A Rach analysis of university teachers and students' perception of using social media to promote an authentic learning environment

Herri Mulyono
Gunawan Suryoputro

University of Muhammadiyah Prof. DR. HAMKA, 2020
ICONEGS, Osaka Japan

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Outline of the presentation

- Introduction and Background of the study
- Objective of the study
- Method
- Findings and discussions
- Conclusions

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Background of the study

- In Indonesia, statistical data on internet and social media show a rapid increase in usage. A survey by the Indonesian Communications and Informatics Ministry (2013) disclose that 95% of 63 million internet users are user of media users.

- Meanwhile, 55 million of the said internet users, access the web through mobile phones, at a rate of 28 million users per day. Such an increase is also reported in We are Social and Hootsuite in January 2018 as quoted in Laksana (2018), showing that 97.9% of 132,7 million internet users are social media users.

- Recent 2019 survey by We are Social also suggest that the active social media users are aged between 18 and 34 with YouTube, WhatsApp and Facebook are the most popular social media platforms

Background of the study

- Studies suggest the benefits of social media to promote the creation of authentic learning environment (Bozalek et al., 2013b; Gikas & Grant, 2013; J. Herrington & Parker, 2013).

- Authentic learning is concerned with education approaches aiming to provide learners with opportunity to use their knowledge as well as ability to understand and engage in addressing real world problems (A. Herrington & Herrington, 2008).

- Within an authentic learning environment facilitated by a mobile technology like social media application, students can learn to use the technology as a cognitive tool to solve problems which are contextual or close to their daily life (Herrington and Parker, 2013; Herrington, Parker, and Jelinek, 2014).

Background of the study

- Furthermore, Bozalek et al., (2013) argue that the emerging of mobile technology for authentic learning enables learners to build the integration of collaboration, knowledge building, and individual or a group discussion.

- The contextual aspect of learning in an authentic learning environment enable both teachers and the students to achieve an effective and meaningful learning activity (Shadiev, Hwang, Huang, & Liu, 2018; Traxler, 2010).

Background of the study

- However, despite the values offered by the adoption of social media in learning activities, some authors have identified some challenges that researches, practitioners and teaches are required to address such as lack of teachers' interests due to the known negative effects of mobile technology integration (O'bannon & Thomas, 2014; Rodriguez, 2011), complexity of learning environment, lack of learner's understanding, ability and experience in utilization of social media and lack of teachers' knowledge of adopting mobile technology to create authentic learning environment for learners (Shadiev et al., 2018).

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Objective of the study

This current survey attempts to explore university teachers and students' perception of using social media to promote an authentic learning environment.

- RQ1:How do university teachers and students perceive the use of social media in promoting authentic learning environments?

- RQ2: Do university teachers and students' perception differ accordance to their role (i.e. teachers and students), gender and ages?

Method

Pariticipants:

- A total of 578 university teachers and students participated in the survey where they were asked to complete 27 items of A Social Media Authentic Learning Environment Inventory (SOMALEVI).

Demography	Details	N	Percentage
Status	Teacher	249	43.08
	Student	329	56.92
Gender	Male	185	32.01
	Female	393	67.99
Ages	< 20 Years	166	34.43
	21 - 30 Years	201	34.78
	31 - 40 Years	125	21.63
	> 40 Years	86	14.88

Method (2)

- The current study employed social media authentic learning environment inventory (SOMALEVI) to gather data from the participants. The scale was developed based upon Herrington and Oliver's (2000) elements of authentic learning environment and was in reference with the relevant literature (i.e. Bozalek et al., 2013b; A. Herrington & Herrington, 2008; J. Herrington & Oliver, 2000; J. Herrington & Parker, 2013; J. Herrington, Reeves, & Oliver, 2010; Pu, Wu, Chiu, & Huang, 2016).

Method (3)

The 27 items of SOMALEVI was developed in a 5-point Likert scale, involving 5 alternative responses: strongly agree (SA), agree (A), fair (F), disagree (D) and strongly disagree (SD). Additional demographic and social media penetration questions were added to the inventory, such as status (i.e. teacher or student), gender, age, frequency of using social media, electronic equipment to access social media and types of social media use.

