DIALOGUE SOCIAL SCIENCE REVIEW

Effectiveness of Social Media in Enhancing the Conceptual Development

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Abstract
The study was conducted to determine the effectiveness of social media in enhancing individual's conceptual development at university level in Khyber Pakhtunkhwa, Pakistan. Objectives of the study were to identify the effectiveness of social media in enhancing individual's ability to remember, understand and apply concepts. The study was descriptive (quantitative) in nature. The survey research method was used to collect quantitative data from the respondents. The population of the study comprises students from the department of education at public sector universities of Khyber Pakhtunkhwa. Purposive sampling technique was used for the selection of the sample. Four hundred (400) students/scholars from ten (10) universities, forty (40) respondents from each university. Data were collected from five (5) public sector universities, three (3) private sector universities, and two women's universities in the Khyber Pakhtunkhwa. Based on findings it was concluded that most students responded that social media is an effective platform to enhance an individual's ability to define terms, share, recall, and assess information by using different applications of social media in different ways i.e. lectures, maps, diagrams, videos, related films, news, information and book etc. Majority of the sample responded that social media is vital in enhancing the learners' ability to judge, explain, compare, classify, and create phenomena. A maximum number of students responded that social media applications enable individuals to modify, choose, and use information in new, continuously changing situations. Most students responded that social media is an effective tool to enhance students' ability to order, analyze, criticize, and differentiate concepts. Most students responded that social media effectively enhances an individual's ability to summarize, judge, and evaluate teachers. Majority students responded that social media is an effective platform to enhance an individual's ability to develop, create, design, modify, propose, and invent concepts.
Keywords: Social Media, Conceptual Development, Bloom's Taxonomy, Higher Education.

Introduction

It would be appropriate to say that social media brings people closer to their parents, relatives, and friends. It is a computerized framework that allows one to spread thoughts, information, pictures, videos, feelings, and much more with other items. Social media is an internet-based technology that allows users to ensure contact with others in a short amount of time. Social media is web-based software that is omnipresent all over the world. Social media is social media that changes human life.

Social media has no universally recognised definition (Scott & Jack, 2011). According to some experts, the phrase means the following: social media, as defined by Kaplan and Haelien (2010), is internet-based, contemporary communication software that uses user-generated content and is based on the conceptual and technological underpinnings of Web 2.0 (Stevenson & Waite, 2011). The Oxford Dictionary defines the term as a social networking website and communication. Dearborn (2014) defines communication networking as a fast-moving, all-encompassing, widely-liked, highly effective, and widely trusted means of connecting people through the discovery and sharing of concepts, knowledge, documents, images, videos, and other content pertaining to specific individuals.

Six Degrees was the name of the first network to gain recognition on social networking. Late in the 1990s, social media had its start. People updated their profiles with friends in 1997 as a result of technology advancements. Since the start, there has been a noticeable improvement. In 2010, Kaplon and Haelien separated social media into six categories:

(i) Joint endeavours (Wikipedia)
(ii) Twitter microblogs and blogs
(iii) YouTube content communities
(iv) Social media platforms (Facebook, 2Go, BB chat)
(v) World (World of Warcraft), a virtual game
(vi) Second life, or virtual second world

This categorisation is suitable for academics and individuals to recognise a certain kind of social media and its purposes. However, because of today's tremendous technology advancements, it could be challenging to understand every type and how it works. According to Al-Tarawneh (2014), social media is the web application that is expanding the fastest in the twenty-first century and offers several advantages to people.

Mobile phones were introduced by social media, which led to a sharp rise in user numbers. The study "Mobile Social Networks and Social Practices" by Humphreys (2007) claimed that social network applications have lately shifted from PCs to mobile phones; these applications combine network information and communication. An additional benefit of mobile phones is that they enable users to build and strengthen their social networks.

The impact of mobile phones on our daily lives is astounding, as they are used for many different purposes, such as connecting and sharing information and research work (Hurt et al., 2012). Social media is important and useful in education; it offers technological opportunities for student-centered activities (Monopolis, 2014). Results-based media lead to collaborative learning, communication, knowledge sharing, and interaction; social media tools improve the learning environment for students (Murumba et al., 2015). Students use

mobile phones as a classroom learning tool and for content, material, and information searches (Bagarukayo, 2015).

