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Social Media Use (SMU) for Teaching and Learning in Saudi Arabia

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Abstract: ***This research aims to explore the factors of teaching and learning measurement through using social media, incorporating the literature of social media adoption on resource sharing, collaborating and communicating for educational purpose. The current research explore factors that perceived usefulness (PU), perceived ease of use (PEU), attitude toward use social media use have certain influence on adoption of resource sharing, collaboration and communication for educational use. Therefore, resource sharing, collaboration and communication influence educational use, while educational use influences PU, PEU, SMU and attitude toward the use (AT) of SMU for teaching and learning. Both the processes of collecting and analyzing the data followed the quantitative method. The main tool of data collection was a questionnaire that has been distributed among 236 students using stratified random sampling technique. The view of the students and their implication of social media use for teaching and learning were solicited through the questionnaire. The Statistical Package for the Social Sciences (SPSS) was used as the main tool in the process of data examination. The results of this research were related to two main constructs: teaching and learning as well as educational use. According to the results, it appears that perceived usefulness, perceived ease of use, attitude toward use, and social media are considered powerful determinants of the former while resource sharing, collaboration and communication were significant indicators of the latter. Educational use, PU, PEU, AT succeeded in explaining 74.9% of SMU for teaching and learning.***

Index Terms: ***SMU, Factors for modeling, Teaching and Learning***

I. INTRODUCTION

SMU helps anyone to collaborate, communicate, and participate with others through the Internet technology (World Wide Web), which realizes the original vision of the Web, as a space [1, 2, 3]. The social media tools have become a trend among the members of the Net generation or digital native who were born and interacted with digital technology [4]. Recently, the various sites of social networking are becoming widespread e-learning platforms used for the purpose of knowledge-sharing and engagement in active collaborative learning [5, 6, 7]. The development as the assessment of the finest social connections among learners is becoming possible through these sites. This is leading to more sharing of ideas, interacting and engaging which helps to produce products and to be at the same time recipients themselves of accurate and regular feedback [8, 9]. For example, social networking sites are becoming the modern classrooms, instead of the traditional ones, in which teaching and learning take place. Through these sites, students can learn languages and other skills [10]. They are also known to enhance students' creativity and skills [11]. Through social media use, exploring, following and replying to other posts by other users became possible for all users. It is also allowing virtual interactions and collaborations among people from different corners of the world [12, 13]. There are other examples of social media tools such as [14, 15]. The best feature of social media is the allowing for large amount of users to connect to each other in the same time [16]. Social media is currently the fastest-growing technology in the world used by active users among Net generation. According to the global web index site (2013), there were over 554 million active registered social media users in the world at the time that article was published. The majority of these users forming (34 %) are aged between 25 to 34 year olds and (29%) of them are aged between 16 to 24 years old. More specifically, there are 4 million active users in the Middle East. The majority of these users with a percentage of (34 %) are from Arab countries [17].The most common purpose of using social media appears to of a personal use. However, others highlighted that they use this technology for communication, learning, knowledge management and interactive journalism. Recently, several studies in the developed countries have focused on the enhancement of teaching and learning via social media [16, 17, 18]. The main aim of this research is to examine the intentions of teachers towards the use of social media as to enhance their teaching and learning activities. Therefore, the main purpose of this research was to develop a model to measure teaching and learning through social media use, and incorporate the literature of social media adoption on resource sharing, collaboration and communication for educational purpose.

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II. Related Work

According to McEwan et al. [19], SMU has had a rapid and extensive significant influence in higher education field in a way that different forms of social media has transformed the way the instructors teach, students learn, education managers lead and direct learning.

Due to combination of the functional use of social media among collages and the need for institutions of higher education [20], they observed that educational networking can enhance the academic performance of students. Along a similar line of argument, [21] related that social networking sites are effective tools to develop the essential students' skills, selection of relevant information, interpretation and examination of socio-cultural context, group work and collaborative work. Moreover, in reaching a decision on whether to make use of individual or collaborative learning activity, the level of the cognitive capacity of the learner play the key determining factors [22]. The considerable inclination of the students for collaborative learning and learning to indicate the effectiveness of social media support collaborative learning (SSCL) outcomes [23].

