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Perception of Nursing Libyan Students of Omar Al-Mukhtar University, College of Nursing in Tobruk on the Effectiveness of Visual Aids: Basis for Academic Enhancement

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Abstract

Visual aids are known to help students to be more engaged in subjects during classes, help retain information, and achieve better comprehension. This study investigated the level of perception of the nursing students of Omar Al-Mukhtar University in Tubruk, Libya on the effectiveness of visual aids to their knowledge, attitude, and skills. The study employed descriptive research design where questionnaire was to obtain the needed data. A total of 100 nursing students from first to fourth level were surveyed regarding their perception on the effectiveness of visual aids. Salient findings revealed that regardless of year level the OMU CON student-respondents perceived moderate effectiveness of using visual aids in their learning in terms of knowledge, attitude, and skills. Results also indicated that there was a significant difference in the perceived effectiveness of visual aids in conveying knowledge according to the student's year level. However, the perceived effectiveness of visual aids in terms of attitude and skills of the students do not differ.

Keywords: Perception; Effectiveness of visual aid; Academic Enhancement.

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1. Introduction

The prime purpose of teachers or educators is to aid learners in the achievement of new knowledge and skills. In line with this, the teacher's constant problem is how to convey to students certain ideas, basic knowledge and information in a most effective way. To achieve this objective and to help the learner in retaining the knowledge, teaching materials like visual aids are practically essential [1].

Visual aids as defined in Merriam Webster is an instructional device (as a chart, map, or model) that appeals chiefly to vision that is used to make something easier to understand. According to [2]; the use of visual aids can better convey what words alone cannot, explain abstract concepts, help retention of information, and can maintain audience's interest. Visual aids are known to help students to be more engaged in subjects during classes, help retain information, and achieve better comprehension [4].

A visual stimulant will help in creating the proper mental image for the learner and that is a true basis of learning. Oral or printed words usually mean nothing to students until translated into a mental image. The total effect of the visual aid is the important factor in the teaching situation [5]. Such aids have certain distinct influences on the student and result in a more complete comprehension of the subject. The impact of learning through visual aids may be reflected in the learner's effective acquisition of new knowledge and skills as well as positive attitude towards the certain subjects.

Students learn more when information is delivered in variety of ways rather than in only one way. Reference [8] explained that students retain 10% of what they read, 26% of what they hear, 30% of what they see, and 50% of what they see and hear. Thus, it is more helpful to use visual aids during lectures.

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Visual aids can also address three modes of learning which consist of the cognitive, affective and psychomotor learning's. As such, this study was conducted to assess the effectiveness of visual aids in learning in terms of cognitive, affective and psychomotor domain as perceived by the nursing students of Omar Al-Mukhtar University in Tubuk, Libya. The results of the study may help the nursing faculty of the university in improving their learning strategies and curriculum construction [3]. It may also provide valuable information for future references of similar researches.

2. Methodology

A comprehensive description of the methodology of the study will be introduced. It is composed of the research design; population and locale of the study; data collection instrumentation and treatment of data.

The study is descriptive in nature where it used survey-questionnaire to acquire value of facts needed. Descriptive survey method is a fast finding study with adequate and accurate interpretation that includes a purposive process of gathering, analyzing, classifying data about the present conditions, practices, beliefs and trend. This is the most fitted design for the study since it attempted to describe the perception of the respondents on the effectiveness of the visual aids by labeling, analyzing and interpreting the data that were presented.

The study was conducted from May to December, 2014 at Omar Al-Mukhtar University, Tubruk, Libya. The respondents of the study comprised of the nursing students of Omar Al-Mukhtar University. Currently, there are 228 nursing students enrolled this first semester 2014-2015 where 100 nursing students from first to fourth level were randomly chosen as respondents.

Survey questionnaire was the main instrument used to obtain the necessary data for this study. The devised questionnaire consists of questions describing the perception of the respondents on the effectiveness of visual aids in terms of knowledge (cognitive domain), attitude (affective domain), and skills (psychomotor domain).

The questionnaire was subjected to reliability. It was pre-tested to determine presence of ambiguity among questions. From the pre-test results, revision to the questionnaire was executed as necessary.

3. Result

Data obtained from the respondents were collated, tabulated, categorized, interpreted and analyzed using descriptive statistics particularly frequency count and weighted mean and inferential statistics (ANOVA). Weighted mean were computed to come up with the interpretation of data to answer the research questions presented. Weighted mean values were computed using the formula below:

$$\bar{x}_w = \frac{\sum_{i=1}^{n}(w_i x_i)}{\sum_{i=1}^{n}(w_i)}$$

Where

$\bar{x}_w$ weighted mean

$\bar{x}_w$ the weighted mean variable

w_i the allocated weighted value

x_i the observed values

The four point likert scale indicated the level of perceived effectiveness of visual aids by the OMU CON students in terms of knowledge, attitude, and skills. The statistical limits served as the equivalent range of scores to describe results of the computed weighted mean values, the following scale of interpretation was used.

