

POSSIBLE POTENTIAL OF FACEBOOK TO ENHANCE LEARNERS' MOTIVATION IN MOBILE LEARNING ENVIRONMENT

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ABSTRACT

Facebook is world's leading social network, 29% of its active members represent Pakistan. This study utilized Facebook for teachers' in-service training. Thirty teachers from different parts of Pakistan took part in this training that lasted for ten weeks. The researcher tested the impact of three independent variables namely: social interactions, quality of experiences and behavior on learners' motivation (dependent variable). The hypothesis of this study propose a positive impact of independent variables on the dependent variable, the research was able to prove the hypothesis.

KEYWORDS

Facebook, Pakistan, motivation, social interaction, experiences, behavior.

1. INTRODUCTION

A phenomenal growth in use of social media has surged globally irrespective of cultural and geographic boundaries. Social media are a collection of Internet websites, services, and practices that support digital interaction, collaboration, community building, and sharing across stakeholders (Special, & Li-Barber, 2012). With over 1.79 billion monthly active users, Facebook has been ranked as number one world's most popular social networking site in the year 2016 (GSMS, 2016). The service allows users to create: a unique profile; closed/ open groups; pages of common interests; and events. In addition to regular multimedia features Facebook borrows the best aspects of other popular services and integrate them to create a central hub for example: voice and video calling, instant embedded articles, and Facebook live video for all (Hew, 2011).

Facebook has been rapidly embraced by all aspects of life such as e-commerce, entertainment, and education etc. Billions of users release, critique, reshape and re-imagine opinions and personal preferences to influence vital dynamics in different fields of life (Friesen & Lowe, 2012; Chen, 2014). It can be downloaded on smart phones in form of an inbuilt mobile application that integrates device features to launch mobile Facebook (m-Facebook) on users' cell phones providing them a much quicker and easier access to the social media service. 90 % of active users access their accounts via mobile phones (Facebook, 2016).

1.1 Facebook in Pakistan

With 3G and 4G LTE cellular technology available in Pakistan, the local society has witnessed new levels of Internet penetration. Low-cost Chinese version of smart phones has taken over the market making it possible for a family with a monthly income of \$300 and above to afford smart phones (Chinese version). According to a survey Pakistan penetrates 29% of the total active Facebook user accounts and 63% of these users are between ages 20 – 30 years (Qureshi, U. 2016).

1.2 Educational Advantages of Facebook

m-Facebook offers an autonomous and interactive information space to users to generate and exchange new ideas (Chen, 2014). It offers a potential a low-budget mobile learning environment that most learners and

tutors are already familiar with and understand its possible potential for prompt interaction and providing a sense of self-direction (Chen, 2014: p.14; Hew, 2011). Extant literature acknowledges the ease of use of m-Facebook because it facilitates users to find opportunities for learning while keeping alongside their digital social activity (Chen, 2014).

1.3 Significance of the study

Most prior researches examine the use of m-Facebook in context of higher education and report possible limitations. In addition to the factor of distraction, Friesen and Lowe (2012) question the possibility of experiencing low motivation and distractive attitudes of learners when and if it is used only for an educational purpose (p. 49). There is limited research available that explores learners' motivation levels during a professional development program especially in context of Pakistan. Through this study the researcher aims to fill this void in the current research in the field of m-Facebook.

1.4 Research Motivation

This study describes lessons learnt from a small scale ten weeks long online teachers' in-service education and training (INSET) program 'Teaching with Digital Technologies' which was conceived as a low-budget alternate to high-cost face-to-face INSET method. The total cost of this training project accounted up to \$ 95. All participants represent a large network of private schools spread across Pakistan; the researcher does not disclose the name of school network to maintain privacy.

1.5 Research Model

The educational value of m-Facebook remains dependent on learners' motivation level (Manca & Ranieri, 2013) which plays a significant role in information seeking behavior (Hew, 2011). Educators and researchers make substantial efforts to find interventions which can sustain or promote learners' motivation in m-learning expeditions. Figure 1 explains the hypothesis for this study.

