



# The Effects of Web-based Instruction on Saudi Medical Students' Achievements in Learning Medical Terminologies

<sup>1</sup>Ahmed Altayeb Alhaj, <sup>2</sup>Norah Hussain Banafi

<sup>1</sup>Jazan University, (Saudi Arabia), <sup>2</sup>University of Limerick,(Ireland)

## Abstract

*Technology nowadays is needed for endless resources and learning materials. This paper explores the application web-based instruction such as YouTube as supportive material to increase students' performance and acceptance of learning system through Web-based Instruction (WBI) to learn Medical Terminologies in Jazan University. It examines how using the web-based instruction in enhancing higher education students' academic outcomes to collaborate on creative thinking solving problems in medical terminologies. The instrument used on this study are survey and observation. The survey investigates students' instrumental and integrative motivation towards the using internet on English class. In addition, the observations were based on students' achievements in classroom and social networks. The research adopted the descriptive and empirical methods. A survey of 20 items distributed to 100 Medical students in 2015. It's analysed by (SPSS). The application of technology in EFL classes increases students' motivation in learning by caring and sharing information and ideas in collaboration.*

## 1.0. Introduction

Integrating web-based tools into medical classes provide students with a lot of benefits that lead to great engagement in learning process. Using technological tools such as YouTube and other web-based technologies open for students chances to interact with specialists and professionals through listening, watching and talking with them. The technological tools "can augment traditional medical humanities education efforts and perhaps even improve them, as well as preparing students future in which social media will play a significant role in medicine" (George & Dellasega)[4]. Although, the use of computer technology in EFL classroom has been a crucial topic of discussions and examinations for a long time and the integrating of web-based instruction into learning language classes have been started since 1950s (Alsied & Pathan)[1].

## 1.1. Study Statement of the Problem

Related to Saudi context, reported that YouTube is a popular web-based tool that Saudi medical students preferred to use as a strategy to help them improving their medical comprehension in classroom. The researches found out that digital tools have a positive influence in medical learning field and the appropriate integration of such technologies as Youtube is needed in medicine educational field (Unis, Khubrani, & AlHweti, 2014)[10]. "In diverse medical education contexts, e-learning appears to be at least as effective as traditional instructor-led methods such as lectures. Students do not see e-learning as replacing traditional instructor-led training but as a complement to it, forming part of a blended-learning strategy" (Ruiz, Mintzer & Leipzig, 2006)[8]. So, Saudi medical students need the internet technologies to be used in learning process in order to be motivated in learning English. These types of technology can assist them to understand different medical issues.

## 1.2. Objectives of the Research

The objectives of the research can be summarized in the following:

- To investigate the effects of Youtube as the web-based instruction tool on students' integrative and instrumental motivation.
- To enable medical students to communicate effectively in a survival digital era.
- Using Youtube as teaching tool in order to motivate students to learn medical terminologies.
- Observe students' collaboration and performance on learning medical terminologies through web-based instruction.



### 1.3. The Significance of the Study

The importance of this study is to examine the effects of web-based instruction on the medical students' integrative and instrumental motivation by using youtube in creating a healthy atmosphere of learning medical terminology. This study explores the theoretical and practical issues of integrating web-based materials along with having EFL medical students well-motivated and engaged through youtube and motivational videos and being active participants.

## 2.0 Literature review

A long time ago, the use of the Web tools played an important role in delivering instruction and have been improved greatly. Khan (1997:6) [7], defined web-based instruction (WBI) as “a *hypermedia-based instructional program which utilizes the attributes and resources of the World Wide Web to create a meaningful learning environment where learning is fostered and supported*” According to Bannan-Ritland (2004) web-based instruction is a combined of technological learning resources such as hypermedia, and multimedia that used to deliver teaching and learning materials and it enhances student engagement with the curriculum content (As cited in Smith, 2006) [10]. In the medical field, “*It is becoming a truth universally acknowledged that the education of undergraduate medical students will be enhanced through the use of computer assisted learning*” (Greenhalgh, 2001)[6].

