

## CHAPTER FIVE

### THEORETICAL AND CONCEPTUAL FRAMEWORKS IN SOCIAL MEDIA RESEARCH

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#### CHAPTER OBJECTIVES

- Understand theoretical frameworks in social media research.
- Understand conceptual frameworks in social media research.
- Steps in selecting social media research conceptual and theoretical frameworks.

#### ABSTRACT

The advent of citizen journalism has made social media an all-comers' affair. This has huge implications for Social Media Research (SMR). Inspired by the gap in the literature concerning the absence of research guidelines for SMR, the researchers debuted a robust *vade mecum* for scientific inquiries in social media. The Chapter aims at providing a guide to social media researchers on how to carry out the theoretical and conceptual frameworks of their literature review. It achieved this by presenting two existing social media models - Media and Technology Usage Assessment Scale (MTUAS) which guides researchers on how to assess social media applications and use them in self-reporting through coding and analyzing their responses as well as Technology Acceptance Model (TAM) which helps users to find a suitable social media application that is relevant and helpful to their jobs. The study found Media and Technology Usage Attitude Scale (MTUAS) and Technology Acceptance Model (TAM) as two existing indispensable theoretical frameworks for choosing a topic, doing a literature review, isolating variables, and implementing and selecting a conceptual framework. The use of tables and figures, also showed how variables identified as independent, dependent, moderating, mediating, and controlling variables may be used to create a system's conceptual framework. The study concluded that unarguably, theoretical and conceptual frameworks are mandatory ingredients for contemporary quantitative and qualitative research in the novel field of social media research.

**Keywords:** Conceptual framework, Media assessment scale, Self reporting, Social media metrics, Social media research, Social media usage, Theoretical framework

## INTRODUCTION

The 21st century has ushered in unprecedented growth in science and technology. This has also debuted an upsurge in tools and techniques of Information and Communication Technologies (ICT). Importantly too, the information global highway is fertile with both traditional and social media platforms which further enhances trade and commerce, edutainment and infotainment, human interaction and interconnectedness to mention just a few. Indeed, "Social media are becoming an ever more important part of an organization's media mix" (Peters, Chen, Kaplan, Ognibeni & Pauwels, 2013: 282). For example, the everchanging expansive nature of traditional or new media technology and technical competence among people have launched new entrants into the digital space. Because of their impact, it is crucial to "pay more attention to social media channels' effectiveness" (Skulme & Praude, 2016: 132).

Unlike in the past when those behind mainstream media dictated what is newsworthy, who gets what information or not and where those pieces of news could be transmitted, social media has given birth to citizen journalism. In a society where everyone with internet access and a smartphone gathers and disseminates information without a third party, authenticity becomes a huge challenge. To this end, traditional media is in a constant face-off with new media which encompasses various social media platforms. This creates a lacuna for research and documentation. More so, managing social media today is challenging. "Social media are substantially different from traditional or other online media due to the network structure and their egalitarian nature. As such, they require a distinct approach to management. A prerequisite for managing social media is their effective measurement" (Peters et al., 2013: 296).

In media studies, students of communication and researchers have always been searching for how to undertake authentic social media research that is capable of yielding valid responses and offer insight into a phenomenon. This search is elicited by the cacophony of information from amateur pundits who saturate social media platforms with unauthentic theories and methods of doing social media research. It is crucial to note that one area of concern is, that most social media enthusiasts confuse theoretical and conceptual frameworks when it comes to embarking on social media research. This chapter attempts to lay a firm foundation for what constitutes a theoretical framework as distinct from a conceptual framework in social media research. It aspires to create a novel approach to research in the area of social media which would serve as a *vade mecum* for students and experts in media studies.

## REVIEW SPADEWORK

Theoretical and Conceptual frameworks are usually content of the literature review section of most research works.

### **Theoretical framework in social media research**

In this study, the researchers conceive theoretical framework as a pathway in a research field that firmly makes overall findings more meaningful and acceptable for generalization (Basyal, 2020). It is also seen as a specific theory that concerns various aspects of human behaviours that should be taken into account while studying events or a phenomenon (Brondizio, Leemans & Solecki, 2014). As a construct that gives life to research, a theoretical framework is a guide or a blueprint (Grant & Osanloo, 2014) that researchers source from other authors to build their research inquiry (Basyal, 2020). Theoretical framework can be employed in qualitative, quantitative, or mixed-method research (Chukwuere, 2021).

### **Conceptual framework in social media research**

For the purpose of this chapter, a conceptual framework is a guide that best explains the natural progression of a phenomenon under consideration or study (Camp, 2001). Bas (2015) defines conceptual framework as a visual or written representation of expected relationships in research. In popular parlance, it is something the researcher develops based on a theory. In statistical terms, it describes the relationship which exists between specific variables identified in the study even as it highlights the input, process and output of the study (Basyal, 2020). Simply put, a conceptual framework is an attempt to add one's concept, construct or variable that is considered relevant to a study towards exploring or testing the relationship between them. It is usually a logical process that is backed by context. It is also an academic effort by a researcher to uncover how the research problem will be investigated in light of the theoretical framework. As it was "Through a conceptual framework, the worldview of the research topic is well understood and provides the base on how the research objectives/questions and the problem statement will be (are) formulated" (Chukwuere, 2021: 2681).

### **Social media research**

In this study, social media research is a study that explores the operationality of a gamut of social media platforms - WhatsApp, Facebook, YouTube, Instagram, FB Messenger, Twitter, Telegram, LinkedIn, Tiktok, Snapchat, Pinterest, Skype and Google Hangouts (Varrella, 2021) for meaning. It is essential to note that new or social is characterized by speed, interactivity and media convergence (Egere, Dyikuk, Dapoet & Moven, 2021). Social media research is meant the science of investigating both the technology and usage of these blogging sites to assess their impact and contribution to the advancement of knowledge and learning.