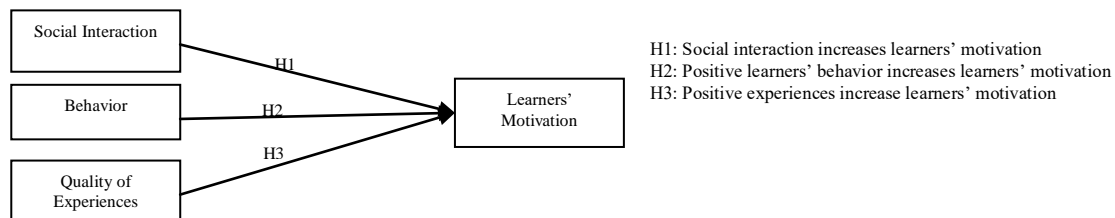


Figure 1. Description of the proposed hypothesis for this study.

It is necessary to explain how the three independent variables are perceived for this research.

1- Social Interaction: In this study social interaction is determined by level of communication between learners and tutor as well as among learners in order to exchange ideas. An interactive learning process enhances self-reflection and motivates learners to achieve higher learning outcomes (Mifsud, 2002, Barker et al., 2005). Parsons et al. (2009) argue that interactive learning creates lasting understanding of the subject matter for all contributors or group members.

2- Behavior: The manner in which learners conduct themselves in the online learning environment refers to their behavior (Li, 2009). In this study, behavior refers to the ability of learners to utilize the provided freedom to express their thoughts, generating productive dialogue with peers, meeting deadlines and self-regulating their learning.

3- Quality of Experience: The overall quality of satisfaction refers to the quality of experience. Course content is vital to define learners' satisfaction. Relevance, utility for self efficacy and diversity of experience may enhance the total learning quality (Chen, 2014). The quality of learners' experiences influences their motivation; relevant experiences tend to enhance learners' motivation towards learning (Qureshi, U. 2016).

1.6 Research Questions

During the course of research the researcher addressed the following questions:

- 1- Do positive social interactions enhance learners' motivation for engaging in learning activities (H1)?
- 2- Does a self-regulatory behavior indicated by learners impact their motivation level (H2)?
- 3- Does a diverse, autonomous and relevant experience positively impact learning outcomes (H3)?

2. RESEARCH METHODOLOGY

2.1 Research Sample

Thirty respondents from different primary school branches of one of the largest private school networks in Pakistan participated in this study. All participants were selected by their school head teachers.

2.2 Research Instrument

Data were collected using three questionnaires; commenced before, during and after the training had started. The first questionnaire was used to collect learners' demographic data and to establish their digital context. The second questionnaire had four parts; Use of Social Media, Social Interaction, Quality of Experience, and Behavior. Responses were collected on 5 point Likert's scale with 5 as 'very frequent' and 1 as 'never'. The third questionnaire was commenced after the project was over and focused mainly on learners' motivation levels during the course of training. Responses were collected on 5 point Likert's scale with 5 as 'very frequent' and 1 as 'never'. The researcher used IBM SPSS statistical software package version 19.0 (SPSS, 2010) for data analysis. A pilot study was conducted with 8 respondents that are not a part of the sampled respondents.

3. RESULTS

A total of 30 teachers (response rate = 100%) completed the pre-training questionnaire. With exception of one, all respondents (n = 29, 96.6%) had an active Facebook account. The one without an account was prepared to create in order to participate in the training program. Most respondents (n = 25, 83.3%) were females and their average age was 33.6 years. 50% respondents reported to be able to proficiently navigate through different options given by m-Facebook such as: uploading and downloading media resources, commenting on news threads, and tagging other members in a group activity.

The second questionnaire consisted of 26 items in 4 subscales namely: 1) Use of social media; 2) Social interaction; 3) Quality of experience; and 4) Behavior. The purpose was to measure learners' motivation level by applying a 5-point symmetrical Likert scale. Table 1 provides an overview of mean value for each item and Table 2 summarizes statistics used to define learners' motivation level.

Table 1. Descriptive data for Questionnaire 2.

