

The level of problem solving skills by students of the institutes of science and technical of physical and sports activities.**Dr. Bensayah Samir**

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Abstract:

The purpose of the study was to know the level of students skill to solve the problems, as well as the differences between them according to the variables of the Age, the sex, the specialty and the level of study therefor the problematic was : do have institutes of science and technical of physical and sports activities students have the skills to solve problems?

So the researcher therefore used a questionnaire destined for a sample of 72 students, and he found that students have great problem-solving skills and that there are no differences between them according to sex and level of study, however there are differences according to the specialty variable.

The researcher have recommended the programming of the training cycles in the benefit of the students to improve their skills of problem solving especially those of gathering necessary information's about the problem and the evaluation of the results of execution.

Keywords: level - problem solving- skill - students.

Introduction :

The Algerian University has seen a number of reforms at the beginning of the second millennium, including the structure, the laws, the training programs, the methods, as well as methods, to convoy the developments in the ocean. The pedagogic side acquired an important part of these reforms and increased the interest to students as an active partner in the educational that influence and can be influenced by his response to what is presented to him in the university, which could take him out from traditional methods of teaching.

Therefore, a problem-solving method has appeared to develop the students ability of adaptation according to different situation in their daily life. Obaidat and Souhaila see that putting the learner in front of real, felt and experienced problems could provide him opportunities to understand, use and apply in similar situations that may encounter him in his life. (Souhaila, 2007)

So, the problem is the situation that thinking and challenge from the person to reach a solution then, the importance of making a clear purpes will appear and the person has to try to reach that purpose and he must beat the obstacle that prevents direct access to the solution from the first time. In the point of view of Mari and Eelhila, the problem solving is one of the basic skills that a person must learn and master in our current era which characterized by many variables interlocking, and there are many educational methods that can be followed in solving and address problems (Elhila, 2013)

Through the above, we have asked the following general question: What is the level of problem solving skills by students of the Institute of Science and Technical of Physical and Sports Activities? Based on this question, we asked the following questions:

- 1 - Are there differences due to the variable of sex in the level of problem solving skills by students of the Institute of Science and Technical of physical and sports activities?
- 2 - Are there differences due to the variable of level study in the level of problem solving skills by

students of the Institute of Science and Technical of physical and sports activities?
3 - Are there differences due to the specialty variable in the problem solving skills by the students of the Institute of Science and Technical of physical and sports activities?

2 - hypotheses of the study:

- 1- Students of the Institute of Science and Technical of physical and sports activities have high level of problem solving skills.
- 2 - There are differences attributed to the sex variable in the problem-solving skills of students by the Institute of Science and Technology of physical and sports activities.
- 3 - There are differences due to the variable level in the study of problem solving skills of students of the Institute of Science and Technical of physical and sports activities.
- 4 - There are differences due to the specialty variable in the problem solving skills by students of the Institute of Science and Technical of physical and sports activities.

3 - Research Objectives:

- Identify the level of problem solving skills of students.
- Identify the differences between students in the problem-solving skill according to the variables of the sex, the level of study, and the specialty.

4 - The importance of research:

The importance of research is to know the level of problem-solving skill by students because of its great role in the learning process as well as its important in facing the daily life challenges and problems met by students.

5. Search terms:

- Skill: Skill refers to the high-level performance in all domains of life, and it refers to all successful performances to reach previously identified goals provided that this performance is characterized by mastering and accuracy. (Allawi, 1994)
 - The problem: a challenge, every situation that make a challenge or a burden. (Alaser, 2000, p. 29)
 - Solution: reaching a way to facing the situation or compatibility with and adaptation. (Alaser, 2000, p. 29)
 - Problem Solving: it means the ability of a person to overcome obstacles and difficulties in different situations at a given time. (AL Adel, 1998, p. 20)
- It is also defined as a behavioral emotional cognitive process whereby persons can identify, discover, or invent ways to manage the daily life problems. At the same time, it looks like a social learning process or a self-regulatory approach, or a general coping strategy that can be applied to a number of problems. (Muhammad, 2000, p. 454)
- Students: They are individuals who study in universities.