Social media research is also seen as the process of analyzing social media data to undertake both quantitative and research to understand how audiences relate to topics by employing tools and data extraction techniques (Pulsar, 2021). While conventional research relies on surveys and focused group discussions, social media research allows "access to the unprompted feelings and opinions of users" (Pulsar, 2021). It equally assists businesses in

such a way that it improves the perception of marketers' brands online as well as helps machines to understand images.

## **SOCIAL MEDIA THEORETICAL FRAMEWORKS**

### **Theoretical frameworks in social media research: Scholarly explications**

In studies that adopt grounded theory approach, theories to explain are developed to explain phenomena and make predictions. A **theoretical framework** tries to explain theories that support research and shows that work is grounded in solid ideas. Although there are various theoretical frameworks in social media research (SMR) such as Technology Acceptance Model (TAM) which researchers can access to conduct their research, the authors want to guide readers on how to use these.

There are three steps in developing a theoretical framework: Firstly, key concepts are identified from the problem statement and research questions; the output from this is a clear objective. Secondly, it evaluates and explains appropriate theories. A systematic literature review is often conducted to investigate how other researchers have defined, drawn connections or compared certain identified concepts and critically evaluated them. This is followed by a discussion of the different theories and models. Here, the researcher selects a theory or model that best fits the research question. To be sure, a combination of theories from different fields may also be used in more complex projects. Thirdly, the researcher needs to show how his or her research fits. Here, the researcher is expected to show how theories will be implemented in his or her work. Implementation of the theories could consist of testing if a theory has a specific context, uses a theory for interpreting results and a critique is done by combining various theories in a new way. Where relevant, one could employ the theoretical framework by developing a hypothesis for the research (Sarah, 2015).

In social media research, theoretical frameworks are often based on already existing theory/theories because they help researchers to contextualize formal theories in their investigations (Ravitch & Carl, 2016). This is without prejudice to the use of grounded theory in social media studies. Most importantly, a theoretical framework assists researchers in testing available theories and defining their study philosophically, epistemologically, methodology and analytically. Experts argue that a theoretical framework is a time-tested truth that embodies the findings of various research on how phenomena occur (Basyal, 2020). According to scholars, a theoretical framework provides a researcher with a guide on how to study questions as well as select, analyze and plan methods for measuring variables (Liehr & Smith, 1999). It also guides "research, determining what things to measure, and what statistical relationships to look for. In this sense, it is critical in deductive, theory-testing sorts of studies, as the conceptual framework is critical inductive theory building exploratory studies" (Tamene, 2016: 53).

### Developing theoretical frameworks in social media research

Social media is a multi-discipline research area. As such, writing a theoretical review for social media ought to take into consideration the discipline, research topic/research question that the researcher wishes to address. Jiayin, Emmanuel, Binxing and Shichang (2018) suggest two streams for all social media research: They posited that while *Technology Stream* is used in Computer Science social media research to help investigators to analyze user’s behaviour on social media towards developing an automatic intelligent service for users, *Information System Stream* is employed for other disciplines.

These experts found that multiple disciplines such as data science, social sciences, behavioural science and design science make use of this new technology for social media usage. They maintained that combining different disciplines to carry out particular research often yields better research outcomes. While developing an appropriate theoretical framework is important, let us now take a look at the extant social media theories:

**Table 5.1:** Extant social media theories

S/N	Theory	View	Proponent
1	The honeycomb framework for social media strategy. <i>Source: Somayya &amp; Siddharth (2021)</i>	A model that presents a way of setting out key aspects of social media usage in 7 blocks: sharing, presence, relationships, identity, conversations, reputation, and group	Kietzmann et al (2011)
2	Social media metrics framework and guidelines	Framework and guidelines for social media management	Peters et al (2013)
3	Seven layers of social media analytics. <i>Source: Somayya &amp; Siddharth (2021)</i>	Guide to business managers for understanding social media concepts and tools, such as texts, actions, search engines, apps, hyperlinks, networks, and location layers.	Khan (2015)
4	Social media integration theory model. <i>Source: Somayya &amp; Siddharth (2021)</i>	Social media platforms effectively provide exposure, feedback, connection, and information sharing in full-duplex communication mode.	Isra (2010)
5	Social media theory: Content and Strategy. <i>Source: Somayya &amp; Siddharth (2021)</i>	Concept of conversation drivers, which provide a guide for brands to identify prospective consumers.	Jodie (2014)
6	Media and Technology Usage Attitude Scale. <i>Source: Rosen et al (2013)</i>	For assessing media and technology involvement across various social media-based research interests	Rosen et al (2013)
7	Technology Acceptance Model <i>Fred (1985)</i>	For testing end-user information systems.	Fred (1985)

### THEORETICAL FRAMEWORK IMPLEMENTATION

Two existing theories are analyzed in this section: Media and Technology Usage Attitude Scale (MTUAS) and Technology Acceptance Model (TAM).

#### Media and technology usage attitude scale

Rosen, Whaling, Carrier, Cheever and Rokkun (2013) developed a comprehensive method for assessing media and technology involvement across various social media-based research interests. The 60-item scale, Media and Technology Usage Attitude Scale (MTUAS) is further grouped into subscales that can be applied to social media research independently. They include smartphone usage, social media usage, internet searching, e-mailing, media

sharing, text messaging, video, gaming, online friendship, Facebook friendship, phone calls, and watching television, and four attitude-based subscales: positive attitudes, negative attitudes, technological anxiety/dependence, and attitude towards task-switching.