Use of Social Media	Mean
You are a member of more than one knowledge development group on FB.	3
It is easy to learn using FB from your mobile phone.	4
You have to think a lot before you communicate with your peers during a learning expedition on FB.	3
You check the group activity more than five times a day.	5
You think about the previous online activity and anticipate next activity in the group.	4
You think your online activity consumes a lot of time due to participation in this training.	4
Information is duplicated in the group due to several responses on one post.	4
Social Interaction	
Response to questions is faster on mobile phone compared to using FB on computer.	5
The group offer channels of frequent communication which tutor and peers.	4
Increased interaction frustrates you.	4
Increased interaction helps you in thinking about your own experiences.	4
FB helped you in making stronger relationship with peers and tutor.	5

You feel a social responsibility to meet deadlines.	2
You feel a social pressure in presenting quality work.	4
Thoughts, opinions and digital behavior of your peers influence your decisions in the course of learning.	3
Quality of Experience	
Learning, sharing of opinion and receiving feedback is faster.	4
Mobile phone features help you to upload, download media files to the group.	5
Feature of 'notification' helps you stay connected to the on-going learning expedition.	5
The feature of 'notification' reminds you to complete learning tasks.	4
You can access course content from anywhere at any time.	5
Hyperlinked information is easier to access from Facebook.	3
Embedded media files make resource access easier.	2
I was able to link learning to prior experiences in my professional life.	4
Behavior	
You set your learning goals.	5
You are able to meet your learning objective in all tasks.	3
You look forward to view work of your peers.	4
A look back on your activity in the group enables you to reflect on your actions.	4

Table 2. Descriptive data for learners' motivation levels.

Attributes for learners' motivation	Mean	SD
Interactions stirred critical thinking about different aspects of training contents.	4	0.896
The interactive nature of learning environment gave me many opportunities for problem-solving.	4	0.945
I was able to make suitable decisions for problem solving during the training period.	4	0.845
Participating in discussions enabled me to question my pre-determined beliefs about classroom teaching.	3	1.025
Interactions with peers helped me in staying focused and attentive.		
I was able to set appropriate goals for my learning.	5	1.033
I was able to achieve my learning goals.	3	0.956
I did not need any reminders to complete due assignments.	3	0.754
I enjoyed the sense of control throughout the training period.	4	0.858
I can say that I was regulating my learning independently.	4	0.921
	4	0.965

The data can be classified as approximately normal because the quantile pairs fell nearly on a straight line in a P-P plot conducted by the researcher to assess data normality. The researcher used multiple regression analysis to test the significance of three independent variables (social interaction, quality of experience, and behavior) on underlying dependent variable (motivation) by using Variance Inflation Factor (VIF). As shown from the table 3, the tolerance (T) and VIF values of all independent variables were within the range.

Table 3. Collinearity Statistics.

Independent variable ^a	Tolerance	VIF
Social Interaction	.309	2.491
Quality of Experience	.395	2.687
Behavior	.276	2.854
Durbin-Watson	1.972	

^a Dependent variable: Learners' motivation

T > .2 and VIF < 4

Reliability of each variable was calculated using Cronbach's alpha. The commonly acceptable level for all four variables was > 0.70. In terms of the correlations between variables, Social interaction (r=.92, p<.001) has the highest value, Quality of experience (r = .88) and Behavior (r = .87) take second and third place respectively. Table 4 outlines the reliability of all four variables.

Table 4. Descriptive statistics: Correlation and reliability among variables (n = 30).

Variable	Mean	SD	(1)	(2)	(3)	(4)	(5)
Use of Social Media	4	0.88	(.84)				
Social interaction	3.8	0.98	.68	(.92)			
Quality of experience	4	0.84	.70	.65	(.88)		
Behavior	4	0.96	.69	.60	.70	(.87)	
Learners' motivation	3.8	0.92	.65	.70	.72	.69	(.85)

3.1 Hypothesis testing

The researcher identified three essential elements as independent variables and carried out multiple regression analysis to test the hypotheses using SPSS. Table 5 shows the results of the regression analysis. All independent variables are considered to have significant relationships with learners' motivation with p-values <.05. Hypothesis 1 examined the influence of the social interaction on learners' motivation in mobile Facebook learning environment. It is supported, with p-values less than .0 and is significant. Hypothesis 2 examined the relationship between the positive experience benefit and learners' motivation in learning ($\beta=1.71$, $p<.01$). Behavior gained during the learning expedition has positively significant effect on motivation in learning ($\beta=.185$, $p<.05$). Therefore, Hypothesis 3 is also supported.

