A Study of Social Media-Apps Integrated Learners' Critical Thinking of Second Language Learning

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Abstract
Social media-apps preferred to social digital platforms included computer-apps, mobile-apps, and web-apps that support learners' L2 learning. The intensive objective of this study is to examine how learners can improve and adapt their L2 learning through using social media-apps, and how social media-apps influence learners' L2 learning. Two methods such as focus group interview and test-taking were assigned to investigate the effects of social media-apps integrated learners' L2 learning. The study showed that the social media-apps were the popular web-based sites that are applied in L2 learning integration. The results have shown how to use social media-apps applied in L2 learning with challenges. The current article also identified the app-frameworks – Facebook, YouTube, LinkedIn, Email, Messenger, and other so on – integrated L2 learning in proficiency. As a result, the results showed that social media-apps such as computer-aided apps, mobile-apps, and web-apps were the key terms of social app-frameworks used to develop and integrate learners' L2 learning, in particular improve learners' learning abilities and attitudes. The means of computer-apps and mobile-apps were greater than the web-apps' means of the significance of this study.
Keywords: social media-apps, computer-apps, mobile-apps, web-apps, app-frameworks

1. INTRODUCTION

The current article is assigned to investigate the effects of using social media-apps to support and integrate learners' L2 learning Improvement. Social media-apps are preferred to social digital platforms included computer-apps, mobile-apps, and web-apps that are used to integrate learners' learning a second language. This study aims to examine how social media-apps integrate and influence learners' L2 learning. The study has also raised some viewpoints related to the background of study and previous empirical studies to review and explain the important points of social media-apps integrate and influence learners' L2 learning in the current social contexts. That's why; the researcher has decided to do a research on this topic as the crucial study for other future study.

1.1. Background of Study

The present study is assigned to examine the effects of using social media-apps to support learners' second language learning. The article aimed to identify how the social media-apps were applied and influenced the students' learning a second language in proficiency. According to McFarland & Ployhard (2015), the social media-apps have been preferred to the popular digital social platforms that have potentially changed the ways of people interact and communicate, in particular the learners learn and use the social media-apps to develop their L2 learning. In this study, the results showed that the social media-apps or social media-frameworks were conducted as the modern technologies to represent the contexts that differ in important ways of communication from traditional (e.g., face-to-face, video-chat) and other digital ways of communicating and interacting (e.g., email. messengers, e-messages). The study have also denoted that the social media-apps were assigned as the contextual frameworks to demonstrate how they change learner-centered or person-centered theories and practices of organization behaviors, for instance, social exchange, social contagion, and social network theories and practices. Moreover, the study is assigned to answer the questions established in the research questions of methodology of research in order to explain how the social media-frameworks or social media-apps are used and applied in the L2 learning with higher critical thinking.

Besides, the social media-apps are preferred to the social digital platforms that facilitate information sharing, user-created content, collaborate across people, and students' learning (Elefant, 2011). Similarly, according to Kaplan & Haenlein, (2010); Lenhart et la. (2010), the social media-apps are also preferred to the network sites such as Facebook, Youtube, LinkedIn, QQ, Messenger, Wechat, and so on. The social media-apps (included computer-apps, mobile-apps, and web-apps) are designed as the technologies that have been revolutionized and changed the ways of learners or people connect, communicate, and develop their relationships (Beal & Strauss, 2008; Derks & Bakker, 2013). Facebook, LinkedIn, Youtube, and other apps are established as the popular social networking platforms that referred to the web-based sites allowing the individuals to create a public profile within a system, develop a list of other users with sharing a connection, review and correspond their lists of connections, and improve their L2 learning (Boyed & Ellison; 2007).

According to Mayer (2002), the online learning was conducted to integrate the L2 learning; it also referred to professional development website. Online learning resources are constructed from the multiple modes of social digital information-photographs, videos, and interactive tools. As Beach & Willows (2017), they reported that the professional development website-apps are conducted to provide students social digital resources for L2 learning integration and development. The study has identified that the models of online learning is offered information about the learners' attitudes towards online professional learning (Duncan-Howell, 2010); however, data generated from these models is limited to participants' re-gathering of their past events. Ngai, Moon, Lam, Chin & Tao (2015) argued that social media-apps are constructed to develop the conceptual-framework to identify how social media applications are supported the students' L2 learning by various social media tools and technologies and underpinned by a set of individual and social behavioral models or theories.

Overall, the study have shown that the social media platforms are served as popular technological tools (Daghfous & Ahmad, 2015) that facilitate the numerous organizational activities including collaborative product development, knowledge creation to share communities, social media deployment of financial institutions (Bonsón & Flores; 2011), and collaborative learning and creativity among individuals, peers, customers, business partners, and organizations (Peppler & Solomou; 2011). The app-frameworks are referred to the computers and mobiles that used the apps to integrate the learners' L2 learning. Particularly, McNulty et la. (2009) suggested that the computer is a kind of social media-apps that is used to construct the L2 learning material; numerous apps are installed in the computer to construct the learning such as dictionary-app, Facebook-app, Google-app, World Wide Web-app, and so on. Deutsch & Frese (2014) potentially suggested that the mobile-apps are preferred to the digital learning resources by EFL students. The interactive mobile-apps are preferred to the types of social media which created to facilitate the SLA and transfer knowledge of critical thinking of second language learning (Hannon (2017).