Numerous research studies have developed models or scales for measuring social media usage. Ellison, Steinfield and Lampe (2007) developed an open-ended multi-item scale to which survey participants answered by writing down their opinions. These were later modified by Steinfield et al. (2008) to be close-ended, to which participants answer using a 5-point Likert scale. Some studies measured time spent on social media (Hunt et al., 2012), while others measured social media usage by physically counting activities such as the number of times users log into the account daily (Hunt et al., 2012) or a number of friends, or activities users engage in on various social media sites (Rosen et al., 2013).

### ***MTUAS Precepts***

The media and technology usage attitude scale uses the following measurement to assess users' media and technology usage:

1. Self-reported frequency of use
2. Activities were performed across various internet devices: tablets, desktops, mobiles, and laptops.
3. Captures attitudinal statements and beliefs on social media
4. Must be validated by the self-reported time of use (Rosen et al., 2013).

### **Technology acceptance model (TAM)**

Fred (1985) developed a model for testing end-user behaviour and attitude toward information systems. TAM follows certain processes to test the acceptance of computer-based information systems. This model chose the Fishbein model Fishbein (1967) as a reference model upon which TAM is built. TAM became necessary to strengthen MTUAS. Fishbein's model was later remodelled by Fishbein and Ajzen (1975) using three (3) equations. The first equation is based on the ideology that the causal relationship between intended behaviour performance and actual performance of that behaviour. The second shows that an individual's attitude towards given conduct is a function of a perceived consequence of displaying such conduct, multiplied by the evaluations of those consequences. The third Fishbein model ideology upon which TAM was built specifies that the individual's subjective norm is a function of perceived anticipations of particular individuals or groups and their motivation to adhere to those specific expectations (Fishbein & Ajzen, 1975). Fred (1985) studied the Fishbein Model, found a research gap and filled it. This means that while a researcher is adopting an existing model or theory he may find a gap in the theory and fill that gap to birth a new model or theory.

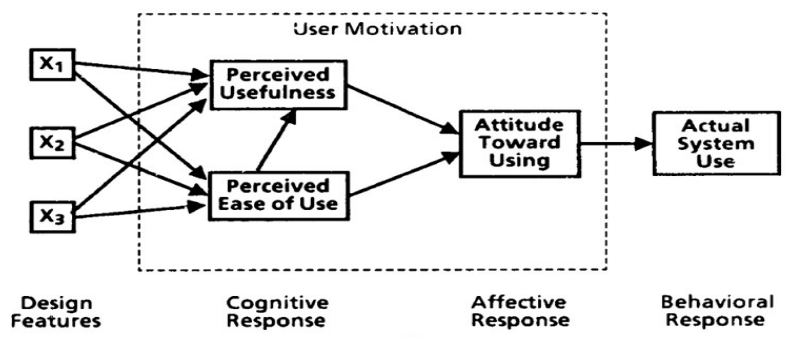
**Model ideology and hypothesis**

Figure 1 below represents the theoretical framework of TAM. Variables X1, X2, and X3 are various design features of target computer-based systems (example: email, social networking site, video conferencing site etcetera).

**The model hypothesis:** A potential user’s overall attitude towards using a given system is a determinant of whether or not he uses that system, and that “attitude towards using” is a function of two beliefs: perceived usefulness and perceived ease of use, and that perceived ease of use has a causal effect on perceived usefulness.

In simpler terms, if a user finds a technology-based product easy to use because of its design features such as interactivity, reliability, availability, robustness, ease to navigate, security of information (for example, end-to-end encryption of WhatsApp), then the user’s belief that the product will be useful to his or her work will increase, hence the two variables (perceived usefulness and perceived ease of use depend on features of the target system. If the system is found to be easy to use, it is considered useful, hence ease of use causes usefulness. When a system is considered easy to use and useful for job, these two variables determine users’ attitudes towards use. Finally, Attitude towards use causes the system to be used.

Figure 5.1: Technology Acceptance Model (TAM) Source: Fred et al (1985)



**Equations representing variables in TAM model**

TAM specifications for the four variables are represented using the equations below:

Eqn 1-----  $EOU = \sum_{i=1,n} \beta_i X_i + \epsilon$   
 Eqn2-----  $USEF = \sum_{i=1,n} \beta_i X_i + \beta_{n+1} EOU + \epsilon$   
 Eqn3-----  $ATT = \beta_1 EOU + \beta_2 USEF + \epsilon$   
 Eqn4-----  $USE = \beta_1 ATT + \epsilon$

Where

- X<sub>1</sub> = Design features i, i = 1,n
- EOU = Ease of Use
- USEF = Perceived usefulness
- ATT = Attitude towards using
- USE = Actual use of the system
- β<sub>1</sub> = Standardized partial regression coefficient

$\epsilon$  = Random error term

Source: Fred (1985)

Variables defined:

1. Perceived ease of use: This is the degree to which an individual believes that using a particular system would not involve physical effort. To analyze this variable, a 10-item survey question was raised to enable respondents to self-report their beliefs. They are required to respond using a 7-point scale Likert scale:

<b>Strongly Agree</b>					<b>Neutral</b>			<b>Strongly Disagree</b>
<b>Disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	

2. Perceived Usefulness: This is the degree to which an individual believes that using a particular product/system would help his/her perform better. This variable also has 10 items and also uses a 7-point Likert scale to evaluate responses for participants.

<b>Strongly Agree</b>					<b>Neutral</b>			<b>Strongly Disagree</b>
<b>Disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	

To analyze this variable, a 10-item survey question was raised to enable respondents to self-report their beliefs. They are required to respond using a 7-point scale Likert scale:

Perceived ease of use and perceived usability are user beliefs deduced from their responses to survey questions. These variables are calculated by coding the scale-based responses to the design feature questions in the survey form, coding the responses in a spreadsheet, regression coefficient of variables that make up each of perceived ease of use and perceived usefulness are calculated, and summing up to find “Attitude towards using” variable. (Fred, 1985).