Table 5. Regression analysis.

Independent variable	B	Beta (β)	t-value
(constant)	.156		.532
Social interactions	.182	.160	2.015*
Positive experiences	.110	.171	2.148**
Behavior	.173	.186	2.806*
R	.805a		
R Square	.665		
Adjusted R Square	.661		

	Sum of Squares	Df	Mean Square	F
Regression	156.701	5	39.875	144.759***
Residual	28.373	117	.237	
Total	185.175	128		

* $p < .05$, ** $p < .01$, *** $p < .001$

4. DISCUSSION

The purpose of this study was to examine the impact of social integration, quality of experiences and behavior depicted by learners on their motivation. Analysis of results support findings of previous studies and establishes a positive relation of all three independent variables with learners' motivation (Chen, 2014). The adjusted R square suggests that 66% of learners' motivation during this training can be explained by these three variables ($F = 144.759$, $p < .001$). The model generated from the multiple regression analysis has a reasonable level of acceptance in the selected independent variables. The model can be presented in form of prediction formula as follows:

$LM^* = SI^{**} \times w1 + QE^{***} \times w2 + B^{****} \times w3 + C$ where C is constant; and w1, w2, w3, w4 are empirically determined weights.

4.1 Social interaction and learners' motivation

Social interaction is determined by the interpersonal behavior, relationships, exchange of ideas, and thoughts between individuals who are connected through a digital medium (Hew, 2011; Rovai et al., 2003). Prior research has placed interactions at the core of factors influencing motivation (Manca, S., & Ranieri, M., 2013; Sun & Bhattacharjee, 2014), this study also narrates this finding. Learners reported that engagement in interactions helped them to formulate their opinions, challenge pre-set ideas, and evaluate theirs and others responses/answers to enhance their understanding.

4.2 Quality of experiences and learners' motivation

Learners' experiences develop their behavior towards a set task; a diverse and relevant experience to learners that boosts their meta-cognitive ability, engages them in positive social activity, and provides opportunities to them for self-regulation (Raza, in press). Through this study the researcher is able to associate aspects of social media (notifications, prompt response rate, ease of access of resources) with quality of experiences gained by learners. Nikou and Bouwman (2014) associated quality of experiences with learners' social and

digital contexts. This research explains learners' ability to handle resources with ease, links they develop with prior experiences and autonomy as positive experience factors that increases learners' satisfaction and motivation.

4.3 Learners' behavior and motivation

Learners' autonomy during learning expeditions defines their behavior (Sun & Bhattacharjee, 2014; Riendl et al. 2014). Most prior studies report the impact of learners' motivation on their learning behavior however this study reports that learners' behaviors during learning mobile Facebook learning expedition have significant impact on their motivation. Every individual has an internal guidance system that organizes priorities and informs the mechanism of learning that enables learners to derive their motivation levels. Through this study the research defines positive behavior with the ability to define learning goals, attempt to achieve those in a given time frame without external reminders (Questionnaire 2). When learners are able to self-regulate their learning they are more likely to show higher levels of motivation (Sun & Bhattacharjee, 2014).

5. CONCLUSION

Learners' motivation is the most vital factor for learning success. This research focuses on examining how the world's leading social media service benefits improving learners' motivation levels. Facebook offers a great potential to answer most commonly identified shortcomings in success of distance learning. The social interactivity, ease of use, positive experiences offered to learners can help motivate learners to be more regular, attentive, and dedicated to learning. Facebook for mobile phones is a relatively new tool for instructional purposes in Pakistan but it offers great potential due to high penetration level in Pakitsani society, learners' ability to fully operate the service, and ease of use for educational purposes. Similar studies could be conducted to examine the effects of Facebook in different learning settings exploring the relationship between different learning styles and the successful educational use of mobile Facebook.

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