As more students utilize social media for research, classes, and related resources, its use in higher education is growing every day. Students claim that social media helps them stay in touch with their family, friends, and institutions. Social media is used by educators and students alike for educational purposes. Individuals from diverse backgrounds, predominantly students, utilise social media platforms. It also serves as a source of inspiration. The current system is student-centered rather than teacher-centered. pupils benefit from the learning platform that social media offers; even reticent and passive pupils actively engage in class activities. Information and communication technology is also used at universities for instructional purposes; it draws in students and inspires them while facilitating quick and simple searches (Tess, 2013).

A person's opinion of an object is referred to as a concept. As to the findings of Burner (2014) and McLeod (2007), the categorization process is a prerequisite for all mental activities. It was Taba who introduced the concept-development model in 1966. She asserts that a person's mental process consists of choosing features or characterizations and arriving at an understanding of how an object relates to the process, which entails obtaining a more focused and precise idea. The model instructs the students to separate the objects (group the data) based on similarities, form groups, name or label the data, abstract or summarise the observation, and study an object from various perspectives. It offers a theoretical framework. Taba

Problem Statement

Social networking is at its golden age right now. It serves a variety of functions. People utilise social media for a variety of reasons, regardless of their background. Most people have some familiarity with one or more social networking application types. Social media is a well-liked resource and channel for influencing public opinion. Social media has little effect on any subject, including education. Social media is now a widely used source of knowledge and education since it has grown in acceptance and popularity throughout time. Billions of new pieces of information are added to the corpus of knowledge every second. Pictures, words, music, and videos can all be creatively utilised on social media.

Social media improves student-teacher interactions, helps students understand and share knowledge, establishes connections between students and parents, and allows students to study globally (Devi et al., 2019). Social media infuses creativity into the conventional educational system, facilitates teaching and learning, and humorously teaches difficult subjects and theories through audiovisual content; it substitutes memorisation with conceptual learning (Hathaway et al., 2007). The use of social media in the classroom boosts students' creativity and engagement (Gulzar et al.,2022).

Developing a notion to solve a specific issue is called concept development. The process of developing a concept begins with a vague idea and ends with a clear message delivered in a way that is easy to understand and includes text and visuals. Exact objectives, well-defined concepts, and robust drive are necessary.

According to Bloom, grasping an idea is the only way to apply knowledge and concepts, and applying knowledge and concepts is impossible without

understanding them. Applying knowledge involves modifying facts to fit a novel circumstance where comprehension is crucial. To analyse an idea, a learner has to be knowledgeable, comprehend, and able to apply abilities. These components all serve as the foundation for evaluation. The pinnacle of cognitive learning is creation(Krathwohl,2002).

In light of social media's use in education, the researcher plans to investigate how well social media works as a tool for learning and to what degree this helps to clarify the idea of a learner. Therefore, the subject of inquiry is whether social media may improve conceptual growth at universities.

Objectives of the study

1. To identify social media's effectiveness in enhancing an individual's ability to remember concepts.
2. To determine the effect of social media on developing an individual's ability to understand concepts.
3. To find out the effectiveness of social media in enhancing an individual's ability to demonstrate concepts.

Hypotheses

1. There is no significant relationship between social media and an individual's ability to remember concepts.
2. There is no significant relationship between social media and an individual's ability to understand concepts.
3. There is no significant relationship between social media and an individual's ability to demonstrate concepts.

Significance of the study

The study might make it easier for academics, instructors, and students at universities to comprehend how social media contributes to idea clarity at higher education levels. These differing viewpoints will be analysed and debated in order to come to a consensus on the role that social media plays in accelerating learning and helping students and teachers understand a subject through various audio and video lectures, maps, and diagrams. The current study might help academics and students comprehend a subject more clearly and utilise social media to shed light on it. The results of this study may persuade academics and students to gain access to various social media sites, which could inspire them to learn and gain mastery over relevant subject areas.

