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**”المستجدات الحديثة في التعليم العالي في ظل التعليم الالكتروني”**

17-16 كانون الاول 2020 (المجلد الثاني)

## Fostering Technology Based Instruction on Students` Motivation in Teaching English as a Foreign Language

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### Abstract

Technology is a fundamental tool that demanding in preparation of language teaching and learning regarding as globally engaged which goes spontaneously with the 21<sup>st</sup> language skills. The purpose of this study was to investigate the impact of technology on a student's motivation to learn new data about the material how to teach methods in ELT. The procedure involved of two groups. Control group was taught in a conventional course reading. An experimental group was to finish students' tasks in the google classroom assignments. A mix of technology PC based enhanced exercises and conventional course book and pencil exercises were utilized over a time of almost two months. Information was gathered through quantitative surveys and qualitative observations and responses from questioning students. Analysis of the data collected shows that student motivation and joy of learning increases as technology is used in the classroom. Conventional techniques for guidance were not recorded as paramount or inspirational for most students.

**Keywords:** Technology, Motivation, Teaching, and Learning.

### 1. Introduction

#### 1.1 Problem and Its Significance of the Study

Technology assumes a larger role in students learning as more and more classroom identifies technology integration as a college initiative to prepare students to be globally engaged, and an active learner in the 21<sup>st</sup> century. COVID19 Pandemic, make deliberate environment for integrating technology teaching as a resource for learning environment has intentionally included technology as a district goal to deepen learning and empower students to “engage effectively in a world saturated with technology. Determining the effectiveness of using technology in the classroom has usually been an assumed position. While teachers may get positive feedback from students about how they “had interest” with a particular lesson, little empirical evidence has been gathered to point towards an increase in motivation for learning while using technology-based instruction.



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Technology infusions into learning environments have grown exponentially during the past two decades and with the accelerating rate of inventions and innovative applications can be expected to continue to do so. Each new technology application is accompanied by a predictable wave of publications describing its benefits and applications. However, the novelty effect associated with each of these innovations soon fades leaving researchers with the continuing problems of providing learning experiences that are motivating to the learners and instructionally effective. Certainly, adaptations of basic knowledge of motivation and learning have to be made in accordance with the specific characteristics of a given technology or delivery system, but there are fundamental principles of motivation and learning that transcend these differences.(keller,2016:2)

Identifying factors that increase student motivation for learning is an ongoing process explored by researchers, educators, and other stakeholders in the educational setting. As technology, Google classroom learning, and digital tools become more readily available, research is beginning to surface about student motivation for learning as its effect to technology.

Technology in the classroom can take different forms based on the definition of technology. Hew and Brush (2006) define technology as any computing device, handheld computer, mobile phone software, or Internet used for learning purposes. Hew and Brush’s research identified primary barriers technology integration. The barriers identified were resources, knowledge and skills, institutions, attitudes and beliefs, assessment, and culture. Despite apparent barriers, strategies should still be employed to integrate technology in a useful and productive manner. Their definition of technology opens the door for additional research into the impact of technology on student motivation for learning.

Technology rich classroom environments has engaged students who learn through technology are more invested in their learning. Technology generates an environment that supports synergy, collaboration, and dynamic, hands on learning. Compared to classrooms where traditional instructional methods were used, technology rich classrooms supported student sharing and developed an awareness of self- motivated learning (Li, Pow, Wong, & Fung, 2010).

Ciampa (2014) conducted a comprehensive research that addressed learning in a mobile age and student motivation. His research identified



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intrinsic motivations for learning like challenge, curiosity, and control. The research also identified extrinsic motivators for learning like cooperation, competition, and recognition. The encompassing research found technology, carefully and selectively included into the lesson plans, positively impacts the intrinsic and extrinsic motivators for learning. Ciampa’s conclusion identified a distinct connection between technology and motivation for student learning. The study correctly determines that tasks assigned to students must be meaningful, take into account student interest, emphasize mastery, and focus on learning. These factors will help to motivate learners (Ciampa, 2014).

