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# Effects Of Youtube Culture On Academic Performance Among Students In Jordan: A Structural Equation Modeling Study

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**Abstract:** The global technological transformation has greatly changed and improved almost every part of our life. Notably, today, social media influences us even for the basic necessities of life, such as education. By keeping the importance of social media in education, this research also focuses on the effects of YouTube culture in improving students' academic performance in Jordan. The researchers used Structural Equation Modeling (SEM)as the study relies on a self-proposed conceptual model. Results revealed that social network usage significantly affects Perceived Usefulness, which further leads to accepting YouTube educational channels. Besides, these YouTube educational channels significantly affect the academic performance of Jordanian students. Finally, demographic variables are found to have a significant indirect effect on the student's academic performance, indicating that YouTube channels as benefiting Jordanian students. Thus, it is concluded that YouTube significantly affects academic performance among Jordanian students. Additionally, the effect of demographical factors is also strong on YouTube usage and academic performance. Here it is concluded that the negativity or positivity of these impacts can be determined by the purpose of usage and the extent to which it is used. Further, the researchers have highlighted and discussed the study's limitations.

Keywords: YouTube Culture; Academic Performance; Learning; Jordan; Structural Equation Modelling.

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# **1. Introduction**

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Social media is defined and understood in different perspectives. However, its primary usage for communication, entertainment, education, and information further implies its implacability. However, these sites have also changed the way of life, so it is easy to share pictures, opinions, and events, and it is of great benefit and important for merchants using it as a means of education and performance levels students have (Alhumaid et al., 2021). The global revolution in communication technologies and the internet has brought about notable changes in modern technological developments in different sectors (Habes et al., 2019). As a result, the world has become a small village where everyone can communicate with each other easily and instantly. Nowadays, people around the globe exchange ideas, opinions, feelings, and experiences through social networking (Mehmood, 2013). The emergence of social media such as Twitter, Facebook, and YouTube encouraged users to use the internet for various purposes like communication and sharing information. Consequently, users may use social media depending on their unique affordances and interaction with them. Nowadays, social media is popular and growing to an extent where technology has become an integral part of our daily life in all its various aspects, including knowledge and learning. Social media allows everyone in the network to react, connect, create a profile, exchange ideas, and share information with others through uploading videos, photos, and posts. The most famous social networking platforms today are Facebook, YouTube, TikTok, Pinterest, YouTube, and others (Data Portal, 2022), indicating that more than 86% of the world's population relies on their virtual social networks for different purposes (Cheng et al., 2008).

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#### 2. Literature Review

Technology facilitating and providing educational services have gained much attention during the past few years (Kaya et al., 2021). Existing literature also witnessed that the relevant technology has improved teaching, and learning practices as social networks' importance is fully acknowledged at every level (Djerf-Pierre et al., 2019). In this regard, the YouTube social network is a platform with a lot of interaction capacity that has a great variety of audio-visual content that could be categorized if desired; for example, there are users interested in being entertained, informed, and also trained. (Geyser, 2021) The importance of visual learning lies in the implementation of tools that develop thinking skills. These visual learning techniques (charting, organizing ideas, and presenting information) help students improve critical thinking and process, organize, and prioritize new information (Ali, 2020). According to (Alhammad et al., 2021), during the last decade, technological advances have changed the learning environment inside and outside the classroom. The blackboard and the textbook are no longer the main mediation tools between teachers and students. One factor that has contributed to this fundamental change is access to the Internet through different electronic devices such as computers, tablets, and smartphones since this medium allows people to have more and better access to textual and audio-visual information and save time and money by not having to travel to specific places of study or having to buy high-cost texts. Current generations adapt quickly and in a natural way to technological advances in all fields, including the educational field. As part of the research process of this study, it is desired to define what are the main criteria or motivations that lead the teachers of the June 5 Educational Unit of the city of Manta, Ecuador, to use the YouTube platform, taking into account their main attraction (the videos), but delving more specifically into its use as an educational aid and its different practices in the pedagogical field (Habes et al., 2020).