1.2. Literature Review

The paper aimed to review and explain some viewpoints of social media-apps that provide consumers or learners information through web-apps, computer-apps, and mobile-apps. The study had raised three main points to review the conceptual frameworks of social media-apps that are used to support and integrate the students' L2 learning.

1.2.1. Social Media-Apps Integrated Second Language Learning

Online learning was conducted to integrate the L2 learning; it also referred to professional development website. According to Mayer (2002), the online learning resources preferred to the professional knowledge that was constructed from the multiple modes of digital information-photographs, videos, and interactive tools. Weschke & Barclay (2011) identified that the online learning opportunities have been shown to have the positive effects on and change the students' content knowledge and learning outcomes. Online learning is implied to a favored approach to create the accessible opportunities; the online learning is conducted within the platforms that deliver information in a mean that removes the situational barriers (Kanunka & Nocente, 2003). Based on the viewpoints stated by Beach & Willows (2017), the professional development website is produced to provide students the digital resources for L2 learning integration and development. Website information can be delivered to practicing students through various professional development opportunities to improve their L2 learning (Kao, Wu & Tsai, 2011).

On accordance to views stated by Charalambousa & Ioannou (2011), L2 learners have increasingly learnt by using modern social media-apps or social media-frameworks to develop their L2 learning; they are also motivated to use internet information for their professional learning. Duncan-Howell (2010) has identified that the models of online learning resources are offered information about the learners' attitudes towards online professional learning; however, data generated from these models is limited to participants' re-gathering of their past events. A method of online learning that tracks the learners' cognitive processes as they make the online choices, is very important to provide further insight into how the learners learn and use from online environmental learning activities.

Similarly, Ngai et la. (2015) argued that social media-apps were conducted to develop the conceptual-framework to indicate how social media applications were supported the students' L2 learning by various social media tools and technologies and underpinned by a set of individual and social behavioral models or theories. As Hanna et la. (2011) suggested that the social media-apps included internet technologies and social media have been attracted considerable attention to develop the students' learning such as second language acquisition in the recent year. Particularly, social media-apps were constructed with new challenges and opportunities for both private lives of learning individuals and the business activities of organization, drawing interest on their applications and benefits from the researchers (Kietzmann et la. 2011; Mangold & Faulds, 2009). The increased development of social media-apps has been shaped the people's interactions and students' learning resources through various social media platforms or social digital platforms (Colliander & Dahlén, 2011; Cho et la. 2014).

In a short of this study, Fernando (2010), Daghfous & Ahmad (2015) argued that the social media platforms

were served as technological tools that facilitate numerous organizational activities included collaborative product development, knowledge creation to share communities, social media deployment of financial institutions (Bonsón & Flores; 2011), and collaborative learning and creativity among individuals, peers, customers, business partners, and organizations (Peppler & Solomou; 2011). As a result, the individuals of learning and organizations have been enhanced to embrace the cognitive challenges and opportunities by using the social media-apps; social media-apps have been encompassed a wide range of tools and modern technologies for supporting the L2 learning integration and improvement (Mangold & Faulds; 2009).

1.2.2. App-Frameworks Supported L2 Learning Proficiency

The article is assigned to review the viewpoints relevant to the use of app-frameworks applied in L2 learning. The app-frameworks are referred to the computers and mobiles that used the apps to integrate and develop the learners' L2 learning. According to McNulty et la. (2009), the computer is a type of social media-apps that use to produce the L2 learning material; the numerous apps are installed in the computer to construct the learning such as dictionary-app, Facebook-app, Google-app, World Wide Web-app, and so on. Similarly, Guze (2015) reported the modern technologies are popular and crucial to integrate the learners' L2 learning with higher critical thinking. The terms of technologies prefer to the scientific materials such as computer, internet welfares, and mobiles, which are applied in the L2 learning to integrate the learners' critical thinking. Furthermore, smartphones are the terms of scientific learning materials that the learners have used to develop their L2 learning (Trelease; 2008). The smartphones have many functions included using Facebook, Youtube, playing videos, and using with other apps, that provide learners many beneficial uses to integrate their L2 learning with critical thinking to achieve their learning outcomes. According to Gutmann et la. (2015); Sandolzer et la. (2014), the mobile-apps are assigned the digital learning resources by EFL students. The studies have outlined language students' preferences for the mobile apps established to deliver the traditional resources to develop the learners' L2 learning with higher critical thinking.