The job of teaching, like the requirement of being a high performing student, contains many obstacles to building and sustaining personal motivation. There are also many challenges with regard to implementation problems and social support, especially in e-learning and even more so in self-directed settings where students are not actively engaged with instructors and other students. Implementation problems can result from such things as poorly designed materials that lack well-written text with adequate examples and exercises and from confusion due to organizational and navigational problems.

Deimann and Keller (2006:12) called two of these problems “lost in hyperspace” and the “serendipity effect.” It can be easy to get “lost” when the navigational support in a program is not clearly defined and is easy to defeat by clicking on icons that branch away without clearly marked return paths. It can also become too easy to get distracted when one link in a program leads you serendipitously to other links that branch away into areas of personal interest that digress from the lesson. Social support problems can occur when learners are not part of a social network and have no opportunity for collaboration, and when motivational support is not available when and where it is needed. Depending on their learning styles, some students might prefer to be independent and learn on their own, but a complete lack of social support is usually detrimental.

Currently, in undergraduate students in English Department, students experience a mix between traditional instructional based lessons and technology-based learning. Expectations to integrate technology into daily teaching practices continues to be an ongoing district focus. However, using technology for the sake of technology is not the purpose or expectation. Instead, technology integration is predicated on the belief that technology can enhance





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learning for students. The focus of this research is to determine if the technology integration being used in academic level of the student actually does aid and support learning as a positive motivational tool. The driving question behind the research project is: “How does technology impact student motivation in the classroom?” This exploratory study aims to find out the effect of teaching technology on students` motivation.

### 1.2 Aim and Hypothesis of the study

The aim of the study is to find out the effect of the Technology Based Instruction on Students` Motivation in Teaching English as a Foreign Language.

The following hypothesis of the present study is: there is no statistically significant difference between students indicating interest between two groups (control and experimental) in using technology to motivate academic learners.

### 2. Technology – Assisted Learning Environments and Motivation

Variety of technology applications that are available to assist in creating interesting lessons and activities. These affordances, or resource opportunities, include such things as productivity software, help systems, data bases, expert systems, wireless communications, email, Facebook, Skype, LinkedIn, smart phones, YouTube, and /or codes to mention only a few. Furthermore, there is a tremendous variety of learning environments and pedagogical strategies. One of the striking things about modern learning environments is that they can occur almost anywhere and at any time thanks to the vast number of delivery system options. (Keller,2016)

List of examples of learning environments and pedagogical strategies

- distance learning
- flipped classroom
- e-learning
- distributed learning
- mobile (*M-*) learning
- blended learning
- massive open online courses (MOOCs)
- hybrid learning
- Virtual worlds: Second-Life , OpenSim, Minecraft



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- online learning.
- and even “traditional” classroom learning, which usually means nothing more than attending lectures

Many educators get very excited about the possibilities offered by these e-learning and technology innovations, but many others do not. Similarly, students are sometimes excited by new techniques and technologies, but their interest is frequently short-lived. Just as students are not always motivated to learn, teachers are not always motivated to teach. Of course, this is not a new insight but what are some of the reasons?

Concerns about human motivation and how to influence it have been expressed throughout history. Aristotle, for example, asked, “Why is man born to wonder”? In the contemporary world a dominant explanation of how to motivate people was provided by behavioral psychology. From a highly simplified perspective, it states that you can motivate people with a “carrot or stick;” that is, you can motivate them to move toward a goal or acquire a new behavior by rewarding positive behaviors related to the desired behavior (“carrots”). In contrast, you can motivate them to avoid given behaviors, or to stop doing them, by punishing instances of those behaviors by ignoring them or administering painful consequences (the “stick”). (Keller,2016)

However, this approach omitted consideration of the many cognitive and emotional aspects of a person that influence behavior. A more comprehensive definition of motivation is that it refers to those things that explain the direction, magnitude, and persistence of behaviors (Keller 1983) and there are many, many theories and concepts that have been formulated to explain aspects of motivation. However, this diversity did not provide a useful foundation for understanding and influencing motivation in a learning environment. There were too many concepts and theories to be useful for design and many of them had overlapping elements. This effort resulted in a synthesis with four categories of motivational variables that were first called “interest,” “relevance,” “expectancy,” and “outcomes” (Keller 1979). The new structure (Keller 1984) was now called the ARCS model (attention, relevance, confidence, and satisfaction):

1. The **attention** category incorporates research on curiosity and arousal, interest, boredom, and other related areas such as sensation seeking.