#### 3. Research Framework

The purpose of current research is to assess the effect of YouTube Educational Channels on the academic performance of Jordanian university-level students based on the Constructivist Theory (Al-Rahmi et al., 2015; Al-Skaf et al., 2021; Petko, 2012) so, as illustrated in Figure 1 "the framework of the research with hypotheses" this study the revealed the integration Educational YouTube Channels with the variables student academic performance, specifically YouTube Educational channels such as YouTube channels (YTC) Use of Social Network (USN), Perceived Usefulness (PU) in addition to Variable of academic performance (AP), Demographic variables as a mediating factor.

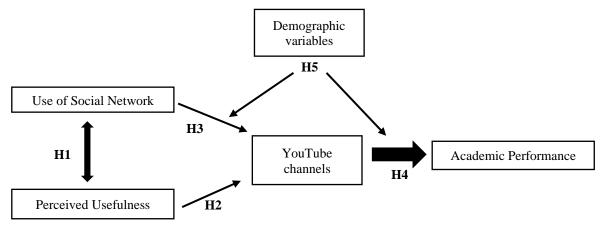


Figure 1: Research Model

### 3.1 Youtube Channels With The USE OF Social Networks (USN)

YouTube channels are a self-regulation-based online platform where a user can upload, share, and create their videos free of cost (Chau, 2010; Duffy, 2008; Tahat et al., 2022). YouTube emerged as a major platform even for advertisements, where even short video clips are available, and advertisements can be easily made (Gueorguieva, 2008). YouTube lo offers other different features, including commentaries and likes/dislikes options to give rapid feedback on video content (Paolillo, 2008). YouTube is being used for several functions for both entertainment and communication and information purposes that make YouTube a popular virtual platform (Chelaru et al., 2012; Khan, 2017). Currently, the rapidly increasing popularity of YouTube and its users also demands for more studies to examine the factors behind its rapid adoption, usage, and also the impacts on academic performance of the young generation. The site of YouTube is a source of knowledge as it is specialized in displaying videos so that scientific lectures can be presented through it as a reference for information for both parties (Raikos & Waidyasekara, 2014). According to (Orús et al., 2016), YouTube is an important social networking platform that also contributes to students' education

and learning across the world. Consequently, it has a strong positive impact on students learning performance. YouTube contains millions of educational videos that are easily accessible, shared through other different communication platforms, and watchable from small portable devices. For instance, the features such as YouTube opus enables users to explore how and to what extent videos can be integrated with educational content and maximum benefit can be taken. As noted by Khan (2017), students choose YouTube as they know that it contains both entertainment and educational content according to their needs.

H1: YouTube channels (YUC) have an effect on Social Networks (USN).

### 3.2 Use Of Social Network (USN) And Academic Performance

Social media helps people to interact freely whenever they want. Users can receive information, share their own ideas, and avail maximum benefit from each other (Alwagait et al., 2015; Shachar & Neumann, 2010). These social media platforms allow users to save and share many useful links on different platforms with other users as well. Besides, merging these links with social media posts also increases the accessibility for other users. For example, students with advertising and business administration as their college majors learn new ways to link different social networking websites with each other, increasing public exposure to certain content. (Colwell & Gregory, 2016; Gormley & McDermott, 2010; Lightfoot, 2012; Redden, 2010). Thus, the above discussion helps to propose that:

H2: Use of Social Networks (USN) has an effect on YouTube channels (YTC).

### 3.3 Perceived Usefulness (PU) And YouTube Channels (YUC)

YouTube channels are a strong and enriched source of education and learning for students worldwide (Burgess & Green, 2018; Chelaru et al., 2012). Students watch YouTube videos, share their comments, like/dislike the videos, and share their experiences with their peers and friends, increasing the visibility of the same videos among the other students (S. A. S. Salloum & Shaalan, 2018). In this regard, it is argued that students will understand the accessibility, advantages, and ease of use attributed to YouTube videos, that work as motivating factors that increase their YouTube adoption, integration, and sharing with others. (Fralinger & Owens, 2009). Existing research provides evidence to construct a strong conceptual framework to design and investigate the reasons behind YouTube adoption and its influence on students' learning capabilities (Lee & Lehto, 2013; S. A. Salloum et al., 2018). Thus, the above discussion helps to propose that:

**H3:** *Perceived Usefulness (PU) has an effect on YouTube channels (YUC).* 

### **3.4 YouTube Channels With Academic Performance (AP)**

Existing literature also witnesses that social media positively affects students' academic grades and overall performance (Jeffrey Mingle, 2015). The effects of YouTube-based educational videos are clear as their aim is to help the students with their educational matters, indicating an increased YouTube useability and contribution for academic purposes (Selwyn, 2012; Silius et al., 2010). Today, educational systems across the globe also depend on online learning to strengthen educational accessibility regardless of any potential barriers (Friedman & Friedman, 2013). The YouTube channels offer value-added services by gathering and analyzing students' activities in a way that supports teachers and leaders in the monitoring and evaluation process (Popescu, 2014). YouTube channels have unique and large features, easily facilitating connections to others for sharing information and knowledge (S. A. Salloum et al., 2017). It is, therefore, a way to exchange ideas and share pictures and videos among students via YouTube channels (S. A. Salloum & Shaalan, 2018). Consequently, this active interaction and involvement lead to an effective participatory community for education (Greenhow & Lewin, 2016). Thus, the above discussion helps to propose that:

H4: YouTube channels (YUC) have an effect on Academic Performance (AP).

#### 3.5 Demographic Variables (DM) With Academic Performance (AP)

Demographical variables are strong variables that impact one's academic performance (Al-Mamun et al., 2014). As we have discussed earlier (Zawacki-Richter, 2020). Despite YouTube covering most part of our daily social media activities, its impacts are basically determined on the basis of its usage, purposes of usage, and the extent to which it is used, as also highlighted by (Ali et al., 2021; Elbasir et al., 2021; Jeljeli et al., 2018). A study conducted by (S. A. Salloum et al., 2021) revealed that YouTube channels have both negative and positive effects; however, the demographical factors remain prominent in enhancing these effects. (Owusu-Acheaw & Larson, 2015). Thus, the above discussion helps to propose that:

**H5:** The positive relationship between YouTube Channels (YUC) and Student Academic Performance is mediated by Demographic variables.

### 4. Research Methodology

The quantitative method was applied in this research as the most suitable approach. Through this quantitative research, data is collected via a survey that is built upon the current theoretical background. It is argued that quantitative research methodology preserves the postulation of an empiricist paradigm (Creswell et al., 2003). Moreover, we analyzed the data by using SPSS Version 64 and IBM Amos Ver 23. As noted by (Dermawan et al., 2020), IBM Amos is one of the software that provides strong statistical analysis and generalizable results of Structural Equation Modelling. Amos is easily available and thus enables the users to ease of use with useful statistical outcomes.

## 4.1 Research Universe & Sampling

The study universe comprises university students currently from Yarmouk University in Jordan. We further randomly selected a sample of n=310 students. It is notable that (Taherdoost, 2018) suggests an ideal sample size of n=200 individuals for the studies having Structural Equation Modelling. So, the sample size of n=310 was fair and according to the requirements of the relevant statistical technique. However, we finally attained a response rate of 96.4% as n=11 or 3.6% of the questionnaires were missing or wrongly filled.

## 4.2 Analysis Of Measurement Model:

### 4.2.1 Convergent Validity

In order to analyze the measurement model, we first conducted a convergent validity analysis, as suggested by (Alghizzawi et al., 2019). First, we can see the values of Factor Loading range from .772 to .891, and Average Variance Extracted range from .820 to .886, indicating that all the values are higher than the threshold value of 0.5. Besides, the Cronbach Alpha values range from .883 to .915, and Composite Reliability values range from .770 to .810, indicating that all the mentioned values are greater than the threshold value of 0.7. Thus, we found that the convergent validity is fully established (See Table 1).