III. Research Methodology

The use of social media for educational purpose has been encouraged by many universities including King Faisal University (KFU). Thus, the research aims at developing a model of measurement teaching and learning on the use of social media through an empirical examination on students' acceptance of SMU for teaching and learning. Therefore, the questionnaires involved were distributed among students using social media tools as a quantitative method. The participants of the current research were undergraduate students who were users of social media. Likert scale of 7-point was utilized in the current research to measure students' rating of the different items "strongly disagree (1), disagree (2), somewhat disagree (3), undecided (4), somewhat agree (5), agree (6), strongly agree (7)". The questionnaire comprises of three main sets of factors. One of these sets comprises the items of independent factors that include resource sharing, collaboration, communication and educational use. The Statistical Package for the Social Sciences (SPSS) was the main tool used to analyse the responses of the students to the different questionnaire items.

IV. Result and Examination

The reliability of Cronbach's Alpha was analysed and found to be 0.813 of the factors comprising of perceived usefulness, perceived ease of use and attitude toward the use of social networks. It also includes the values on resource sharing, collaboration, communication, and educational use that are considered as independent factors. These factors are also known of their strong influence on the use of social media in teaching and learning. Criteria of three points were used for the purpose of evaluating the discriminant validity (DV).

A. *Descriptive and Examination of Factors*

The result shows that the majority of students somewhat agree and strongly agree that resource sharing with peers was useful on educational use purposes. Thus, "this research defines resource sharing as the degree where a student's beliefs that resource sharing would enrich their teaching and learning". These results are consistent with [24, 25], who argued that resource sharing with peers was useful on educational use. See Table 1.

Table 1. Measuring resource sharing on educational use

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
RS 1	16 8.6%	9 3.8%	12 5.1%	51 21.6%	46 19.5%	53 22.5%	49 20.8%
RS 2	15 6.4%	15 6.4%	13 .5%	36 15.3%	49 20.8%	57 24.2%	51 21.6%

The result shows the majority of students somewhat agree and strongly agree that communication with peers was useful on educational use purposes. Thus, "this research defines communication as the degree where a student's beliefs communication with peers would enrich their teaching and learning". These results are consistent with [11, 26], who argued that communication with peers was useful on educational use. See Table 2.

Table 2. Measuring communication with peers on educational use

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
CM 1	15 6.4%	12 5.1%	19 8.1%	37 15.7%	55 23.3%	63 26.7%	35 14.8%
CM 2	17 7.2%	16 6.8%	8 3.4%	36 15.3%	46 19.5%	71 30.1%	42 17.8%
CM 3	15 6.4%	18 7.6%	15 6.4%	44 18.6%	52 22.0%	59 25.0%	33 14.0%

Also, the result shows the majority of students somewhat agree, agree, and strongly agree that collaboration with peers was useful on educational use purposes. Thus, "this research defines collaboration as the degree where a student's beliefs collaboration with peers would enrich their teaching and learning". These results are consistent with [27, 28, 29], who argued that collaboration with peers was useful on educational use. See Table 3.

Table 3. Measuring collaboration with peers on educational use

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
CO1	10 4.2%	9 3.8%	15 4.6%	35 14.8%	52 22.0%	62 26.3 %	53 22.5%
CO2	16 6.8%	10 4.2%	10 4.2%	36 15.3%	35 14.8%	64 27.1 %	65 27.5%
CO3	17 7.2%	5 2.1%	11 4.7%	40 16.9%	39 16.5%	72 30.5 %	52 22.0%

Similarly, the result shows that the majority of students somewhat agree, agree, and strongly agree that resource sharing, communication and collaboration with peers was useful on educational use purposes. Thus, "this research defines educational use at a degree where a student's beliefs educational use with peers would enrich their teaching and learning".

These results are consistent with [12, 25, 30, 27, 31, 32], who argued that educational use with peers was useful on educational use. See Table 4.