5. Field action for the study:

5-1 –Methodology: Due to the nature of the subject, the researcher adopted the descriptive approach in his study.

5-2 - population of the study: They are the students of the Institute of Science and Technical of physical and sports activities at the University of Souk Ahras, numbering 480 students.

5-3: sample of the study: The study sample consisted of 72 students studying at the Institute of Science and Technical of Physical and Sports Activities at Souk Ahras University.

5-4: Areas of study:

A - Time domain: from the beginning of September 2018 to the end of October 2018.

B- Sphere: Institute of Science and Technical of physical and sports activities at Souk Ahras University.

C - Human Field: Students of the Institute of Science and Technical of Physical and Sports Activities at the University of Souk Ahras.

5.5 Study Tools:

The researcher based his set of data on a of bibliographic sources and references, and on a problem solving skill scale Prepared by Sami Mohsen al-Khatatna (Al-Khatatna, 2003, pp. 84-89)

5-6 - The scientific foundations of the study tools:

5.6.1. Questionnaires have been certified:

- The structural truth of the scale: The correlation coefficients between the terms of each axis and the whole questionnaire were calculated as 0.86, which is a strong correlation.

5-7-2 - Stability of the scale:

- Crobach's alpha method: where the stability was calculated using the equation Alpha Cronbach through the statistical program spss andis was found that the scale has a high degree of stability where the coefficient of stability Alpha Cronbach was: 0.808.

- Split half method: Stability coefficient was calculated in the split half method using the spss statistical program, where the of Spearman Brown coefficient was 0.801 and Guttman coefficient was 0.77, which indicates the stability of the scale.

5-8 Statistical processing: The researcher employed in this study: correlation coefficient of Pearson, Alpha Cronbach, the arithmetic mean and ANOVA test, and we have used the spss statistical program.

6. Presentation, analysis and discussion of results in the light of hypotheses:

6-1 Presentation, analysis and discussion of the results related to the first hypothesis (the students of the Institute of Science and Technical of physical and sports activities have a high problem solving skills are great):

Table 1: Results of problem solving skills by students:

The dimension	Mean	Standard deviation	Degree	Rank
Sense of trouble	1.76	0.22	high	3
Define the problem	1.77	0.22	high	1
Gathering necessary information	1.65	0.25	Medium	7
information analysis	1.71	0.25	high	6
Generating Alternatives	1.77	0.19	high	1
Decision – making	1.73	0,22	high	5
Applying the appropriate alternative	1.76	0.23	high	3
Evaluation of implementation results	1.64	0.24	Medium	8
total	1.72		high	-

Through the results shown in the table above we find:

The first (sense of problem), the second (definition of problem), the fourth (collection of necessary information), the fifth (generation of alternatives), the sixth (decision making) and the seventh (applying the appropriate alternative) have an arithmetic mean between 1.71 and 1.77 in high degree, and a standard deviation between 0.19 and 0.25.

- The third dimension (information analysis) and the eighth (evaluation of the results of implementation) came at a mean of 1.65 and 1.64 in a medium degree and at a standard deviation of 0.25 and 0.24.

Therefore, students have high degree of problem solving skill, whth is a mean of 1.72, reflecting their understanding of the importance of this method in their lives. This is what satisfies us the first hypothesis: Students of the Institute of Physical Sciences and Technical of physical and sports activities have high problem solving skills.

6-2 - Presentation, analysis and discussion of the results of the second hypothesis (there are differences due to the sex variable in the problem solving skills of students of the Institute of Science and Technical of physical and sports activities):

Table 2 represents the differences in the problems solving skill of in students according to sex variable:

Sex	A mean	St	Df	T	Sig
Male	69.81	6.30	70	1.341	0.339
female	67.89	5.30			

Table (2) shows that there are no statistically significant differences between the males and females in the problem solving skill, where the value of (T) is equal to (1.341) and the value (Sig= 0.339) is greater than the significance level ($\alpha = 0, 05$), and therefore T is statistically insignificant at a level of significance (0.05) and a degree of freedom of (70).