Variables	Items	Factor	CA	CR	AVE
		Loading			
	USN1	.832			
Use of Social Network	USN2	.777	.883	.770	.820
	USN2	.851			
	PES1	.850			
Perceived Usefulness	PES2	.828	.915	.810	.886
	PES3	.885			
	YTC1	.836			
YouTube Channels	YTC2	.772	.906	.800	.828
	YTC3	.876			
	APE1	.891			
Academic Performance	APE2	.823	.916	.794	.832
	APE3	.782			

**Table 1:** Convergent Validity Analysis

## 4.2.2 Discriminant Validity

Moreover, we also conducted the discriminant validity analysis of the measurement model as suggested by (Henseler et al., 2015). First, we conducted a Fornell-Larker Criterion analysis (see Table 2) and found that all the squares of Average Variance Extracted (AVE) values are greater than the correlation values mentioned in the table. Besides, we also found that the Heterotrait-Monotrait Ratio value of our measurement model remained at .063, which is less than the designated threshold value of 0.85 as suggested by (Habes et al., 2021). Thus, we found that the discriminant validity of our measurement model is successfully established.

	USN	PES	YTC	APE
USN	.672			
PES	.614**	.784		
YTC	.657**	.710**	.685	
APE	.567**	.562**	.662**	.692

Table 2: Fornell-Larker Criterion

**Table 3:** HTMT Ratio Scale

	USN	PES	YTC	APE
USN				
PES	444			
YTC	204	388		
APE	176	076	398	

### 4.3. Demographics Of Participants

We conducted a descriptive analysis of the participant's personal data. We found that the majority of respondents (51.2%) were females, and 48.8% were males (M:.510, SD: 501). The calculation of age revealed that most of the respondents (47.0%) were 22 to 24 years old, 23.4% were 18 to 21 years old, 19.3% were 25 to 27 years old, and 10.0% were 25 to 27 years old (M: 1.93, SD: 1.238). Finally, according to the qualification level of the respondents, 42.4% were undergraduate level students, 33.1% were graduate level students, 17.0% were post-graduate level students, and only 7.55 of participants were Doctorate level students (M: 2.42, SD: 1.322).

# 4.4 Structural Model Testing

### 4.4.1 Coefficients Of Determination R2

To assess the strength of variation caused by exogenous variables, we conducted the R2 analysis as suggested by (Figueiredo Filho et al., 2011). As shown in Table 4, the predictive potential of the Use of Social Networks remained at .657 or 65.7%, the power of Perceived Ease of Use remained at .710 or 71.0%, and finally, the predictive power of Academic Performance is found at .662 or 66.2%. Thus, we found that all the values indicate a strong predictive power of all the n=3 latent variables.

<b>Table 4:</b> <i>R</i> <sup>2</sup>	Analysis	of Latent	Variables
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S/R	Variables	$R^2$
1.	Use of Social Networks	.657
2.	Perceived Ease of Use	.710
3.	Academic Performance	.662

### 4.4.2 Hypotheses Testing

We finally analyzed the relationships between the study variables proposed in the study model. As shown in Table 4, the relationship between YouTube Channels (YTC), Social Networking Usage, and Perceived usefulness are strongly significant, with significance value at p > 0.000 (t-value: 7.144) and p > 0.000 (t-value: 8.395), respectively. Besides, the relationship between YouTube Channels and Academic Performance is also significant, with a t-value of 9.920 and a p-value of p > 0.000. Finally, the mediation analysis of the demographical variables also remained strongly significant, with the path value at .037 and the significance value at p > 0.000. Also, the indirect effects of demographical variables on the relationship between YouTube Channels and Academic Performance remained strong with a value of .080, indicating that the H5 of the study is strongly supported (See Table 5 and Fig 2).

Hypotheses	Path	<i>t</i> -value	<i>P</i> -Value	Decision
USN >PES	.770	11.183	.000***	Validated
USN >YTC	.051	7.144	.000***	Validated
PES >YTC	.070	8.395	.000***	Validated
YTC >APE	.084	9.920	.000***	Validated
Hypotheses	Path	Indirect	P-value	Decision
YTC >DEM > APE	.037	.080	000***	Validated

Table 5: Path Analysis, t-value, Significance value

### 5. Discussion On Results

According to Elareshi et al. (2022), we frequently use social networking platforms for different purposes. Indeed, digital technology has become a constant part of our everyday life activities, which I also highlighted in this study. Ali (2018) noted that increased social media usage also indicates students' increased dependency on digital media. However, we cannot consider it purely negative. Students are now much more mature and able to manage their time for education and entertainment. Especially a web-based platform like YouTube is of greater impotence, as they provide students with entertainment, information, and educational opportunities through different videos and even online tutorials.