3. Attitude towards using: The model adopts the definition of attitude which describes it as the effect of how individual associates with using the target system in his or her job (Fishbein and Ajzen, 1975). This variable had 5 items in the survey form to which respondents answered using a 7-point semantic differential rating scale developed by (Osgood et al, 1957).

**Good:** \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ **Bad.**

4. The fourth variable “actual system use” has two items in the survey form. The first item is a question that measures the frequency of system use, while the second item measures the amount of time.

It is also more stable to generate questions from the available literature. In the TAM model, multi- items used for the “attitude towards using” and the “actual system use” variables were existing, well-established model with a 0.80 reliability level, which was found through literature review. However, no established survey items were found for “perceived ease of use” and “perceived usefulness”. The researcher generated items from published works in Management Information System and Human Factor Fields. The 13-point items for each of the variables were later reduced to 10 items for each of the

perceived variables. Finally, the table below shows the multi-item question for each variable in TAM and the measurement scale used. (Fred, 1985).

### **PROCEDURE FOR SOCIAL MEDIA RESEARCH**

Social media researches try to assess various activities of social media users. Some seek to find pros, some the cons, while others aim to make comparisons or find relationships between different variables. No matter what the researcher seeks, assessing social media usage will involve, but may not be limited to the following:

1. Asking research question(s). This helps the researcher identify what variables (Independent and dependent) to look for.
2. Hypothesize relationships among variables
3. Choose a data analysis method based on Nos 1 and 2: Is the research descriptive, inferential or both?

Inferential uses sample statistics to infer cause and effect, recursive, one-way or multi-dimensional relationships.

Descriptive use of sample information to explain Association, Causal relationships, Tendency, trend, range, and dispersion. It is also used in non-parametric analysis such as (chi-square, t-test, 2-way ANOVA) or both statistical methods are required for different hypotheses raised in the research.

4. A survey is generated to collect data from the target group. Here, the questions are raised to find views on the dependent and independent variables. Social media research requires self-reporting feelings on system design features, beliefs, behaviour, emotion, and related variables, attitude towards using, and actual system use. This can be carried out either by finding established multi-item questions and scales for the variables or by generating multi-item questions that will lead to user self-reporting. Variables are categorized in sections, with each section having multi-item questions. The purpose of multi-item questions is for cancelation of inconsistency and for improving reliability ( Fred, 1985).
5. After the survey responses have been collected, the worded items are coded and appropriate statistical tests are carried out to find relationships, associations, trends, causal effects, etcetera. An example of this process can be seen in the social media research by Olebara (Olebara et al., 2021).

Sample of multi-item questions on actual use of email

Figure 5.2: TAM multi-item survey questions on “Attitude towards using” Source: Fred (1985)

**ELECTRONIC MAIL**

Questions in this section concern your reactions to the use of electronic mail. By electronic mail we mean any mail sent via the computer system -- profs notes, messages, memos, files, and so on.

**Usage of Electronic Mail**

1. Electronic mail is currently available for me to use, if I want to. Yes \_\_\_ No \_\_\_ Not Sure \_\_\_

2. On the average, I use electronic mail (pick most accurate answer):

Don't use at all	Use less than once each week	Use about once each week	Use several times each week	Use about once each day	Use several times each day
___	___	___	___	___	___

If you don't use electronic mail at all, please skip to page 6.

3. I normally spend about \_\_\_ hours each week directly using electronic mail.

4. I have been using electronic mail for (pick most accurate answer):

less than 1 month	between 1 and 3 months	between 3 and 6 months	between 6 months and a year	more than a year
___	___	___	___	___

5. I use electronic mail because I have chosen to, not because I am required to for my job.

	Strongly Agree		Neutral		Strongly Disagree
	1	2	3	4	5
6	7				

6. I am quite knowledgeable about how to use electronic mail.

	1	2	3	4	5	6	7
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Figure 5.3: TAM multi-item Survey Questions on “Actual Using” Source: Fred (1985)

**Overall Evaluation of Electronic Mail**

All things considered, my using electronic mail in my job is:  
(place X mark on each of the five scales)

Neutral

1. Good |\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_| Bad

2. Wise |\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_| Foolish

3. Favourable |\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_| Unfavourable

4. Beneficial |\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_| Harmful

5. Positive |\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_|\_\_\_| Negative

Figure 5.4: TAM Multi-item survey questions on “Perceived Ease of use” Source: Fred (1985)

**Perceived Ease of Use of Electronic Mail**

	Strongly Agree		Neutral			Strongly Disagree	
	1	2	3	4	5	6	7
1. I find the electronic mail system cumbersome to use.	1	2	3	4	5	6	7
2. Learning to operate the electronic mail system is easy for me.	1	2	3	4	5	6	7
3. Interacting with the electronic mail system is often frustrating.	1	2	3	4	5	6	7
4. I find it easy to get the electronic mail system to do what I want it to do.	1	2	3	4	5	6	7
5. The electronic mail system is rigid and inflexible to interact with.	1	2	3	4	5	6	7
6. It is easy for me to remember how to perform tasks using the electronic mail system.	1	2	3	4	5	6	7
7. Interacting with the electronic mail system requires a lot of mental effort.	1	2	3	4	5	6	7
8. My interaction with the electronic mail system is clear and understandable.	1	2	3	4	5	6	7
9. I find it takes a lot of effort to become skillful at using electronic mail.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system easy to use.	1	2	3	4	5	6	7

Figure 5.5: TAM multi-item survey questions on “Perceived Usefulness” Source: Fred (1985)