Therefore, we found that there are no differences due to sex variable in the problem solving skills of the students of the Institute of Science and Technical of physical and sports activities. And thus reject the second hypothesis that: There are differences attributed to the gender variable in the problem-solving skills by students of the Institute of Science and Technical of physical and sports activities.

6-3 - Analysis and discussion of the results related to the third hypothesis (there are differences due to the level of studyvariable in the problem solving skills by the students of the Institute of Science and Technical of physical and sports activities):

Table 3: presents the differences in problem solving skills among students according to the variable of the academic level:

Academic level	A mean	S t	Df	T	Sig
license	68.90	6.22	70	0.271	0.733
master	69.29	5.71			

Table (3) shows that there are no statistically significant differences between the students according to the level of study (license -master) in the problems solving skill where the value of (T) is calculated (0.271), and the value (Sig=0.733) bigger than the significance level ($\alpha = 0.05$). Therefore, T is not statistically significant at an indication level of 0.05 and a degree of freedom equal to (70).

So, we refuse this third hypothesis: there are differences due to the level of study variable in the problem solving skills by the students of the Institute of Science and Technical of physical and sports activities.

6-4- Analysis and discussion of the results related to the fourth hypothesis (there are differences due to the specialty variable in the problem solving skills by students of the Institute of Science and Technical of Physical and Sports Activities:

Table (4) Results of the ANOVA analysis of the differences between the average responses of the sample members according to the specialty variable:

	Sum of Squares	Df	Mean Square	F	Sig
Between Groups	294.972	2	147.486	4.548	0.014
With in Groups	2237.680	69	32.430		
Total	2532.653	71			

Table (04) shows that there are statistically significant differences between students' skills according to the specialty variable (physical and education activity, sports training, management of sport). The value of (F) is (4.548) and the value of (Sig=0.014) is less than the significant level ($\alpha = 0.05$). Thus, F is a statistical function at a level of significant of (0.05).

Using Scheffé Range we find differences between the two groups of students (physical and education activity, sports training specialty)

. This is in favor of sports training specialty as with the highest mean (70.96) compared to the mean of (66.26) for the physical and education activity.

Table (5): The extent to which the differences between the mean responses of the members of the study sample according to the specialty variable:

(I) Specialty	(J) Specialty	Différence of moyennes (I-J)	Standard Erreur	Sig	Intervalle of confiance à 95%	
					Borne inférieure	Borne supérieure
Education	Traning	-4.70687*	1.56721	.014	-8.6278-	-.7859-
	Manag	-3.12802-	1.79212	.225	-7.6116-	1.3556
Traning	Educ	4.70687*	1.56721	.014	.7859	8.6278
	Manag	1.57885	1.68755	.647	-2.6431-	5.8008
Manag	Educ	3.12802	1.79212	.225	-1.3556-	7.6116
	Traning	-1.57885-	1.68755	.647	-5.8008-	2.6431

*. Overage difference is significant in level of 0.05.

Through the above we have established the fourth hypothesis that there are differences due to the specialty variable in the problem solving skills of the students of the Institute of Science and Technical of physical and sports activities.

7- Results of the study:

- Students of the Institute of Science and Technical of physical and sport activities have a great ability to solve problems.
- There are no differences due to the sex variable in the problem solving skills by students of the Institute of Science and Technical of physical and sport activities.
- There are no differences due to the level of study variable in the problem solving skills by the students of the Institute of Science and Technical of physical and sports activities.
- There are differences due to the specialty variable in the problem solving skills by students of the Institute of Science and Technical of Physical and Sports Activities.

8-Suggestions and recommendations:

- Organizing training courses for students to develop problem solving skills.
- Raising students' awareness of the need to develop their problem solving skills, especially concerning the dimensions of gathering the necessary information about the problem and evaluating the results of implementation.
- The adoption of teachers in their teaching methods that will raise the problem solving skills by students.
- Educating students about the need to develop their skills in solving problems in their studies at the university as well as in their lives outside.

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