Current research also indicates the extent to which YouTube plays a significant part in Jordanian students' life. We found all the proposed hypotheses as accepted and well proposing the relationship through the structural model. First of all, we found a strong significant relationship between the use of social networking sites and perceived ease of use. This relationship shows a great consistency with the study conducted by (Lee & Lehto, 2013) as they also found social networking platform usage significantly motivated by the perceived ease of use. Second, we found that there is a strong significant relationship between Social Networking Usage and YouTube channels. This relationship is validated with a significance level of p > 0.000, which is strongly consistent with the study conducted by (Tahat et al., 2022) as they also found a significant relationship between social media usage and YouTube. In other words, both studies strongly witnessed that students mostly use social media to use YouTube channels. These results further showed consistency with a study previously conducted by (Al-Skaf et al., 2021). Here we found that both studies validated the idea that ease of use is an important factor that motivates students to watch and subscribe to the relevant YouTube channels. Besides, the relationship between YouTube channels and students' academic performance is also validated with a significance level of p > 0.000. This third hypothesis also proved a s compatible with the study conducted by (Peter, 2015).

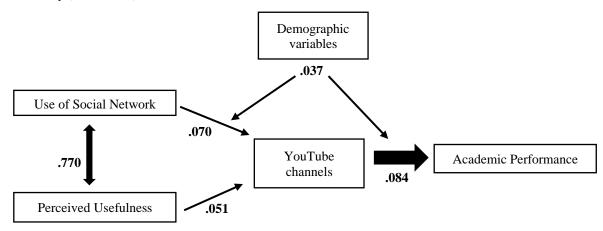


Figure 2: The structural model results.

Peter (2015) argued that using social media platforms and YouTube, in particular, strongly impacts academic performance. However, this extreme positivity or negativity can be determined by how social networking sites are used daily and the purpose they are mainly used. Finally, the relationship between YouTube channels and academic purposes is significantly mediated, as suggested in the H5 of the study, with the significance level at p > 0.000, indicating that the last hypothesis is also validated. This result is also consistent with the study conducted by (Ali et al., 2021; She et al., 2021), as both studies found demographical factors to strongly determine the use and impacts of YouTube usage on students' academic performance. Thus, YouTube is widely used by millions of students across the globe. This ubiquitous nature of YouTube indicates how it has integrated into our lives and shows why and to what extent we are using it and for what purposes (Faizi & El Fkihi, 2018).

#### 6. Conclusion

Constructivists believe that social media can be used for consistent educational and learning experiences. Learners depend on different social networking platforms and build their own understanding of the platform to further use it for educational purposes. For example, by using YouTube channels, they construct and later reconstruct their prior knowledge. As a large number of educational videos are available on YouTube channels, students not only benefit from them but also share with peers to share their experiences. Hence, learning through YouTube channels is spontaneous and personalized for the young generation. That is why today, YouTube is considered one of the most influential and preferred social media platforms. Due to ease of use and wider accessibility, youngsters prefer YouTube channels for entertainment, education, and information-gathering purposes. In this context, the impacts of social media usage in general and YouTube exposure, in particular, have inevitable impacts on the student's academic performance. However, existing literature, including this study, also witnesses demographical factors' role in YouTube usage and academic performance. Here it is concluded that the negativity or positivity of these impacts can be determined by the purpose of usage and the extent to which it is used. Therefore, considerable attention should be given to preparing the students for positive, constructive usage of YouTube, especially for information and educational usage, to ensure better outcomes for the student's academic journey.

#### 7. Limitations & Recommendations

This study is extensive in nature, yet it also has certain limitations. First, the study is conducted in Irbid Jordan, which hinders the generalizability in their geographical regions. Second, this study involves only three demographical variables, whereas other variables can have a strong mediating impact. The third limitation involves choosing only YouTube as an influential social networking platform when there are several different platforms that are widely selected and used by students in Jordan. Finally, the fourth limitation involves selecting only perceived usefulness as one of the leading variables when there are several different factors that motivate students to actively use YouTube channels and videos. Thus, we recommend more investigations, especially on the mediating role of other demographical factors on the relationship between YouTube channels and Academic Performance across the globe.

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