**Perceived Usefulness of Electronic Mail**

	Strongly Agree		Neutral			Strongly Disagree	
	1	2	3	4	5	6	7
1. Using electronic mail improves the quality of the work I do.	1	2	3	4	5	6	7
2. Using electronic mail gives me greater control over my work.	1	2	3	4	5	6	7
3. Electronic mail enables me to accomplish tasks more quickly.	1	2	3	4	5	6	7
4. Electronic mail supports critical aspects of my job.	1	2	3	4	5	6	7
5. Using electronic mail increases my productivity.	1	2	3	4	5	6	7
6. Using electronic mail improves my job performance.	1	2	3	4	5	6	7
7. Using electronic mail allows me to accomplish more work than would otherwise be possible.	1	2	3	4	5	6	7
8. Using electronic mail enhances my effectiveness on the job.	1	2	3	4	5	6	7
9. Using electronic mail makes it easier to do my job.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system useful in my job.	1	2	3	4	5	6	7

**ADOPTING TAM IN SOCIAL MEDIA RESEARCH ANALYSIS**

For a researcher intending to adopt TAM’s model in his or her social media research, the equations are used to address the researcher’s social media project. This can be implemented as stated below:

Equation 1:  $EOU = \sum_{i=1,n} \beta_i X_i + \epsilon$

Eqn2-----  $USEF = \sum_{i=1,n} \beta_i X_i + \beta_{n+1} EOU + \epsilon$

Eqn3-----  $ATT = \beta_1 EOU + \beta_2 USEF + \epsilon$

Eqn4-----  $USE = \beta_1 ATT + \epsilon$

Multiple Regression is used to model the attributes of belief individually.

Firstly, in equation 1, design features' effect on the belief “Ease of use” is assessed by finding a multiple regression coefficients. Multiple regression allows more than one independent variable to be assessed. This gives:  $\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \beta_n X_n + \epsilon$  where  $\beta_1$  is the regression coefficient of the effect of the first design feature ( $X_1$ ) on “Ease of Use and Usefulness” and  $\epsilon$  is the random error term.

Equation 2 also allows the effect of design features on the belief “Perceived Usefulness” to be calculated and assessed using multiple regression coefficients as indicated in the equation. Equation3 is used to assess attitude. Here, attitude is evaluated by summing up the individually calculated beliefs (Ease of Use and Usefulness).

Equation 4 evaluates Actual system use by finding the regression coefficient of attitude. Table 5.2 below displays relationships between the four TAM variables. of some or all of independent, dependent, moderating, mediating and controlling variables, with directed The system dependent and independent variables are shown in the table below:

**Table 5.2:** Cause-and-effect relationship of TAM

Dependent Variable	Independent Variable				
	SYS	EOU	USEF	ATT	USE
System (SYS)	---	0	0	0	0
Perceived Ease of Use (EOU)	$\beta$	---	0	0	0
Perceived Usefulness (USEF)	$\beta$	$\beta$	---	0	0
Attitude toward Using (ATT)	0	$\beta$	$\beta$	---	0
Actual System Use (USE)	0	0	$\beta$	$\beta$	---

Source: Fred and Ajzen (1985)

The table shows dependent and independent variables as well as their respective effects in TAM. Variable “System” as stated in the model ideology section.  $\beta$  (Regression coefficient) is used to represent statistically significant relationships between Independent and dependent variables and show where casual relationships exist.

1. The system is an independent variable, while Perceive ease of use is the dependent variable
2. The system is an independent variable, while Perceive Usefulness is a dependent variable

3. Perceived ease of use is an independent variable, while perceived Usefulness is a dependent variable
4. Perceived ease of use is an independent variable, while Attitude towards Using is dependent
5. Perceived Usefulness is an independent variable, while Attitude towards Using is dependent
6. Perceived Usefulness is an independent variable, while Actual System Use (USE) is dependent
7. Attitude towards Using is an independent variable, while Actual System use (USE) is dependent.

For researchers who want to adopt the MTUAS, self-reported importance weights are used instead of estimated regression coefficients.

### **CONCEPTUAL FRAMEWORKS IN SOCIAL MEDIA RESEARCH**

This section underscores extant conceptual frameworks in social media research. While social media has a legion of young users, its usage for academic purposes is thin. For example, a recent study on the *Influence of Social Media on the Moral Formation of Youths in Jos Metropolis* found that the use of social media for academic purposes was as low as 13.4% (Ijwo & Tanko, 2019). Notwithstanding this development, before establishing the place of conceptual framework in social media research, it is important to understand what it constitutes. For the most part, a conceptual framework helps a reader to understand why a researcher is investigating or studying a particular topic, the assumptions the person is making, the conceptual grounds of approach, the scholars the author is dialoguing with, as well as those he or she agrees or disagrees with (Tamene, 2016).

Scholars like Adom, Hussein and Agyem (2018: 440) capture it more beautiful when they opined that: "The conceptual framework is mostly placed in the chapter where the literature survey was discussed. It is in this chapter that the theoretical perspectives of the main variables or constructs are rigorously reviewed. In most dissertation or thesis papers, the literature survey is discussed in chapter two." On the confusion among students and researchers as to whether the theoretical framework is one and the same as the conceptual framework, the authors contend that usually, researchers develop their conceptual frameworks from the theories which support their research.

The concept emphasizes two major points namely, that is, it is a guide to a plan of study in qualitative research paradigms and interdependence of ideas or tentative understanding of a phenomenon under consideration. A conceptual framework consists of assumptions, expectations and beliefs that guide a given research work (Tamene, 2016). In summary, the conceptual framework steers the research activity and serves as a "map" or "rudder" that guides the study to achieve the objectives of the study (Patrick, 2015). An example of a conceptual framework that students or researchers can use is can be drawn from our definition of conceptual framework in social media earlier presented. Notice that although the

authors drew inspiration from scholars like Camp (2001) and Basyal (2020), they conceived conceptual framework as "an attempt to add one's own concept, construct or variable that is considered relevant to a study towards exploring or testing the relationship between them. It is usually a logical process that is backed by context." This means that it is adding a recipe to what one has investigated concerning a subject of study which makes it one's concept or definition.