Delimitation of the study

There are social media sites like Instagram, Facebook, WhatsApp, Twitter, TikTok, and YouTube. Due to a number of limitations, including time and budgetary restrictions, the current study was restricted to YouTube, Facebook, and Twitter only. Moreover, the study was delimited to university level students in Khyber Pakhtunkhwa province.

Literature Review
Social Media

Social media was utilised to communicate with family members. But as science and technology advanced, its range of use expanded, and today it encompasses

everything from content to information sharing with everyone on the planet, whether one person at a time or many. Globally, there are around 3.8 billion users of social networking sites. Daily advancements and changes occur in social media. The variety of social media has grown with the introduction of new apps like Instagram, Twitter, and TikTok. By 2023, there will be a 257 million rise in social media usage in the USA. According to the Pew Research Centre, around 90% of social media users are young people between the ages of

Types of Social Media

Contact, social networking, blogging, information sharing, contact sharing, photo sharing, reviews, the virtual world, and business networks are just a few of the uses for social media. Public opinion formation, propaganda, and political actions are further uses of social media. Social media is used by people to stay in touch with their friends and family. Additionally, people network for job prospects and look for people worldwide who share their interests, likes, dislikes, opinions, and emotions via a range of social media platforms. Businesses utilise social media for a variety of objectives, including customer acquisition, sales, advertising, and promotion. Moreover, it aids in the promotion of products and services (Dollarhide, 2021).

As per the January 2021 research on the utilisation of several social media platforms, Facebook stands as the most comprehensive social network worldwide, boasting over 2.74 billion active users. Individual accounts are created, friends are added, and messages and status updates are used for communication. Facebook users have the option to "like" pages that businesses make. Among its features is Facebook Messenger, which has 1.3 billion active users.

With 2.29 billion subscribers, YouTube is a free platform for sharing videos. Better still, someone can create videos to upload and distribute to others. Twitter is a social networking service that combines microblogging and social networking. It allows people to stay in touch by sharing brief status updates (limited to 140 characters).

WhatsApp, which has two billion users, provides an additional medium for sharing communications. Instagram is a free picture and video sharing app with 1.22 billion users that allows users to alter their photos with digital filters, frames, and effects before posting them on social media.

LinkedIn is an online discussion platform used for information sharing among groups of businesspeople who share similar interests. Facebook is the world's most popular social networking site with over 2.9 billion members; it also draws people from Instagram and Twitter.

Blogs serve as forums for casual discussion and debate on certain issues or points of view.

With 689 million users, TikTok

617 million people use QQ.

With 600 million users, Douyin

With 511 million users, SinoWeibo

There are 700 million Telegram users and 635 million Snapchat users (Dollarhide, 2021).

Social media can be found on a variety of platforms, such as review websites, virtual worlds, business networking sites, social gaming, and video sharing.

Individuals use social media platforms to communicate their thoughts on social networks, find individuals worldwide who share their interests, and establish connections with possible jobs. Social media is a tool used by governments and politicians to communicate with citizens and voters.

Bloom's Taxonomy

The Bloom taxonomy refers to the arrangement of various educational goals according to B. Bloom's ability rating system in several areas (Crowe et al., 2008). This taxonomy's main goal is to facilitate student learning, and educators use it to guide their instruction in order to accomplish their goals. The three domains of the Bloom taxonomy—the cognitive (related to the head), affective (related to the heart), and psychomotor (related to the hand) domains—can be described in order to gain an understanding of it. Every one of these has been further divided into various learning levels. This hierarchy offers methodical, sequential instruction. The following are the three categories of objectives and their respective purposes:

• Cognitive domains include knowledge, creativity, problem-solving skills, mental aptitude, and thinking.
• The emotional domains, including attitude, motivation, values, and likes and dislikes, are related to human will.
The utilisation of motor skills, coordination, and physical movement are all relates to the psychomotor domains.