Table 4. Measuring educational use on teaching and learning

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
EU1	17 7.2%	21 8.9%	12 5.1%	45 19.1%	58 24.6%	51 21.6%	32 13.6%
EU2	13 5.5%	11 4.7%	13 5.5%	34 14.4%	46 19.5%	65 27.5%	54 22.9%
EU3	9 3.8%	11 4.7%	10 4.2%	41 17.4%	46 19.5%	59 25.0%	60 25.4%

Moreover, result shows the majority of students somewhat agree, agree, and strongly agree that perceived ease of use was ease of use social media for educational use purposes. Thus, "this research defines perceived ease of use at a degree where a student's beliefs perceived ease of use social media would enrich their teaching and learning". Results are consistent with [33, 34, 35], who argued that PEU was easy and useful on teaching and learning. See Table 5.

Table 5. Measuring perceived ease of use social media for teaching and learning

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
PEU 1	6 2.5%	9 3.8%	12 5.1 %	13 5.1%)	35 14.8 %	65 27.5 %	96 40.7 %
PEU 2	13 5.5%	16 6.8%	10 4.2 %	48 20.3 %	29 12.3 %	76 32.2 %	44 18.6 %
PEU 3	8 3.4%	14 5.9%	13 5.5 %	16 6.8%	32 13.6 %	90 38.1 %	63 26.7 %
PEU 4	8 3.4%)	12 5.1%)	14 5.9 %	29 12.3 %	35 14.8 %	79 33.5 %	59 25.0 %
PEU 5	5 2.1%	14 5.9%	12 5.1 %	21 8.9%	29 12.3 %	74 31.4 %	81 34.3 %

Furthermore, the result shows that the majority of students somewhat agree, agree, and strongly agree that perceived usefulness was useful on social media for educational use purposes. Thus, "this research defines perceived usefulness at a degree where a student's beliefs perceived usefulness on social media use would enrich their teaching and learning". These results are consistent with [25, 29, 35, 36, 37, 38], who argued that perceived usefulness on social media use was useful on teaching and learning. See Table 6.

Table 6. Measuring perceived usefulness on social media use for teaching and learning

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
PU1	8 3.4 %	9 3.8 %	12 5.1 %	25 10.6 %	37 15.7 %	85 36.0 %	60 25.4 %
PU2	5 2.1 %	9 3.8 %	8 3.4 %	23 9.7%	28 11.9 %	89 37.7 %	74 31.4 %
PU3	20 8.5 %	33 14.0	22 9.3 %	34 14.4 %	45 19.1 %	53 22.5 %	29 12.3 %

The result shows the majority of students somewhat agree, agree, and strongly agree that attitude toward the use of social media was useful for educational purposes. Thus, "this research defines attitude toward use at a degree where a student's beliefs attitude toward use social media would enrich their teaching and learning". These results are consistent with [30, 39, 40, 41, 42, 43], who argued that attitude toward use social media was useful on teaching and learning. See Table 7.

Table 7. Measuring attitude toward use social media for teaching and learning

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
AT1	15 6.4%	7 3.0%	10 4.2%	28 11.9%	43 18.2%	60 25.4%	73 30.9%
AT2	20 8.5%	12 5.1%	19 8.1%	37 15.7%	49 20.8%	48 20.3%	51 21.6%
AT3	23 9.7%	15 6.4%	12 5.1%	39 16.5%	51 21.6%	61 25.8%	35 14.8%

Table 8. Measuring social media use for teaching and learning

Code	1	2	3	4	5	6	7
	f(%)	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*	*f(%)*
SM1	14 5.9	11 4.7 %	15 6.4 %	35 14.8 %	51 21.6%	62 26.3 %	48 20.3 %
SM2	13 5.5 %	10 4.2 %	12 5.1 %	36 15.3 %	36 15.3%	67 28.4 %	62 26.3 %

Finally, result shows the majority of students somewhat agree, agree, and strongly agree that social media use for teaching and learning was easy and useful for educational use purposes. Thus, "this research defines social media use at a degree where a student's beliefs social media use would enrich their teaching and learning". These results are consistent with [39, 44, 45, 46], who argued that social media use was easy and useful on teaching and learning. See Table 8 above.