Web-based instruction has a great impact on medical students. The use of advanced technology spread widely on academic learning and teaching environments. The internet is a particularly significant resource of learning. However, it includes a huge amount of unstructured and uncontrolled information that can provide student with effective learning if they use it professionally. (Ward, Gordon, Field, & Lehmann, 2001) [13].

### 2.1. YouTubes

Gray (2013) mentions that YouTube is a virtual video –sharing platform that provides users with features to upload videos into a public space where any individual can watch them. YouTube provides the users with platform that help them to generate different clips in varied subjects with specific names and tags. The users have options to make their videos public or private and they can watch them on the YouTube site or embedded in any other website. In addition, Gray stated that YouTube is very important for learning because many researches demonstrate that the majority of people learning via listening, watching and doing. So, the teachers “*Should be trying give students the option of watching a video if they want*” (2013:144)[5].

### 2.2. Web-based instruction & Motivation

Martin and Briggs (1986) state that motivation is a theoretical hypothesis that indicate to external and internal desires that affect the encouragement, and learners' behaviours tendency toward certain issues in their life (As cited in Cornell & Martin (1997)[3]. According to Reeves & Reeves (1997) technology played an important role in increasing students' motivation. So, teachers need to engage students in active learning through using web-based instruction that attempt to motivate student by creating effective engagement (as cited in Wang & Reeves, 2007)[12].

Sankaran (2001) [9] mentions that teachers have a common belief that all students can learn if they have high motivation. Although, the strong desire of learning medical terminologies differs from one person to another. Some students have inner feelings by developing themselves, whereas to learn for the sharing reason of educating and satisfying themselves as individuals. Others are motivated by profitable things such as getting an "A" grade in their colleges or getting a job.

## 3.0. Research Methodology

In order to find generalizable answers to the research questions and find out the practical solutions of the problems and also the practicality of web-based instruction such as Youtube to motivate students in life situation, the paper will adopt the empirical method and analytical methods by involving EFL medical students at Jazan University.

### 3.1. The Participants

The participants of the study are 100 EFL medical students on level 1, course code 163-prep3 at Medial College from Jazan University in Saudi Arabia in this academic year 2015. All students who participated in this study are Saudi and their native language is Arabic. Their average age is 20.



### 3.2. Research Instrument

The instrument used in this study is a 5 point Likert Scale ranged from 'Strongly Agree' to 'Strongly Disagree' to gather information on participants' motivation through (WBI). There are 20 items in the survey. The survey consists of two parts: items (1-10) are for integrative motivation, and items (11-20) are for instrumental motivation. These instruments were used as tools for collecting evidence and justification for questions.

### 3.3. Data Collection

The survey was distributed to 100 medical students during regular class session, in the same time they were given clear instruction and explanation in both L1 and L2 for filling out the questionnaire. The researchers followed qualitative and quantitative standard of research.

### 3.4. Research Questions

- To which degree can web-based instruction affect students' integrative and instrumental motivation?
- Are videos motivating students to learn medical terminologies?
- To what extent does YouTube enable medical students to improve their comprehension skills?
- To what extent can YouTube motivate students creative thinking and experience?

### 4.0 Data Analysis and Discussion

This study followed the statistical analysis for overall results of Web-Based Instruction 'WBI' that use in teaching and learning English as a foreign language. This paper will be in the form of tabular charts, and the analysis will be done in the form of the comparison of the percentage of groups learning through 'WBI' and using the video Tubes. 'WBI' applications have a positive affect on the students' integrative and instrumental motivation and they have better interaction, communication and achievement.