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2.The second category, **relevance**, refers to learners' perceptions that the instructional requirements are consistent with their goals, compatible with their learning styles, and connected to their past experiences.

3.The third category, **confidence**, refers to the effects of positive expectancies for success, experiences of **success**, and attributions of successes to one's own abilities and efforts rather than to luck or to task challenge levels that are too easy or difficult.

4. The fourth condition of motivation is required is called **satisfaction**. It includes the appropriate mix of intrinsically and extrinsically rewarding outcomes that sustain desirable learning behaviors and discourage undesirable ones.

These four categories provided a basis for transitioning into a more applied model. Sets of strategy prescriptions were developed for each of the five categories. Complete descriptions and examples appear in numerous publications ( Keller 2010) but in brief they are as follows:

- 1.To generate and sustain attention, use tactics that capture interest, stimulate inquiry, and maintain attention.
- 2.To make instruction relevant to the learners, relate it to their goals, match it to their interests, and tie it to their experiences.
- 3.Build or sustain confidence by creating success expectations, providing opportunities for success, and instilling personal responsibility for success.
- 4.Satisfaction with the learning experience can be achieved by reinforcing an intrinsic sense of satisfaction, providing extrinsically rewarding outcomes, and treating learners fairly. Finally,
- 5.support learner persistence by helping them learn to state their goal intentions in concrete terms, take actions that support their efforts, and regulate their behaviors to stay on task.

The ARCS model is based on expectancy-theory, which assumes that people are motivated to engage in an activity if it is perceived to be linked to the satisfaction of personal needs (the value aspect), and if there is a positive expectancy for success (the expectancy aspect) (Keller,1987:3). The model uses a systematic design process from analyzing target audiences' motivations, designing motivational strategies based on the motivational analysis and other constraints, implementing the strategies and evaluating the effects. Attention means that designers need to draw and hold learners' focus during instruction. Relevance





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means that learners should be informed how the content relates to their needs. Confidence is the degree learners believe they can succeed. Satisfaction is the degree learners feel they are satisfied with their learning results (Keller 1987). More recently, Keller (2008) expanded the original ARCS model by adding the fifth component: volition. In this study, we used the original model because it has been applied in different contexts, and there are validated instruments measuring motivation in terms of the four components.

The ARCS model has been widely applied in online or blended learning environments to improve students' motivation, attitude, retention rate, performance, and other psychological traits (Li and Keller 2018). For example, ChanLin (2009) found positive student attitudes toward the ARCS-enhanced learning materials in a web-based media service class. Hodges and Kim (2013) reported better attitudes toward the course topics in the experimental group which used ARCS-enhanced materials than the control group, which did not use these enhanced materials in a blended learning.

### 3. Technology and Language Teaching in Motivation

The effectiveness of learning with technology has been tackled from both sides. There is evidence that the use of technology increases achievement and self-efficacy (Liu, Hsieh, Cho, and Schallert, 2006), but some studies indicate that the use of technology in certain areas is not beneficial to students (Cramer and Smith, 2002). Still yet, some studies show no link between technology and achievement, but a positive relationship between technology use and discipline (Garthwait, 2007). Technology use in schools has had mixed results. Technology integration must have a purpose in order for it to be beneficial for producing positive results (Cramer and Smith, 2002).

Motivation is a fundamental concern among teachers (Linnenbrink and Pintrich, 2003). Motivating students is a continual problem throughout education and although there are no clear cut solutions, there are several strategies to help teachers with the dilemma. Motivation is generally defined as an internal condition that initiates behavior (Ibid: 2009).

Motivation gets humans going. Motivation arouses interests. Motivation creates the want to achieve a goal. Teachers are always looking to see what motivates their students. Motivation is the key to academic success as well as promoting lifelong learning (Sanacore, 2008).