B. *Discussion and Implications*

The current research aims at cultivating a new model on how social media adoption through resource sharing, collaboration, communication and educational use with factors are used to explore the factors affecting the attitude of students towards the SMU within teaching and learning in the institution of higher education. Besides, social media helped the learning institution to foster information exploration and information sharing [47]. Social media tools also assist in teaching and faculty research in terms of social and behavioral sciences [48]. Thus, the perception that social media yields beneficial results as an academic environment prompts several students to have a high inclination towards this social media tool as an educational environment [48]. The findings of this research revealed that social media acts as an integral element in the lives of several students and teachers drawn from the younger generation.

For instance, social media improves the learning environment for the students by ensuring that they can effectively manage their studies efficiently.

The interactive nature of social media helps to accomplish purposes such as sharing information, communicating, building relationships, and sustaining connection with between the learners and students. From a different perspective, Rohr and Costello [49] prefer social media due to the perception that it increases the interaction among the users while enhancing the active involvement in academic matters. The timely feedback mechanism offered by social media sites makes them ideal for social learning. Particularly, the students view social media as an ideal means of assessment and appropriate way to ensure social presence in the high enrolment courses [49]. Therefore, social media creates a feeling of connection to the course content and classmates. For that reason, designing social media activities that are linked to the student assignments and previous course activities would improve the learning in the contemporary academic environment. The statistical analyses in this research provide a clear-cut support to all of the hypotheses proposed in this research. Thus, both of the research model and the hypotheses are confirmed. Many fruitful insights on resource sharing, communication, collaboration and their impacts on educational use are provided in the current research. In addition, certain factors namely the PEU, PU and AT were investigated in this research through examine the factors. Moreover, the influence of these factors on social media for teaching and learning was examined. Resource sharing, communication and collaboration for educational use were taken into consideration in this research.

Recently, it is observed that Facebook, twitter, linked-in, google+ being tools of social media are heavily used by young people. For example, people use different tools of social media such as Flickr, semantria.com, ebay.com and Amazon.com for the purposed of uploading their photographs, performing sentiment examination or opinion mining, selling or buying products and crowd sourcing respectively. On a scale of Zeta-bytes, the rate of using the internet in rapidly increasing of 10 times per five years. Such data is obtained and collected through the use of blogs, cameras, RFIDs, sensors, e-commerce, social networks, telephony and medical records. Through these characteristics, public sharing of information, engagement, and collaborative learning became famous features of these social networking sites [5, 12, 25, 41, 50]. This research supports the SMU to improve the students skills via their peer interactions [51, 52]. Their satisfaction in SMU boosts their technology use, and in turn, this use enhances their skills and improves their achievement through collaboration and interaction [3, 5, 7, 53, 54]. The findings indicate that need for univeristies, colleges, and institutions to facilitate a collaboration learning environment in order to improve the students achievement this is consistent with Al-Rahmi et al., [55]. See Table 9.

Table 9. Mean and Standard Deviation for all Items and Factors

Factor	Code	Mean	S.D
Resource Sharing	RS 1	4.94	1.706
	RS 2	4.97	1.755
Communication	CM 1	4.84	1.673
	CM 2	4.94	1.753
	CM 3	4.73	1.701
Collaboration	CO 1	5.15	1.604
	CO 2	5.19	1.772
	CO 3	5.13	1.697
Educational Use	EU 1	4.64	1.729
	EU 2	5.12	1.689
	EU 3	5.21	1.615
Perceived Easy of Use	PEU 1	5.72	1.552
	PEU 2	4.98	1.716
	PEU 3	5.42	1.626
	PEU 4	5.31	1.616
	PEU 5	5.55	1.601
Perceived Usefulness	PU 1	5.41	1.553
	PU 2	5.64	1.465
	PU 3	4.38	1.865
Attitude toward Use Social Media	AT 1	5.33	1.723
	AT 2	4.83	1.829
	AT 3	4.71	1.811
Social Media Use	SMU1	5.02	1.691
	SMU2	5.21	1.710

V. CONCLUSION AND FUTURE WORK

The findings of this research support the effective teaching and learning through social media use. The findings also showed that resource sharing, collaboration and communication influencing educational use would be positively associated with social media used for teaching and learning. The use of factors (perceived usefulness and perceived ease of use) in examining attitude toward use and social media use for teaching and learning was supported by the results of this research. Future attempts should also consider the views of lecturers and top manager in higher education stakeholders in relation to the SMU for educational purposes.

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