Bloom's Taxonomy of Cognitive Domain

Educational psychologist Benjamin Bloom proposed Bloom's Taxonomy in 1956 as a framework for classifying learning goals according to their degree of specificity and complexity. It is frequently utilised as a guide by educators when developing their lesson plans, teaching strategies, and evaluation techniques. Three areas of learning were covered by Bloom's Taxonomy in its original form: cognitive (knowledge-based), affective (emotion-based), and psychomotor (action-based). The cognitive domain was the most commonly used.

A updated version of the cognitive domain was introduced in 2001 by Bloom's former student Lorin Anderson and David Krathwohl, who were among the initial contributors to the taxonomy's establishment. This updated taxonomy, which goes by the name Bloom's Revised Taxonomy, represents a more dynamic classification paradigm. The two main modifications were rearranging the top two levels and substituting verbs for the original taxonomy's nouns in order to represent thought processes.

The six levels of the revised Bloom's Taxonomy of the Cognitive Domain are remembering, understanding, applying, analysing, evaluating, and creating. These levels go from the most fundamental to the most complicated.

Research Methodology

The nature of the study was descriptive and quantitative. The method of survey research was employed to get quantitative information from the participants. The goals were accomplished by applying the deductive technique. Students from the education departments of Khyber Pakhtunkhwa's public universities make up the study's population. The sample was chosen using the purposeful sampling technique. Forty (40) respondents from each university out of a total of four

hundred (400) students and academics from ten (10) universities. In Khyber Pakhtunkhwa, information was gathered from two women's institutions, three private universities, and five public universities.

While interviews were done with university teachers in the education departments, the students in same departments completed questionnaires and interviews with teachers. In order to gather data, the researcher personally visits each of the relevant universities and speaks with the faculty and students.For the quantitative portion, a thirty-item, closed-ended questionnaire with a Likert scale was used (Pearse, 2011). Items 01 through 05 of the questionnaires concerned social media. Each statement had five possible responses: agree with the statement, strongly agree with the statement, disagree with the statement, and strongly disagree with the statement.

Remembering ability (conceptual ability), social media and understanding ability (conceptual ability), social media and applying ability (conceptual ability), and social media and analysing ability (conceptual ability) were the topics of items 06 through 10. Social media and judging ability (conceptual ability) were the items numbered 21 to 25. From 26 to 30, the final five categories pertained to social and creative abilities (conceptual capacity). After the data were entered into SPSS, the quantitative analysis produced a non-parametric result; inferential statistics, such as chi-square, were employed in light of the characteristics of the data. To check the mean of the hypothesis, the standard deviation, frequency, and percentage were employed.

Analysis of Data

Table 1: Effectiveness of social media in enhancing individual's ability to remember concepts

	N	M	SD	X^2	df	P
Social media is an effective platform to enhance individual's ability to define terms	400	1.70	0.66	502.925[a]	4	.000
Social media is an effective in improving individual's ability to share information and express ability.	400	1.72	0.66	527.300[a]	4	.000
Social media plays an active role in developing ability of recalling.	400	1.77	0.79	397.225[a]	4	.000
Social media is an operative application for learning concepts.	400	1.90	0.89	327.700[a]	4	.000
Social media is an active application/tool use to assess information.	400	1.70	0.69	455.325[a]	4	.000

Table 1 elucidates the correlation between social media usage and students' conceptual retention. There is a significant association between students' use of social media and their definitional skills, as indicated by the figures of X2 = 502.925 and P = 0.000. Students' ability to share knowledge is significantly

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correlated with their use of social media, as indicated by the results of X2 = 527.300 and P = 0.000. There is a significant association between students' use of social media and their memory skills, as indicated by the figures of X2 = 397.225 and P = 0.000. Social media use and students' application proficiency are significantly correlated, as shown by the values of X2 = 327.700 and P = 0.000. There is a significant association between students' ability and their use of social media, as indicated by the figures of X2 = 455.325 and P = 0.000.

Table 2: Effectiveness of social media in enhancing individual's ability to understand concepts.