Statistics								
		item 1	item 2	item 3	item 4	item 5	item 6	item 7
N	Valid	100	100	100	100	100	100	100
	Missing	49	49	49	49	49	49	49
	Std. Error of Mean	.04824	.04560	.12258	.09547	.08507	.13891	.08040
	Std. Deviation	.48242	.45605	1.22578	.95473	.85067	1.38914	.80403
	Variance	.233	.208	1.503	.912	.724	1.930	.646
	Range	1.00	1.00	4.00	3.00	4.00	4.00	4.00
	Minimum	1.00	1.00	1.00	2.00	1.00	1.00	1.00
	Maximum	2.00	2.00	5.00	5.00	5.00	5.00	5.00

		item 15	item 16	item 17	item 18	item 19	item 20
N	Valid	100	100	100	100	100	100
	Missing	49	49	49	49	49	49
	Std. Error of Mean	.10804	.04408	.05925	.04943	.06289	.12561
	Std. Deviation	1.08040	.44084	.59246	.49431	.62893	1.25606
	Variance	1.167	.194	.351	.244	.396	1.578
	Range	4.00	1.00	2.00	1.00	2.00	4.00
	Minimum	1.00	4.00	3.00	4.00	3.00	1.00
	Maximum	5.00	5.00	5.00	5.00	5.00	5.00

The data based shows that all the participants disagreed to use YouTube only for understanding their regular class topics. That means they can use YouTube for other purposes such as entertainment, exploratory than education only. They can use YouTube for formal and informal learning on their own ways.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	16	10.7	16.0	16.0
	Neutral	12	8.1	12.0	28.0
	Agree	52	34.9	52.0	80.0
	Strongly Agree	20	13.4	20.0	100.0
	Total	100	67.1	100.0	
Missing	System	49	32.9		
Total		149	100.0		

Relating to the above table about 72% of students agreed to the item (4) (Using YouTube for my medical terminology class help me to pass my examination). It means that most of EFL medical students concentrate upon passing their exams and watching YouTube videos which help them to succeed. In item(8), (Making YouTube that are relating to health issues make people respect me) about 74% of the participants agreed to study medical terminology through YouTube so as to make them more professional in their future.

item 18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	59	39.6	59.0	59.0
	Strongly Agree	41	27.5	41.0	100.0
	Total	100	67.1	100.0	
Missing	System	49	32.9		
Total		149	100.0		

item 19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	11	7.4	11.0	11.0
	Agree	56	37.6	56.0	67.0
	Strongly Agree	33	22.1	33.0	100.0
	Total	100	67.1	100.0	
Missing	System	49	32.9		
Total		149	100.0		

Regarding the participants' perceptions of the using of 'WBI' items (12) (Studying English You Tube motivate me to discuss Medical terminologies with my classmates and teacher), item (17) (Studying English through YouTube make my appreciate using web-based tools for learning medical terminologies), item (18) (Studying English through YouTube give me freedom to watch and understand any topic I need) and item (19) (Learning Medical terminologies through YouTube provides me with information that encourage me to share my knowledge with others), these results showed positive perception of this effectiveness on their integrative motivation. The participants' mean score on the using web-based materials variable was quite positive using YouTube. Participants reported that 'WBI' and using YouTubes increased their motivation, discussion, performance, and encouragement according to the following percentage (100, 95, 100 and 89 % respectively). In item (20) 51%of participants agreed that studying medical terminology through Youtube improve their creative thinking and 32% of them are neutral, that means students need more training and workshops which help them to use YouTube creatively.

From this results, it is clear that learning through YouTubes has a great effect on the students' motivation and better outcomes in learning medical terminologies in real world.

#### 4.1. Findings and Conclusion

In the light of the findings of this study, the researchers concluded that:

- From the data analysis, results indicate that the technology has a great influence on students' improvement and solving complex medical problems.
- Using web-based materials such as You Tube and devices are better than using traditional methods in learning a language specially for medical terminologies.
- Medical students have positive thoughts toward using web-based instruction in classrooms.
- EFL medical students have positive experiences of communicating effectively and collaboratively through web-based instruction.

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