to the effectiveness of the educational approach, which helped to establish the correct performance in arbitration and to overcome the large number of errors and their recurrence (Sabah Hussein Al-Ajili & others, 2002,p65) . As well as increasing their mastery of the laws of the handball game through their mastery of legal knowledge, as the British model has an effective impact on developing legal knowledge for the experimental group and comparing it with the control group in terms of the results of the pre and post tests for both groups, through its adoption of a quality education and a technologically advanced method through its use of tools and devices Which provides information to students in a manner commensurate with their inclinations and desires and in a manner that is attractive and interesting to them, This is because this model is characterized by the presentation and application of the content of the educational material in a sequential, intense and overlapping manner by assembling the content in one frame (applied educational video, posters, programmed educational program, presentations). (Sabah Hussein Al-Ajili & others, 2001,p33).

The researcher believes that the development of legal knowledge of handball for the experimental group by raising the motivation to learn using the British model (self-organized learning) away from the prevailing methods of learning and its reflection on the increase in the acceptance of the scientific material and the desire to learn it through the video presentation and posters that stimulate their thinking and exciting their enthusiasm, the researchers also believes that the Britinch model has a prominent role in advancing the knowledge level of the game law materials and its applications in the field by targeting the model more than one sense of learning, and thus its reflection on the student's understanding, comprehension and awareness of the educational content theoretically and practically, through presentation, explanation and application. (Abdel Rahim, Talaat Hassan, 1981, p64).

The researchers also attributes the development of his experimental group in the legal knowledge of handball to the fact that the model worked to increase the cognitive abilities of students through the sequencing of the educational curriculum and its gradation from easy to difficult and the diversity of work with display situations and a specialized application of these cognitive abilities represented by a set of goals (educational, behavioral) During the educational units prepared by the researchers, in addition, retaining information for the educational curriculum by remembering the educational situations that were made through (video, posters, virtual reality glasses) by the researchers. (Suwaid, Abdul Muti, 2003, p77).

D. Conclusion

The educational curriculum prepared according to the steps of the British model had an effective impact in developing the legal knowledge of handball for students. Increasing the students' desire to know the tasks and duties of the referee. Students interacted positively with the material given during the educational units. It recommends the necessity of using the educational units prepared with the British model to develop the legal knowledge of handball for students in the faculties of physical education and sports sciences. Emphasis on the use of British in teaching applied subjects because of its role in developing effective learning and teaching, creating a favorable atmosphere for students and creating their motivation for the learning process. Conducting other similar research and studies using the British model to develop legal knowledge for the rest of the applied lessons of sports in colleges and departments of physical education and sports sciences.

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