Numerical Rating	Statistical Limits	Descriptive Rating	Level of Effectiveness
4	3.50-4.00	Strongly Agree	Highly Effective
3	2.50-3.49	Agree	Moderately Effective
2	1.50-2.49	Disagree	Slightly Effective
1	1.00-1.49	Strongly Disagree	Not Effectively

The comparison on the perceived level of effectiveness of visual aids in terms of the OMU CON student's year level was performed using Analysis of Variance (ANOVA). F-values were computed using the formula as shown below:

$$F = \frac{variability\ between\ group}{variability\ within\ group}$$

Table 1 shows the descriptive assessment on the perceived effect of visual aids in the learning of the OMU CON student-respondents in terms of their knowledge. Results revealed the students strongly agree that visual aids are highly effective as regards to their comprehension to the explanation of their teacher and their analysis to given situation.

While, they agree that use of visual aids in their learning is moderate as to their retention, improvement of their comprehension and interpretation on the concepts and flow of the topic.

In overall, the use of visual aids in teaching is moderately effective in area of knowledge as perceived by the student-respondents of OMU CON. As [7] claimed that visual aids like visual media can be both beneficial and motivating to students, and can increase test performance and comprehension.

Table 1: Perceived level of effectiveness of visual aid in terms of Knowledge

With the use of visual aid:	Mean	Descriptive Equivalent	Interpretation
1. I am able to recall the topic that was discussed.	3.43	Agree	Moderately Effective
2. My retention span was prolonged.	3.29	Agree	Moderately Effective
3. I understand the topic	3.33	Agree	Moderately Effective
4. I am able to get additional information to probe further into some	3.44	Agree	Moderately Effective

issues raised during our lesson			
5. My comprehension was improved	3.41	Agree	Moderately Effective
6. I am able to explain my report	3.47	Agree	Moderately Effective
7. I understand the explanation of my teacher	3.49	Strongly Agree	Highly Effective
8. I was able to analyze the given situation	3.46	Strongly Agree	Highly Effective
9. I am able to follow the flow of the lecture	3.25	Agree	Moderately Effective
10. I am able to interpret the concept of the lecture	3.38	Agree	Moderately Effective
11. I am able to get additional resources	3.21	Agree	Moderately Effective
Overall Mean	**3.38**	**Agree**	**Moderately Effective**

The OMU CON student-respondents avowed that visual aids are highly effective in increasing their interest in participating during classroom discussion, attendance in class, and valuing all the sheets provided by their teacher. Meanwhile, it is moderately effective in improving student-respondents' study habits. Hence, in overall student-respondents agree that use of visual aids is moderately effective in aspects of their attitude. Such result can be reflected in [1] study which revealed that students subjected to PowerPoint presentations demonstrated higher understandability about classroom presentation.

Table 2: Perceived level of effectiveness of visual aid in terms of attitude

With the use of visual aid:	**Mean**	**Descriptive Equivalent**	**Interpretation**
1. My study habit was improved	3.37	Agree	Moderately Effective
2. Increased my interest to participate during classroom discussion.	3.53	Strongly Agree	Highly Effective

3. I enjoy attending my class.	3.47	Agree	Moderately Effective
4. I am challenged to study further.	3.40	Agree	Moderately Effective
5. I am inspired to attend my class.	3.48	Agree	Moderately Effective
6. I am encouraged to join classroom discussion	3.52	Strongly Agree	Highly Effective
7. I am happy to attend to my class	3.37	Agree	Moderately Effective
8. My habit of memorizing was improved.	3.45	Agree	Moderately Effective
9. I am eager to attend my next class	3.50	Strongly Agree	Highly Effective
10. I value all the sheets provided by my teacher	3.50	Strongly Agree	Highly Effective
11. My attitude for sharing my knowledge was improved	3.35	Agree	Moderately Effective
Overall Mean	**3.45**	**Agree**	**Moderately Effective**

Result manifest that student-respondents claimed that visual aids are highly effective in: catching their attention to focus on the topic, helping their preparation for the application of nursing skills, it is also highly effective in their performance in the classroom and during their return demonstration. On the other hand, visual aids is perceived by the student-respondents to be moderately effective in giving idea on how they study correctly, to think specific ways on the application of knowledge they acquire during lectures, and creating new ideas.

It is also moderately effective in enabling the students to interact to active discussion, and it is also moderately effective in enabling them to visualize information especially when picture, table or graphs were presented. In overall, visual aids are perceived by the students as moderately effective in terms of their skills. This moderately effectiveness of visual aids may also be interrelated to the non- effect of visual aid like PowerPoint in conveying information for long term memory. As [1] revealed in their study that PowerPoint presentations has no significant effect on long term memory but it may improve short term memory.