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Yet the assessment of motivation has received little attention in education Building on expectancy-value theories of motivation, Keller defined a four dimension model for motivation with practical application to instructional design—Attention, Relevance, Confidence, and Satisfaction (ARCS):

- Attention, or interest, must be obtained and maintained.
- Relevance to learners’ goals and needs must be made clear.
- Learners must feel Confident in their ability to succeed in learning (expectancy for success).
- Learners should feel Satisfaction about their accomplishments in the learning opportunity.

Keller also developed an instrument, the Instructional Materials Motivation Survey (IMMS), to assess motivational features of a course in each of the ARCS dimensions (Keller, 2006).

In an ever-changing technological world, computers seem to be at the forefront of education. At the same time, the exact impact of using technology for instruction is still unknown. Some questions teaching communities grapple with are technology's role in student's desire to learn and how technology affects the retention of the information. More specifically, it would be useful to know whether students respond in a more positive manner to participating in a social studies class when using Google Classroom tools versus when using paper-based methods. For an educator in the 21st century, it is important to gain a deeper understanding of the impact of technology on education. Students are motivated when they feel excited about a task or feel that what they are doing is worthwhile (Linnenbrink and Pintrich, 2003). Teachers must adjust their teaching to match the motivations of their students.

In a traditional classroom, teachers need to encourage students' intrinsic motivation (Sanacore,2008). Intrinsic motivation stems from factors such as interest or curiosity (Woolfolk-Hoy and Hoy,2009). Extrinsic motivation focuses on rewards or incentives. In order to motivate, teachers must encourage and challenge their students (Sanacore, 2008). Students presented with too easy or too difficult material will eventually become bored and unmotivated. In a traditional classroom, teachers must differentiate activities in order to place some power into the hands of the students.This freedom can positively affect the motivation for a student who is unwilling to participate. Great motivators in traditional classroom





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should encourage students to love learning and help students maintain high self-efficacy beliefs (Linnenbrink and Pintrich, 2003). This often proves to be the most difficult task for some teachers. To motivate students, teachers must rely on what students' interests and what they already know and with which they are successful.

Creating activities that students enjoy and respond to is a challenging task for teachers of all subjects. Introducing technology infused lessons may prove to be a beneficial motivator for every grade level. Digital natives respond well to technology-infused activities because of their familiarity with technology (Prensky, 2001). Technology and teacher motivation have positive effects on student motivation (Atkinson, 2000). Because students respond positively to technology and are motivated by technology, teachers should make conscious efforts to create activities that encompass some form of technological tool. Motivated students will be more likely to perform at their highest levels because of the opportunities that their teachers have made available.

## 4. Methodology

### 4.1 Population and the Sample of the Study

This study was conducted to second year undergraduate college students in English Department in second course of the academic year 2019-2020. The material studies class has a particular focus in Teaching ELT. There are four sections taught throughout the day and the number of students in each class varies between 45 and 50. The sample of the study is (100) students are distributed into two groups, group A (50) students for conventional methods without using google classroom, and group B (50) students using the google classroom in sending their homework. The material is Teaching ELT.

### 4.2 Procedures of the Study

The entire data collection process took place over a nearly fifteen weeks from February to May early, 2019-2020. The student used their mobiles or computer Chromebook. Early excitement for the devices was evident and observable, many of the teachers and the students needed to learn new programs, like Google Classroom, Google Docs, Google Slides, and Google Forms, in an effort to make the devices educational and helpful. IN



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experimental group having to learn a new way of computing and using the devices, students exposed their excitement for having technology and information at their classwork. Other early observational data was identified as students were responding to assignment questions. The purpose of an assignment question, is to engage students in the class, or the content, that is intended to be studied for the day. The first assignment question of the year was a simple question, “What is an EFL/ESL teaching setting? Education a Google Classroom had been set up for each section that was taught throughout the day. Google Classroom enables digital questions and conversations to occur through the classroom Stream – the never- ending flow of questions, assignments, and comments that make up the digital classroom. The digital conversations that flowed from the question were unprompted and unsolicited.

Four surveys were administered during the data collection period. The purpose of the surveys was to gather quantitative data that could support the qualitative observations, provide additional knowledge, and uncover other valuable information that could help during the intervention and data collection period of the research project. All surveys were administered via Google Forms and were answered by the students who were present in college for the day.