Construct	Operating definitions
Authentic contexts (AC)	Provide authentic contexts that reflect the way the knowledge will be used in real life
Authentic tasks (AT)	Provide authentic activities.
Expert performances (EP)	Provide access to expert performances and the modelling of processes
Multiple roles and perspectives (MR)	Provide multiple roles and perspectives
Collaboration construction (CC)	Support collaborative construction of knowledge.
Reflection (R)	Promote reflection to enable abstractions to be formed.
Articulation (A)	Promote articulation to enable tacit knowledge to be made explicit.
Coaching and scaffolding (CS)	Provide coaching and scaffolding by the teacher at critical times.
Authentic assessment (AA)	Provide for authentic assessment of learning within the tasks

Method (4)

- Rasch analysis was performed to 578 records to examine the reliability and validity of the inventory and to analyse the distribution of the quality of participants' responses towards the items in the inventory in reference to their role (i.e. teachers and students), gender and ages.

Table 3. Reliability of SMOLEVI inventory

	Mean	Reliability	Separation	Cronbach Alpha
Person	2.12	0.92	3.47	0.95
Item	0.00	0.98	7.01	

Method (5)

Fit statistics test to the Instrument

- OUTFIT MNSQ fall between .5 and 1.5 with several items in the OUTFIT ZSTD column are observed less than -1.9 or higher than 1.9 (highlighted gray in the Table 4). These results indicate that all the items in SOMALEVI inventory were productive for measurement but with careful supervision for some items, such as item 1, 3, 6, 12, 16, 20, 21, 24, and 26.

Findings: Penetration of Social Media

- The result of the survey reveals that 97.75% of the participants use social media daily (N= 565, M=2.12). Less than 2% of the participant have mentioned their use of social media on weekly or monthly basis.
- WhatsApp was reported to be the most frequent used social media platform by Indonesian university teachers and students followed by Facebook (79.58%), Instagram (9.52%), Twitter (3.63%) and other social media applications (2.77%).
- Participants reported to access social media from their smartphone (96.13%), laptop (2.59%), tablet (1.04%), and Personal Computer (0.17%). Using social media for communication with family (12.96%), communication with friends (28.89%), to access information about the campus life (17.47%), to manage academic activities ((17.65%), and other businesses (23.01%).

Findings

- RQ1:How do university teachers and students perceive the use of social media in promoting authentic learning environments?

- RQ2: Do university teachers and students' perception differ accordance to their role (i.e. teachers and students), gender and ages?
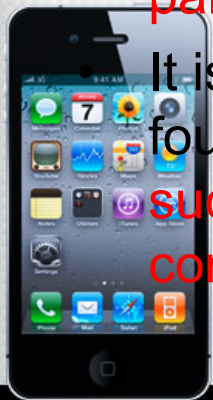
Findings: Perceptions

| Category		
More Difficult to be Considered		
Difficulty Strata I	LVI > 0.59	CC3 (LVI = 0.91)
		AT2 (LVI = 0.90)
		AC2 (LVI = 0.77)
		R2 (LVI = 0.63)
Difficulty Strata II	0.59 > LVI > 0.23	AC3 (LVI = 0.58)
		AT1 (LVI = 0.58)
		AA2 (LVI = 0.30)
		R3 (LVI = 0.24)
Difficulty Strata III	0.23 > LVI > 0.14	MR2 (LVI = 0.22)
		AC1 (LVI = 0.19)
		CC1 (LVI = 0.19)
		AA1 (LVI = 0.16)
Moderate to be Considered	0.14 > LVI > -0.02	R1 (LVI = 0.13)
		CC2 (LVI = 0.12)
		A2 (LVI = 0.01)
Easier to be Considered		
Difficulty Strata V	-0.02 > LVI > -0.37	MR3 (LVI = -0.03)
		A3 (LVI = -0.09)
		AT3 (LVI = -0.25)
		AA3 (LVI = -0.36)
Difficulty Strata VI	-0.37 > LVI > -0.69	A1 (LVI = -0.38)
		CS2 (LVI = -0.41)
		CS1 (LVI = -0.46)
		CS3 (LVI = -0.59)
Difficulty Strata VII	LVI < -0.69	EP3 (LVI = -0.70)
		EP1 (LVI = -0.82)
		EP2 (LVI = -0.85)
		MR1 (LVI = -0.97)

Findings: Perceptions (2)

- Four items considered the easiest to be agreed by the participants, such as EP3 (LVI = -0.70), EP1 (LVI = -0.82), EP2 (LVI = -0.85), and MR1 (LVI = -0.97). The findings indicate that both teachers and students perceived that social media provided students with opportunities to share their experiences and learning activities (MR1, LVI = -0.97).

- Social media also were sought to enable them to learn from experts (EP1, LVI = -0.82) so that they were able to obtain a lot of insight on particular issues (EP3, LVI = -0.70).