Table 3: Perceived level of effectiveness of visual aid in terms of skills

With the use of visual aid:	Mean	Descriptive Equivalent	Interpretation
1. Give me idea how to study correctly	3.48	Agree	Moderately Effective
2. I am able to think specific ways on how to apply the knowledge I acquire during lectures	3.45	Agree	Moderately Effective
3. I am able to create new ideas	3.43	Agree	Moderately Effective
4. Catches my attention to focus on the topic.	3.60	Strongly Agree	Highly Effective
5. Helps me to prepare for the application of nursing skills.	3.65	Strongly Agree	Highly Agree
6. I am able to perform well in the classroom	3.61	Strongly Agree	Highly Agree
7. I am able to perform well during return demonstration	3.53	Strongly Agree	Highly Agree
8. I am able to ask questions for clarification	3.46	Agree	Moderately Effective
9. I was able to visualize information especially when picture, table or graphs were presented	3.36	Agree	Moderately Effective
10. I am able to interact to active discussion	3.38	Agree	Moderately Effective
Overall Mean	**3.49**	**Agree**	**Moderately Effective**

Table 4 summarizes the perceived effectiveness of visual aid when the OMU Con students are group according to their year level. It is notable that student-respondents who are at second level perceived visual aids as highly effective in aspects of their knowledge, attitude, and skills. Meanwhile, first year, and fourth year level student-

respondents agreed that use of visual aids is moderately effective in terms of their knowledge, attitude, and skills. Moreover third year level claimed that visual aids are highly effective in terms of attitude and skills while moderately effective in terms of knowledge.

Comparing further, results show that there exists a difference in the perceived effectiveness of visual aids in terms of knowledge of the students when year level is taken into consideration. While, effectiveness of visual aids in terms of attitude and skills do not differ significantly as perceived by the student-respondents. This implies that perception of the student-respondents is the same among all year level.

Such findings are subjects to several limitations. The study has not considered the respondent's kind of learners where maybe mostly of the second year level respondents are visual learners thus they acknowledge more the effectiveness of the visual aids in learning than the other students.

Such findings are subjects to several limitations. The study has not considered the respondent's kind of learners where maybe mostly of the second year level respondents are visual learners thus they acknowledge more the effectiveness of the visual aids in learning than the other students. It also has not considered other demographic profiles of the students such as gender, ethnicity and others. Reference [6] explained that nursing classroom nowadays is diverse, not only by age by but ethnicity, gender, and other demographic characteristics. Hence, taking into account such characteristics is imperative.

Table 4: Differences in the perceive effectiveness of visual aid when the OMU Con students are group according to their year level

Year level	Knowledge	Attitude	Skills
	Mean (Descriptive Equivalent)		
First Year	3.38 (Agree)	3.48 (Agree)	3.45 (Agree)
Second Year	3.52 (Strongly Agree)	3.53 (Strongly Agree)	3.65 (Strongly Agree)
Third Year	3.46 (Agree)	3.57 (Strongly Agree)	3.61 (Strongly Agree)
Fourth Year	3.25 (Agree)	3.32 (Agree)	3.36 (Agree)
Computed f-value	1.77*	1.05^{NS}	1.42^{NS}
Significance	0.0341	0.4138	0.1440

Results revealed that the first year and fourth year level student-respondents of OMU CON perceived that the use of visual aids is moderately effective in their learning in terms of their knowledge, attitude, as well as skills. Moreover, for the second level students perceived the use of visual aids as highly effective in their learning in terms of their knowledge, attitude, and skills. Third level student-respondents on the other hand perceived the use of visual aids as highly effective in their learning in terms of their attitude and skills, while moderately effective in terms of their knowledge.

Further testing revealed that there is a significant difference in the perceived effectiveness of visual aids in terms of knowledge of the students. However, the perceived effectiveness of visual aids in terms of attitude and skills of the students do not vary.

4. Conclusions

Based on the findings, the following conclusions are drawn:

1. Student-respondents of OMU CON perceived that use of visual aids in their learning is moderately effective in terms of terms of knowledge, attitude, and skills.
2. First year and fourth year level student-respondents of OMU CON perceived that use of visual aids is moderately effective in their learning in terms of their knowledge, attitude, and skills. Second level students perceived that use of visual aids is highly effective in their learning in terms of their knowledge, attitude, and skills. Third level student-respondents of perceived that use of visual aids is highly effective in their learning in terms of their attitude and skills, while moderately effective in terms of their knowledge.
3. There is a significant difference in the perceived effectiveness of visual aids in terms of knowledge of the students. While, perceived effectiveness of visual aids in terms of attitude and skills of the students do not differ significantly.

5. Recommendations

On the basis of the findings and conclusions arrived at, the following recommendation are made:

1. A similar study is suggested to be conducted in same school and other schools considering a control and experimental group; use of other kind visual aids; and considering the variable gender.
2. The teachers should constantly improve their teaching aids. Since today's generation of learners are accustomed to fast-paced technologies, the teacher should experiment with combining advanced technologies and lectures within the classroom. A similar study is also suggested to be conducted in same school and other schools considering a control and experimental group, the use of other kind visual aids and considering other demographic profiles of students.

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