COMPARISON OF THE DIFFERENCE IN LEARNING LEVEL IN EXPERIMENTAL SCIENCES FOR MALE STUDENTS OF 6TH GRADE IN PUBLIC, PRIVATE, SHAHED AND BRIGHT TALENTS SCHOOLS

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Abstract

The purpose of this research is to compare the difference in learning level in experimental sciences for male students of 6th grade in Public, Private, Shahed and Bright Talents schools in Naghadeh City. Statistical community of this research is comprised of all public, private, shahed and bright talents schools of Naghadeh City, including 1 bright talents, 1 shahed, 7 public and 4 non-profit elementary schools which totally, 13 schools were selected by means of classification with appropriate allocation sampling. As a result of using final scores of students in experimental sciences, in this work, one-way variance analysis has been used for cumulative comparisons. Results of research indicate that there is a meaningful difference in learning level of male students of aforesaid schools.

Keywords: learning level, public, private, shahed and bright talents schools

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Problem statement

Attempts toward understanding learning method of the human dates back to 427 B.C, when Socrates and Plato investigated the knowledge source by their philosophical theorems. Today, wonderful advances of human have roots in learning. Human attains main part of his qualifications through learning. By means of learning his thought develops and his mental abilities come to action. Therefore, learning is one of the most important contexts in today psychology and at the same time, one of the most difficult concepts for definition. Learning, in general, is gaining knowledge, understanding and being skillful through experience or study. However, most of psychologists reject this definition and are inclined towards those definitions which imply to change in observable behavior. The most widely recognized definition is for Kimball (1961) which occurs as a relatively stable change in behavioral power as a result of strengthened exercise. Being aware of learning process not only helps us in understanding normal and conformant behavior, but also provides us with the opportunity of deeper understanding about situations which lead to abnormal and incompatible behavior. Obviously, people are different and personal differences can be explained in terms of learning experiences (Hergnan and Elson, 2007). New learning theories put the main emphasis on understanding the contents and controlling learning trend. In these theories, which are essentially result of psychological researches, learning is an active process corresponding to social status. In researches which are carried out, problems which must be learnt by student are of a type whose learning is performed through certain rules and student recognizes that why a certain vision is appropriate for a certain situation while is not appropriate for another one. Such recognition and understanding is the base of future utilization of new obtained information. In this way, transfer based on basics will be possible. This alteration in learning process usually occurs by mentor interference and through supportive preparation or relatively direct teaching. Researches carried out in this regard, illustrate an evident relationship between IQ and effective learning or transfer (Lotfabadi, 1987). In situations in which professional sciences are increasingly growing, learning process plays a vital role in education and instructing various skills. Although personal talent, intelligence and creativity are important in this context, we cannot ignore the role of factors such as space, location, teaching method, utilities and equipment and motivation. Role of learning is evident in all life events. Learning is not only the understanding of a certain skill or subject, but it interferes in development of emotions, personality and social interactions of human. Human

learns what to fear from, what to like and how behave in each situation. In fact, human engages in learning process from the beginning of the birth and this ability leads to his development and daily changes and changes from one generation to another (Gheshlaghi, 2010, p. 14).

In recent years, in experimental sciences and their teaching methods, main emphasis is on methods in which learner has an active role. In such methods, the main role of learning is for learner and s/he must promote learning – teaching process. Consequently, other factors such as educational content, equipment and utilities and teacher activities find their meaning in relation with learner activities. Teacher plays the role of coordinator and organizer and tries to promote learners' activities in accordance with learning objectives in appropriate way.

In novel methods of learning experimental sciences, in addition to activity of learner, discovery, research and problem solving processes are considered important. Scientific fundamentals and concepts must engage students with questions whose answer is found through problem solving and discovery.

In modern methods of learning experimental sciences, teacher is requested to organize his/her teaching in a collaborative manner so that she/he becomes similar to students. In these methods, the interaction of teacher and student is overemphasized, since experience has shown that interaction and experience exchange among teacher and students plays a major role in learning. Furthermore, collaborative activities result in development of social skills such as respecting others' rights, recognizing others' responsibilities and expectations, takin part in collaborative decision makings, tolerance and so on.

Elementary schools classifications: elementary schools are classified according to investment, administration, public education and certain people:

Non-profit elementary schools: are those schools which are established and administered through collaboration, according to goals, rules and instructions of education ministry under supervision of that ministry.

Public elementary schools: are those schools which are funded by government and their educational, financial and administrative affairs are controlled by government.

Bright talents elementary schools: are those schools which are established for those students who have excellent educational talents.

Shahed elementary schools: is another type of school established for children of martyrs with no mental and physical disabilities.

As can be seen, in Naghadeh, there are various types of such schools and the method of learning experimental sciences is different among them. In this work, we try to know whether or not the level of learning experimental sciences subject is same in various schools of Naghadeh.

Research method and measurement tool

Since in this research, final score of students has been used, one-way variance analysis is utilized for collaborative analysis. Statistical community of the work consists of all public, non-profit, shahed and bright talents elementary schools of Naghadeh including 1 bright talents, 1 shahed, 7 public and 4 non-profit elementary schools which were selected using classification with appropriate allocation sampling method and the scores of their 6th grade students in experimental sciences subject has been collected. Research tools in this work is the score of 6th grade students of elementary schools of Naghadeh which are selected by sampling.

Research main hypothesis

There is a meaningful difference between final scores of experimental sciences of 6th grade students in Naghadeh elementary schools.

Research minor hypotheses

1. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and non-profit elementary schools.
2. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and bright talents elementary schools.
3. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and shahed elementary schools.
4. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and shahed elementary schools.
5. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and bright talents elementary schools.
6. There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh shahed and bright talents elementary schools.

Research main question

Is there any difference between average experimental sciences scores of students in various schools of Naghadeh?

Research minor questions

1. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and non-profit elementary schools?
2. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and bright talents elementary schools?
3. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and shahed elementary schools?
4. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and shahed elementary schools?
5. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and bright talents elementary schools?
6. Is there any meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh shahed and bright talents elementary schools?

Research findings

1. **There is difference between average final scores of experimental sciences of 6th grade students in Naghadeh public, non-profit, shahed and bright talents elementary schools.**

According to variance analysis and since the level of meaningfulness is less than 0.05%, we conclude that the average scores of students in these schools are different. Taking into account this conclusion, using subsequent tests, we determine this difference corresponds to which pair of schools. In what follows, we introduce subsequence test of Toki.

2. **There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and non-profit elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is a meaningful difference between average scores of public and non-profit schools students.

3. **There is no meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and shahed elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is no meaningful difference between average scores of public and shahed schools students.

4. **There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh public and bright talents elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is a meaningful difference between average scores of public and bright talents schools students.

5. **There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and bright talents elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is a meaningful difference between average scores of non-profit and bright talents schools students.

6. **There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh non-profit and shahed elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is a meaningful difference between average scores of non-profit and shahed schools students.

7. **There is a meaningful difference between average final scores of experimental sciences of 6th grade students in Naghadeh shahed and bright talents elementary schools.**

Since the level of meaningfulness is less than 0.05%, we conclude that there is a meaningful difference between average scores of shahed and bright talents schools students.

Concluding remarks

According to one-way variance analysis results, we conclude that average scores of students differ among various schools. In what follows, using subsequence test of Toki, we investigate the differences more exactly.

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