#### **4.3 Instruments**

The observation is used as a data collected included observing students’ reactions to using technology to complete assignments, observing how on task students stayed when using technology to complete work or assignments, and observation students’ general, daily use of technology throughout the day. General questions were asked to groups of students like “Do you prefer to do your work on computers or on paper? Why?” and “Do you prefer to do your assignment on paper or on the computers?” These brief, and often informal questions, provided insight into how students viewed and valued technology as a part of their learning process.

Four surveys were administered during the data collection period. The first survey was designed to gather baseline data into the initial motivation level for students and to determine various factor that could motivate students to do well in college. The initial survey, titled Motivation Survey, consisted of eight multiple choice questions. Students could choose Strongly Agree, Agree, Disagree, and Strongly Disagree. The other survey was IMMS = Instructional



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Materials Motivation Survey adopted from Keller(2006) has developed an instrument of the Instructional Materials Motivation Survey (IMMS), to assess motivational features of a course in each of the ARCS dimensions (Keller; CIS = Course Interest Survey also consisted of two short answer response questions asking students to identify strategies teachers use that engage them in the learning process and to determine how different strategies effect their ability to learn new things. Multiple choice statements asked in the survey included:

- ✓ I enjoy learning new things in class.
- ✓ I like to participate in this class.
- ✓ I have a desire to do well in this class.
- ✓ Ideas and skills learned in this class will be helpful for me in the future.
- ✓ Learning in this class is fun and engaging.
- ✓ Technology can help me learn new ideas.
- ✓ It is important for me to be creative on my assignments.
- ✓ Sharing my work with others motivates me to do my best.

Short answer questions asked in the survey included:

- ✓ What strategies can teachers use to engage you in learning new things?
- ✓ Does how a teacher teach new ideas effect your ability to learn?

Other surveys given to the students throughout the intervention period included an evaluation and feedback survey for twelve different weeks covered. The primary purpose for each survey was to identify what students enjoyed most about their learning in each unit. Each evaluation survey included the question “What did you enjoy the most from this unit?”

The final survey given during the data collection period consisted of the same motivation survey that was given a month-and-a-half earlier. All of the multiple choice questions were the same but the short answer questions were different. There was only one short answer question and it asked students “What have you enjoyed the most about geography class?”

The IMMS survey in Table (1) consists of 36 statements with response options ranging from 1 (not true) to 5 (very true). After correction for negatively phrased items (i.e., reverse scoring), higher scores indicate greater motivation. The twelve for Attention items focus on how well a course’s content, writing style, and organization capture and maintain attention or help avoid boredom. Nine Relevance items assess how well the information links to the learner’s prior





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knowledge and experience, perceived needs, and potential future applications. Nine Confidence items address the material's apparent difficulty and how the course presentation provides assurance that learning would be successful. Six Satisfaction items assess enjoyment during the course and perceived accomplishment afterward.

**Table (1)The IMMS Survey**

IMMS Components	Subcomponents of ARCS
<b>Attention</b>	The quality of the text helped to hold my attention
	The way the information is arranged on the pages helped keep my attention
	The variety of reading passages, exercises, illustrations, etc., helped keep my attention on the user instructions
	There was something interesting at the beginning of these user instructions that got my attention
	These user instructions are eye-catching
	These user instructions are so abstract that it was hard to keep my attention on them
	The pages of these user instructions look dry and unappealing
	These user instructions have things that stimulated my curiosity
	The amount of repetition in these user instructions caused me to get bored sometimes
	I learned some things that were surprising or unexpected
	These user instructions' style of writing is boring
	There are so many words on each page that it is irritating
<b>Relevance</b>	It is clear to me how the content of these user instructions is related to things I already know
	The content and style of writing in these user instructions convey the impression that being able to work with the telephone is worth it
	The content of these user instructions will be useful to me
	There were stories, pictures, or examples that showed me how this telephone could be important to some people
	Completing the exercises successfully was important to me
	The content of these user instructions is relevant to me
	These user instructions contain explanations or examples of how people use the telephone
	These user instructions were not relevant to me, because I already knew most of the content
<b>Confidence</b>	I could relate the content of these user instructions to things I have seen, done, or thought about before
	As I worked with these user instructions, I was confident that I could learn how to work well with the telephone
	After working with these user instructions for a while, I was confident that I would be able to complete exercises with the telephone
	The good organization of the content helped me be confident that I would learn to work with the telephone
	When I first looked in these user instructions, I had the impression that these