- It is interesting, but not surprising that both teachers and students found that social media benefited them with model and resources such as video, demonstration, learning files that enabled students comprehend the learning materials (EP2, LVI = -0.85)
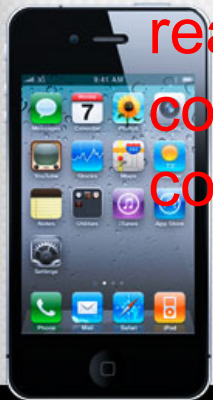
Findings: Perceptions (3)

- It is important to note that it is common in Indonesian university classrooms that teachers provided materials online to allow their students access to the materials without having time and place.

- These findings corroborate the exisiting literature documenting the value of social media to help teachers and students to access teaching and learning resources (Chugh & Ruhi, 2018), to allow the sharing of learning resources (Siemens & Weller, 2011), increases students' interaction and engagement (Aydin, 2014; Davis III et al., 2012; Dougherty & Andercheck, 2014; Kabilan et al., 2010), and to enable both teachers and students to connect to learning communities (Cox & McLeod, 2014) within which they could learn from more able people.
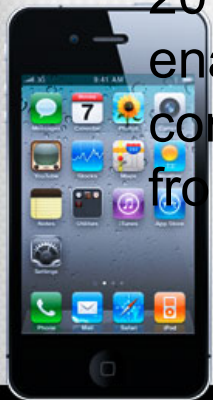
Findings: Perceptions (4)

- Four items were identified to be the most difficult for participants to agree, including R2 (LVI = 0.63), AC2 (LVI = 0.77), AT2 (LVI = 0.90), and CC3 (LVI = 0.91).

- The findings indicate that social media application was unlikely to allow students identify their strengths and weaknesses in learning (R2, LVI = 0.63), to learn thing that reflected real-life situations (AC2, LVI = 0.74) and real-life problem (AT2, LVI = 0.90), and the last, students' collaboration in social media did not reflect real-life collaboration (CC3, LVI = 0.91).

Findings

- RQ1:How do university teachers and students perceive the use of social media in promoting authentic learning environments?

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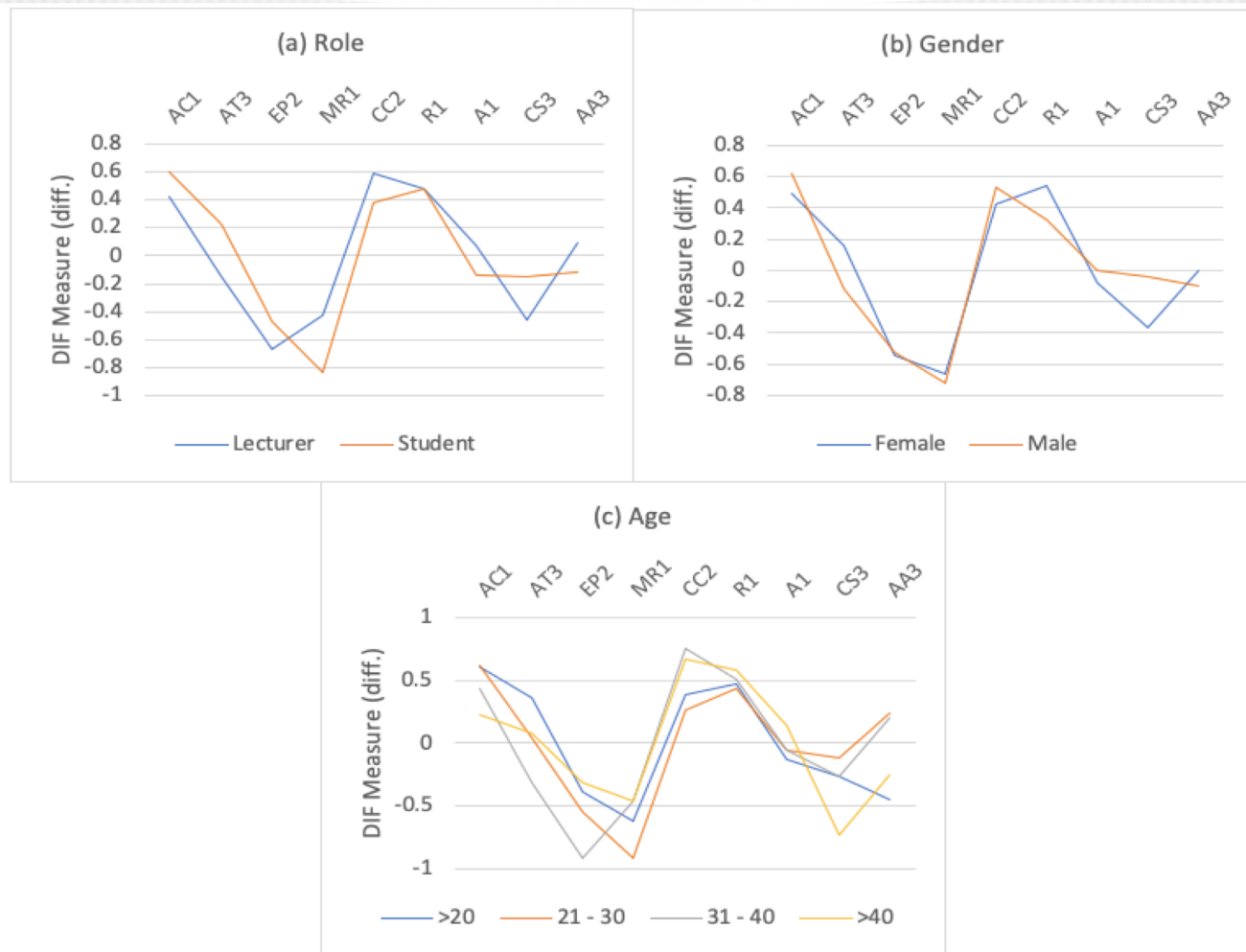
Findings: Perceptions in refernce to demography (5)