### **Writing the conceptual framework in social media research**

The method of constructing a conceptual framework depends on what relationship the researcher seeks to find (Bas, 2015). For a cause-and-effect type research question, dependent and independent variables are chosen from the survey variables. Independent variables are variables responsible for problems in a system while dependent variables are the outcome of independent variables, hence the name, cause-and-effect. Other variables include moderating variables, which positively or negatively changes the effect an independent variable has on the dependent variable, mediating variable, which connects independent variables to the dependent variable, and control variable, which are variables that must be constant so they do not interfere with the outcome (Bas, 2015).

### **STEPS IN SELECTING A CONCEPTUAL FRAMEWORK IN SOCIAL MEDIA RESEARCH**

Scholars have proposed various concrete steps in choosing a suitable conceptual framework for social media research. Patrick (2015) outlines these steps as, choosing a topic, doing a literature review, isolating variables from the important variables and generating the conceptual framework. These shall be highlighted thus:

#### **Decide on a topic**

First, to arrive at a sound conceptual framework for your study, it is vital to decide on what your topic of research is. With this foundational decision in place, the researcher can then go ahead to ensure that the topic is within his or her field of study or specialization as the case may be.

#### **Do a literature review**

Second, the author needs to undertake a relevant or updated investigation on the theme that he or she has decided to unravel the point at issue. It is preferable to employ peer-review or other renowned learned journals since they constitute reliable sources of information and knowledge.

#### **Isolate important variables**

Third, it is absolutely important to identify the specific variables mentioned in the literature. This is to find out if they are related especially where abstracts contain variables and major findings. This could be found in the research paper's summary, methodology or the results

and discussion section. Isolating the variables helps the researcher to arrive at the essential points without much difficulty.

### **Generate the conceptual framework**

Fourth, the investigator should build his or her conceptual framework through a mix of the variables found in learned articles. The statement of the problem and objective of the research are catalysts for constructing a good conceptual framework. The person engaging in the study should attempt to answer the question that other researchers are yet to explain on the one hand and address the gaps in the literature on the other (Patrick, 2015).

## **THEORETICAL FRAMEWORKS IN SOCIAL MEDIA RESEARCH: PRACTICAL APPROACHES**

The fact that social media sites are free and open to everyone to either send or download content they desire poses grave challenges to society (Ijwo & Tank, 2019). As stated earlier, some rules guide choosing an appropriate theoretical framework for social media research. These include but are not limited to, avoiding bias, employing random sampling, use of representative coding, creating new insights and taking into cognizance relevance and context. These shall be highlighted thus:

### **Avoiding bias**

The first practical approach in choosing a desired theoretical framework is avoiding bias in data collection. For example, in searching for key terms or phrases in any given social media research, it is expedient to avoid bias when it comes to selecting social handle brands and hashtags associated with various causes. Those researching in the area of social media could also challenge their assumptions to reduce bias in data collection (Carson, 2016).

### **Employing random sampling**

The second step in selecting the right theoretical framework for social media research is using random sampling. A critical guide to framing a conceptual framework is data-led segmentation. This is a representative random sampling approach that involves a manual conversation or coding of themes. This helps the researcher to discover novel ideas towards arriving at more granular themes. For instance, a human being can detect rich and profound data with additional subtleties in tone, emotion and context (Carson, 2016).

### **Use of representative coding**

The third relevant approach to selecting a requisite theoretical framework for social media research is through representative coding. Since the researcher is telling the customer's story and not his or hers, it is critical to challenge your assumptions as a researcher through a coding sample that assists you to fit your topic into both the context and the theory in place (Carson, 2016).

### Creating new insights

The fourth practical approach to developing a theoretical framework in social media research is generating new insights. Since these insights are ideas that are communicated from one person to another, they can be conveyed in a new manner. It is also important to note that the journey from data to insight and insight to action has communication and understanding as two bridges that are reliant on human interpretation. Whenever this process is opened up to more humans, there is the likelihood of risk occasioned by human error. This is rife where research is muddled in the waters of opinion (Carson, 2016).

### Place of relevance and context

The fifth approach is making a place for relevance and context. One major mistake that some researchers and students often make is treating a theoretical framework in isolation. More often than not, once the theoretical framework is discussed after the conceptual framework or in chapter two, no reference is made to it again. To get it right in social media research, a researcher must choose a theoretical framework that is relevant to his or her topic. This means that it has to have a practical application to the context of the study. It means that before wrapping up the study, readers should be pleased to find how your study affirms or disapproves of the existing theory. If the latter is the case, the researcher can propose a new theory based on the gaps in the literature. Using obsolete or Western theories for a study in Africa, by Africans for Africans could be termed "academic suicide" in this regard.

## CONCEPTUAL FRAMEWORK IMPLEMENTATION

The conceptual framework of social media research depends on the relationship the researcher seeks to find among the variables. For cause-and-effect relationships, two variables are required: Dependent and independent variables. An independent variable is a variable that causes a change in another variable, while the dependent variable is the variable that is affected. The dependent variable depends on the independent variable (Bas, 2015).

### Conceptual framework example

The conceptual framework is either represented by a diagram, written text, or both. An example of the conceptual framework is the causal relationship of the TAM model. Fred (1985) presented TAM's conceptual framework in figure 5.6 below, using directed lines to show causal relationships.