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	would be easy to work with
	These user instructions were more difficult to understand than I would like for them to be
	After having looked in these user instructions briefly, I felt confident that I knew what would be discussed in these instructions
	Many of the pages had so much information that it was hard to pick out and remember the important points
	The exercises with these user instructions were too difficult
	I could not really understand quite a bit of the information in these user instructions
<b>Satisfaction</b>	I enjoyed working with these user instructions so much that I was stimulated to keep on working
	I really enjoyed working with these user instructions
	It was a pleasure to work with such well-designed user instructions
	Completing the exercises gave me a satisfying feeling of accomplishment
	The comments in these user instructions helped me feel rewarded for my effort
	The course provides a free statement of accomplishment for students who meet the criteria as a certificate showing their work.

## 5. Results and Data Collection

### 5.1 Data Collection

The focus of the study was to determine how students' motivation for learning was impacted by the careful integrated use of technology in their assignment work. A variety of data collection methods were employed to help answer the driving question of how technology impacts students' motivation. Formal and informal questions were posed to the entire classroom of students to observe their motivation in using google classroom, surveys were distributed to all students were distributed, and qualitative observational data was collected on a weekly basis. The approach to the research sought to integrate both qualitative and quantitative methods. The surveys that were distributed to students helped to establish quantitative data while the observations, and the formal and informal questioning all helped to provide a qualitative component to the data collection.

Efforts were made to ensure that the data collected proved to be reliable and valid. In an attempt to ensure that the research was valid and reliable, multiple methods of data collection were used. The validity of the quantitative surveys could be called into question because other factors besides technology could be assessed to the positive increase in students' responses to the statements. The IMMS was administered immediately after each module. Knowledge was assessed following IMMS administration using Likert scale (Cronbach alpha 0.68). Each dimension's



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subscore was standardized, as suggested by Keller, by dividing by the number of questions to yield a score for each dimension ranging from 1 to 5. Internal consistency was calculated using Cronbach alpha(0.76) .

## 5.2The Results

Attention Course assigns caught learners' attention. The content that the observers paid attention to included upcoming topics and reminders of due assignment work (63.0% of observers). students treated assignment work on google classroom stream that helped them see the big picture of the course (23.8%)in control group . Additionally, the observations considered the encouraging tones in these assignments work an effective way to connect with the course materials table 2.

**Table (2) Descriptive statistics of the IMMS in control group**

	N	Minimum	Maximum	Mean	Std. deviation
Attention	50	3.00	5.00	4.29	.448
Relevance	50	2.22	5.00	3.99	.614
Confidence	50	2.00	5.00	4.05	.586
satisfactory	50	2.33	5.00	4.27	.669
Average	100	2.75	4.91	4.15	.470

The course attention such as syllabi and grading information also caught attention (71.7%)in experimental group more than in control one , especially at the beginning of the week course . Students in relevance component looked for course content/introduction, course schedule, and/or assignments are more than in control group. Almost all students control and satisfy to remember the layout or specific elements like images or quotes from previous students that were purposefully designed on the course pages(27.4%).

**Table (3) Descriptive statistics of the IMMS in experimental group**

components	N	Minimum	Maximum	Mean	Std. deviation
Attention	50	1.50	5.00	4.17	.575
Relevance	50	1.67	5.00	3.95	.582
Confidence	50	1.78	5.00	4.03	.566
Satisfactory	50	1.17	5.00	4.14	.728
Average	50	2.25	4.89	4.78	.515

The average score on the pre-survey was 4.15 the mean score. The average post-test score for all participants was 4.78. The average score on the retention test for all participants was. Table (2,3) summarizes the results by each group on two groups. The results of the pre-test were low for all the groups. The average mean





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score for the pre-test for all two groups was .515 with a standard deviation of .470, indicating quite a range of responses on the pre-test. Control group may explain lower than expected post-test scores .