Perception	N	%	Status		Gender		Ages			
			Lecture	Student	Male	Female	<21	21 - 30	31 - 40	>41
Positive	551	95.33	247	309	178	373	159	186	120	86
Negative	27	4.67	7	20	7	20	7	15	6	0

Findings: Perceptions in refernce to demography (5)

Findings: Perceptions in refernce to demography (6)

- Most teachers and students had a positive perception towards the use of social media in authentic learning environments (N=551, 95.33%, LVI > -0.39) and only a few expressed negative views (N=27, 4.67%, LVI <-0.33).
- Students found it more positive about promoting authentic learning using social media compared to teachers.
- In Figure 2a, students felt that social media eased the sharing of knowledge (MR1, diff. = -0.8343) and expressed opinions (A1, diff. = -0.1428) in community studies.
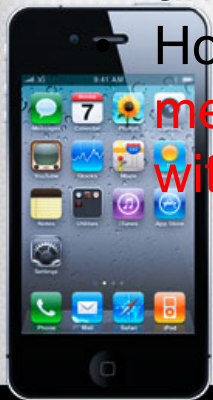 Such findings correspond to a study by Cox and McLeod (2014) that suggest the usage of social media for learning does not only allow communication among teachers and students but also enable them to create learning communities.

Findings: Perceptions in reference to demography (6)

- Teachers revealed the value of social media for facilitating teachers to provide instructional material in the form of video/file or demonstration (EP2, diff. = -0.6682).
- Social media was reported to enable teachers to monitor students' performance and provide feedback (CS3, diff. = -0.453). The access to instructional materials and teachers' attention to their students over monitoring activity as well as giving feedback to the students may promote students' enthusiasm for learning and play an active role in authentic learning environments.
  However, both teachers and students had similar view that social media was unable to help them to reflect learning in accordance with real life (R1, diff. = 0.477).

Findings: Perceptions in refernce to demography (6)

- People from all aged had positive view on social media for learning. Students and teachers aged <30 years had a positive impression on the use of social media which can provide a cavity for students' mutual sharing (MR1, diff. <20= -0.6156, diff. 21 - 30= -0.9096).

- Regarding the use of social media, students and teachers age range 31-40 years perceived that teachers had to provide students a well-done material/model for authentic learning environment (EP2, diff. = -0.9123). Learning activities using social media required teachers to monitor, observe and provide positive evaluations to students (CS3, diff.= -0.7319).

Conclusions

- This current survey aimed to explore university teachers and students' perception of using social media to promote an authentic learning environment.
- Most of the participant showed positive views about the use of social media to promote authentic learning environment.
- The adoption of social media is valued for its capability to offer opportunities for the students to share their experiences and learning activities, to offer students the opportunity to learn from experts so that they were able to obtain a lot of insight on particular issues.
- Social media helps students to access the teaching and learning resources such as video, demonstration, learning files, allowing students to comprehend the learning materials.
- However, the study identified some critical issues regarding the use of social media for authentic learning environment, such as unsuitable real-life representation, difficulty to collaborate with others, and difficulty in recognizing their learning potential.