**Figure 5.6:** Conceptual framework of technology acceptance model (TAM). **Source:** Fred and Ajzen (1985)

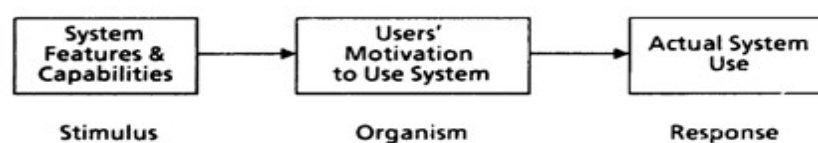


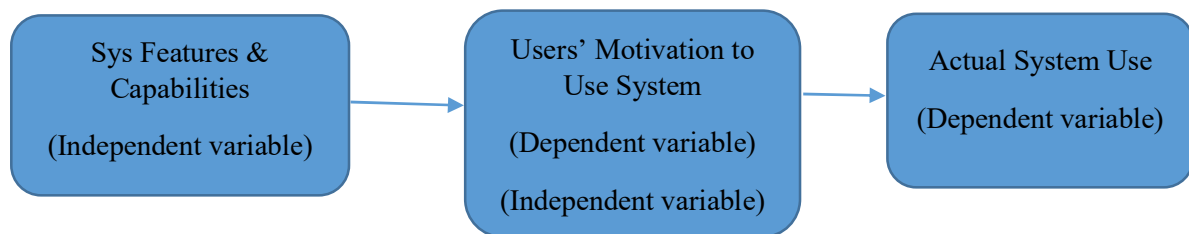
Figure 6 is the conceptual model of TAM and the relationship between the variables can be explained thus: Concepts that make up the TAM study and the relationships between them.

The concepts are:

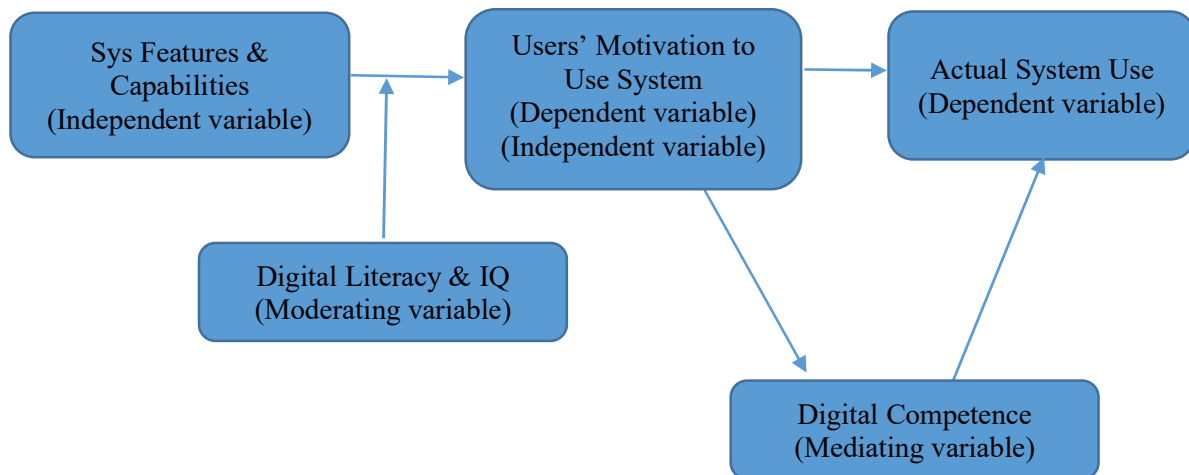
1. System Design Features (Represented by X1, X2, X3...Xn)
2. User Motivation (Represented by Perceived Ease of Use, Perceived Usefulness, and Attitude Towards Using)
3. Actual System Use.

System features and capabilities (functionality advantages, security, user-friendly interface, and all enhancement considerations that the system developer added to help conquer the already saturated IT marketplace) is the independent variable that causes User Motivation. User motivation depends on what features the system has to offer. Secondly, Users' motivation directly influences whether or not they use, and continue to use the system. For this second part, the User's Motivation becomes an independent variable, while Actual System Use is the dependent variable. This relationship is displayed in Figure 5.7a.

**Figure 5.7a:** TAM's Conceptual Model showing the relationship among variables. Adapted from (Fred and Ajzen, 1985)



**Figure 5. 7b:** TAM's Conceptual Model with more Concepts Generated from General Conceptual Framework Relationships: Moderating and Mediating Variables. Adapted from (Fred & Ajzen 1985)



**Implementation of conceptual framework in social media research**

As stated earlier, a Conceptual Framework shows written or diagrammatic view (concepts) of variables in a study, with directed lines showing the relationships between them. These relationships are Independent, dependent, Moderating, Mediating, and Controlling variables. Within these variables are the concepts that make up the study. In this chapter, the researchers ex-rayed two existing models for writing social media research. When the research requires social media usage experiences, MTUAS should be adopted. The MTUAS

allows the researcher to generate questions that allow users self report the various effects using social media has on them. However, when the research is directed towards how users accept social media technology and use it in their job context, TAM is more appropriate. TAM allows the researcher to ask survey questions in-line with the target group's acceptance of a particular social media application and intended continuance with the technology. In this section, the researchers make use of the existing study carried out by the TAM model developer to show how social media researchers can generate their conceptual model. The social media technology studied in TAM is "the email". The conceptual framework of TAM as displayed in figure 6 suggests three important categories around which the model is built, which are further broken down to get the concepts of the study. This suggestion implies that social media research is made up of the following when social media technology acceptance is the problem being studied:

1. The design features of the social media application being studied (this depends on the system developer which is an external dependency). It, however, influences the next category.
2. The motivation for use: this category has to do with the "why" and "what". Why would a user prefer an application over others with similar functionality? what functionalities would keep a user loyal to a social media application? This category consists of three variables in TAM: Perceived ease of use, perceived usefulness, and attitude towards using, where "perceived ease of use" implies its user-friendliness as depicted in the user interface, navigations and number of clicks required to fully accomplish a task in the application (Social media researcher can generate survey questions that would help him collect relevant self-reported user belief on what he perceives as "Ease of use"). The second variable in this category is "perceived usefulness": How useful is this social media application to your job definition? For instance, email would be quite useful to organizations as this is the major mode of communication among staff, office branches, and clients. This belief also follows the self-report of respondents on how useful an application is to their job, and is answered using a set scale as shown in figure 5 above. The third variable in the second category of the TAM model is the "Attitude towards use". This captures the behaviour of users of an application. This behaviour is measured by self-reporting frequency and duration of use. Social media researchers may come up with more variables to measure when generating survey questions.
3. This third category "Actual system Use" is a product of the "Motivation for use" category. Figure 7b is a modified version of TAM's conceptual model that not only shows the causal relationship between the three categories but extends it to visually capture some of the other variables which constitute the Conceptual Framework. While the independent and dependent variables are important, moderating, mediating and controlling variables are also important as they alter the effect of independent variables on dependent variables, connect independent to dependent variables, and control the effects between independent and dependent variables. Relating this to TAM's model, the researchers show how a social media researcher may:

Derive independent and dependent variables from the research question and hypothesis, for example TAM's system features, motivation for use, and actual use.

Find the variable whose presence in the system will alter the effect the independent variable has on the dependent variable, example: system features affect the motivation of a user to use an application, however, if the user is digitally literate, most applications become easy to use especially when they have good Graphical user interface. Hence digital literacy is adjudged a moderating variable in TAM's model. Social media researchers should also find a variable that links the independent variable to the dependent variable. This variable mediates between independent and dependent variables. An example can be seen in figure 7b, TAM adapted model presents two independent and two dependent variables. Between the motivation for use variable and actual use, the variable "digital competence" may connect the motivation a user has to use an application, to actual use and continued use of the system, hence it is the mediating variable between the motivation for use and actual system use.

Following the example in Figures 5.7a and 5.7b, a social media researcher may generate a pictorial representation of variables in his research after asking research questions and hypothesizing. The contexts are now visible and the researcher can expound on them. Figure 7 makes such contexts as System Design features visible, which can lead researchers to expound on software design considerations. Other contexts like Ease of Use, Digital literacy, Digital competence, etcetera may be discussed in the conceptual framework section also.

### **IMPLICATION OF THE CHAPTER**

It has been established that although theoretical and conceptual frameworks are somewhat similar, they are essentially different. For instance, based on your research problem, you can begin to make your hypothesis or claim. The two work hand in hand because they have similar characteristics although, each of them is distinct (Adom, Hussein & Agyem, 2018). The implication is this chapter is, that while it clarifies the similarities and differences between theoretical and conceptual frameworks, it nonetheless provides a guide for current and upcoming students and researchers interested in social media research.

To advance your argument, you can add your perspective to an existing theoretical framework. Your theory becomes the theoretical framework while your analysis translates to the conceptual framework. In a nutshell, "Once you are clear about your theoretical and conceptual framework, you will be clear about your research model, constructs, variables, hypotheses. In the meantime, be always mindful of your research problem, objective(s), and questions" (Basyal, 2020). We shall now take a look at the difference between the theoretical and the conceptual frameworks:

**Table 3:** Social media research: Difference between theoretical framework and conceptual framework

<b>Theoretical Framework</b>	<b>Conceptual Framework</b>
It provides a general or broader set of ideas within which a study belongs	It refers to specific or narrower ideas a researcher utilizes in his/her study
It is based on existing theory/theories in the literature which have been tested and validated by other scholars.	It is based on the concepts which are the main variables in a study
It is in the form of a model that pivots a study, with its exponents and the results of their studies	It is a researcher's own constructed model that s/he uses to explain the relationship that exists between the main variables in his/her study. It can also be an adaptation of a model in an existing theory that a researcher adapts to suit his/her research purpose.
It is well developed, designed and accepted.	Its design is not accepted, but it's a proposal of the researcher's answer to the research problem s/he has defined.
It offers a focal point for approaching the unknown research in a specific field of inquiry.	It is the framework that shows logically how the research inquiry is to be undertaken.
It consists of theories that seem interrelated with their propositions deduced.	It consists of concepts interconnected to explain the relationships between them and how the researcher asserts to answer the research problem defined.
It is used to test theories, to predict and control the situations within the context of a research inquiry.	It is aimed at encouraging the development of a theory that would be useful to practitioners in the field.

**Source:** Adom, Hussein and Agyem (2018: 440).

## CONCLUSION

We have established that "The popularity of social media networks is increasing worldwide" (Skulme & Praude, 2016: 132). This chapter has demonstrated that although the use of social media may be an all-comer affair, engagement with new media platforms requires scientific guidelines. The authors have attempted to provide a systematic approach to employing social media for the purposes of information gathering and sharing. It is hoped that the gaps in the literature as regards the lack of concrete rules of engagement for social media research have been filled.

While the erstwhile conjecture about theoretical framework and conceptual framework is settled, mindful of the limitation of the study, this chapter appears as a tip of the iceberg aimed at stimulating more empirical research in social media research. It is crucial for researchers and students to earnestly incorporate both theoretical and conceptual frameworks into their work. This will make for robust scholarship (Adom, Hussein & Agyem, 2018). Unarguably, theoretical and conceptual frameworks are mandatory ingredients for both quantitative and qualitative research (Adom, Hussein & Agyem, 2018). Given its ever-expansive and explosive nature, it is safe to conclude that social media research has come to stay.

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