	N	M	SD	X^2	df	P
Social media plays an important role in enhancing ability to explain phenomena and ideas.	400	1.68	0.77	427.875[a]	4	.000
Social media is effective to enhance individual's ability of judgment.	400	1.85	0.89	294.425[a]	4	.000
Social media improves individual's ability to compare phenomena.	400	1.85	0.89	312.875[a]	4	.000
Social media is a program that produces the ability to classify concepts.	400	1.78	0.87	345.250[a]	4	.000
Social media has different dynamic applications that create the ability of translation.	400	1.80	0.85	372.775[a]	4	.000

Table 2 delineated the correlation between social media usage and an individual's conceptual understanding. There is a significant association between students' use of social media and their capacity for idea explanation, as indicated by the values of X2 = 427.875 and P = 0.000. There is a significant association between students' use of social media and their capacity for judgement, as indicated by the figures of X2 = 294.425 and P = 0.000. There is a significant association between students' use of social media and their ability to compare, as indicated by the results of X2 = 312.875 and P = 0.000. A significant link was found between students' use of social media and their classification skills, as indicated by the values of X2 = 345.250 and P = 0.000. Social media use and students' capacity to learn are significantly correlated, according to the values of X2 = 372.775 and P = 0.000.

Table 3: Effectiveness of social media in enhancing individual's ability to demonstrate concepts.

	N	M	SD	X^2	df	P

Social media is effective tool that creates an individuals' ability to calculate things.	400	1.78	0.77	502.925	4	.000
Social media is a vigorous application that enables the individual to use information in a new continuously changing situation	400	2.02	0.99	281.375[a]	4	.000
Social media plays an important role in producing the ability to modify concepts.	400	1.73	0.76	394.875[a]	4	.000
Social media plays a major role in producing the ability to choose the best option.	400	1.85	0.83	379.450[a]	4	.000
Social media is a strong platform that creates the ability to demonstrate things and ideas.	400	1.72	0.77	439.550[a]	4	.000

The correlation between social media usage and an individual's capacity for applying and demonstrating concepts was illustrated in Table 3. Social media use and students' mathematical proficiency are significantly correlated, as indicated by the values of $X2 = 502.925$ and $P = 0.000$. Students' use of social media and their aptitude for using information are significantly correlated, as shown by the results of $X2 = 281.375$ and $P = 0.000$. Social media use and students' capacity to adapt concepts are significantly correlated, as indicated by the values of $X2 = 394.875$ and $P = 0.000$. The association between students' capacity to choose the best and their use of social media is significant, as indicated by the values of $X2 = 379.450$ and $P = 0.000$. Social media use and students' academic performance have a significant link, as indicated by the results of $X2 = 439.550$ and $P = 0.000$.

Conclusion
In the light of statistical analysis, the following conclusions were drawn.
In response, the majority of students stated that social media can be used in a variety of ways—such as lectures, maps, diagrams, videos, related films, news, information, and books—to improve a person's capacity to define words, share, recall, and evaluate information. Social media is essential for improving students' capacity to evaluate, justify, contrast, categorise, and generate phenomena, according to the majority of the sample. Social media applications allow people to choose, edit, and apply information in novel and ever-changing contexts, according to the greatest number of students who replied. According to the majority of students, social media can help students become more adept at categorising, evaluating, diffusing, and analysing ideas.

Recommendations
This research study demonstrated the "effectiveness of social media in enhancing conceptual development at the university level in Khyber Pakhtunkhwa," and the following recommendations were given in light of the study's conclusions.
1. The study discovered that using social media guarantees concept clarity at the tertiary level. It is advised that academics and students at universities make

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use of various social media platforms to enhance idea clarity and eliminate any uncertainty regarding definition, meaning, recall, and identification of particular facts pertaining to the subject matter.

2. According to the study's findings, social media plays a critical role in improving students' capacity to evaluate, interpret, compare, categorise, and compare phenomena. It is advised that universities offer their students the means and chance to take advantage of social media's benefits in the form of explanations, translations, associations, discussions, and illustrations of concepts.

3. The study's findings also showed that social media applications allow people to adapt, select, and use information in a variety of new and constantly changing contexts.

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