**Table 3**  
**Mean and Standard Deviations for the Two Groups on Pre, Post IMMS Survey**

Group	N	Pre- IMMS		Post-IMMS		T -value	Sig.
		Mean	SD	Mean	SD		
Experiment	50	19.24	(3.33)	26.48	(4.23)	3.156	0.05
Control	50	18.77	(3.83)	27.6	(3.75)	2.451	0.05

The mean score for the pretest in the experimental and control group was lower than the post survey, with the lower of a standard deviation. Seventy-eight percent of the participants achieved scores equal to or higher than their respective post-test scores. At the same time, the standard deviation, which increased on the post survey, indicates that at the experiment group is higher than the control group, there were more scores deviating from the mean in either direction than there were at either pre or post-test.

## 6. Discussion

To achieve the aim of the study ,it is using both qualitative and quantitative data was based on a few different factors, to provide some flexibility and a hands-off approach to gathering data. The purpose of the research was to determine the effect of technology had on students' motivation for learning. The quantitative surveys provided insight into the number of students who thought or believed a certain idea, the qualitative observations garnered insight into *how* or *why* students believed certain ideas.

Data collection provided meaningful insight and knowledge into the value of technology integration and student motivation. the observable data was shown positively students responded to taking out their computers to answer questions, view websites, gather information, or complete an assessment. Since technology in the classroom was always used for educational purposes students were always learning, designing, or collaborating to construct knowledge. While audible groans or sighs could be heard when students were asked to take out textbooks or pencils, excitement and positive energy was evident when students were instructed to open their Chromebooks. Through meaningful observation and



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surveys it was evident that the students valued technology and embraced technology as a tool to drive learning. They enhanced their own learning experience through the use of technology without being asked or required. Since some of the students did this on their own, changes to other classes were instituted that encouraged digital dialogue and discussion. The observations determined this was a positive change that not only enhanced learning, but increased the students' willingness to participate and engage in a topic or concept.

## 7. Conclusion and Suggestion for Further Studies

The surveys, and observations all helped to provide insight into how technology motivated students for learning. The mixed-method methodology enabled multiple forms of valuable data to be collected and compared. The value of the data collection method was revealed in the data analysis. Throughout the data collection and intervention period a combination of technology-based lessons and more traditional textbook and paper lessons were used. A technology-based lesson included anything within the lesson that involved using a computer. Examples included digital assignment in the stream, videos, websites, digital worksheets, or having students design digital presentations. Traditional methods consisted of either reading from the textbook and answering reading comprehension questions or reading from the textbook and recording guided reading notes on paper graphic organizers. Motivation Survey was to see if any of the interventions had an impact on students' motivation for the class.

After comparing the results of the same survey, using of technology played a significant role in changing the motivation perceptions of many students. One of the key components to carefully integrating technology into the classroom is providing opportunities for students to share and collaborate on their work. The findings gathered from the collected data suggest that careful and consistent integration of technology into the classroom can have a positive impact on student motivation for learning. Both the quantitative data and the qualitative data suggest technology is meaningful and valuable to student learning.

The combination of qualitative and quantitative data, and their analysis, provided measurable and noticeable changes in students' motivation for learning within the general social studies classroom. The data, especially when viewed in its entirety, revealed that while they may be a variety of factors that can influence



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student motivation for learning, technology plays a strong and significant role. It is suggested that in an effort to engage students in learning and to build up their motivation for learning, technology should be integrated on a weekly basis. When students were asked to write about the things they enjoyed most about class it was rarely the worksheets or reading out of the book. Students instead chose to write about classroom activities, projects, presentations, and conversations that took place in a digital world. Integrating technology on a consistent basis establishes the excited expectation that technology will be used to drive and assist learning. Overuse can lead to complacency of technology and boredom. Meaningful integration of technology transcends frequency, however, and instead highlights the value technology can bring to learning. The meaningfulness of technology, combined with anticipation, seems to generate motivation for learning.

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