Therefore, the L2 learners are encouraged and prompted to use the app-frameworks to develop their L2 learning with critical thinking to reach the academic learning objectives and achieve the learning outcomes effectively. Hannon (2017) suggested that the interactive mobile-apps are preferred to the types of social media-apps which created to facilitate the acquisition of a second language and transfer the knowledge of critical thinking of L2 learning. The study also showed that the web-based learning mobile-apps are constructed to develop the learners' L2 learning. In addition, the computer-aided instructional resources and mobile-apps are constructed to provide students social media resources to integrate their L2 learning with higher critical thinking. Karpicke & Blunt (2011) suggested that the app-frameworks such as mobile-apps and computer-aided apps are designed to be interactive, utilize active retrieval in the form of self-guided quizzes and self-learning assessments.

1.2.3. Social Media-Apps Influenced Learners' L2 Learning Improvement

The study has shown that the cultivation of social networks are conducted to support the learners' learning a second language; social media-Facebook has enhanced and constructed the relationships of the learners, that increase loyalty through the trust, learner satisfaction, perceived value, and commitment (Gambao & Gonçalves (2014). Akar & Topçu (2011) have analyzed the student's attitudes towards the social media-apps and developed a learner-based attitude scale for the further studies. The factors that have reflected the attitudes of learners' L2 learning with higher critical thinking and their acceptance of social media-apps: attitudes towards social media-apps, social media-app use, social media-app knowledge, social media-apps monitoring, foresight on the social media-apps, and fears regarding social media-apps or social media-marketing.

According to the social media-apps conducted, the computer-aided materials/apps and mobile apps are established to construct the students' higher critical thinking of second language learning. De Valck et la. (2009) have investigated how the decision-making processes of customers/learners that can be affected by their interactions and communications and information and experience sharing, with the other consumers/students in the virtual communities. The relationships between social media-apps variables such as critical thinking productions and quality of L2 learning and learners' online posting behaviors at the initial and mature stages of internet usage are the key terms of critical thinking to develop the learners' L2 learning or consumers' using app-frameworks, described by Chen, Fay, & Wang (2011).

Particularly, McFarland & Ployhard (2015) argued that the social media-apps have been regarded as the popular digital platforms that have increasingly changed the way of people or learners communicate and interact. The social media-apps have been conducted as the modern technologies representing a context that differs useful ways of communication from traditional (for instance, face-to-face) and other digital ways of communicating and interacting (for example, email). The social media-apps have been relatively provided the effects of cognitive context, developmental perceptions, and adapted behaviors of individuals within L2 learning. McFarland & Ployhart also identified that the social media-apps were assigned as the contextual frameworks to demonstrate how they change person-centered theories or learner-centered theories and practices of L2 learning behaviors, for example, social exchange, social contagion, and social network theories and practices.

Thereafter, on accordance to the viewpoints stated by Elefant (2011), the social media-apps are set as the

social digital platforms that coordinate and facilitate information sharing, user-created content, and collaborate across people. Similarly, the social media-apps are preferred to the network sites included Facebook, Youtube, LinkedIn, QQ, Wechat, and so on (Kaplan & Haenlein, 2010; Lenhart et la. 2010). As Beal & Strauss (2008), Derks & Bakker (2013), they argued that the social media-apps are designed as the technologies that have been revolutionized and changed the ways of learners or people connect, communicate, and develop their relationships. The social media-apps or social media-framework have represented the context for communication and interactions that are differentiated from the traditional interaction and communication (e.g., face-to-face, video-chat) and other types of digital media-apps (e.g., email, chat, messengers, messages). Based on the viewpoints stated by Cascio & Aguinis (2008), they suggested that the social media-apps preferred to the global phenomenon and scientific scrutiny contributes to the potential devaluation of applied psychological science that used to serve the learners' learning with higher critical thinking, cognitive creations, and challenged learning activities.

Overall, Facebook-apps, LinkedIn-apps, YouTube-apps, and other social media-apps are established as the popular social networking platforms that are referred to the web-based sites allowing the individuals to create a public profile within a system, develop a list of other users with sharing a connection, review and correspond their lists of connections, and improve their L2 learning with higher critical thinking (Boyed & Ellison; 2007). The social media-app such as YouTube is collaborated knowledge being developed, created works like blogs, social bookmarking such as CiteULike, and contented complication and organization such as RSS feeds (Greenhow, 2010).

1.3. Limitation of the Study
Based on the short time to do a research, the study only focused on some effects of using social media-apps to integrate learners' L2 learning with higher critical thinking. So, the evidences were not enough to provide the significance for this study; the results of data analysis getting from the descriptive statistics provided the significant variables between computer-apps, mobile-apps, and web-apps were under the limitation of data research with a study of social media-apps integrated learners' critical thinking of L2 learning. As a result, the significant variables of learners' L2 learning with higher critical thinking through using social media-apps were not enough. The researcher attempted to do a further researcher on the using social media-apps integrated learners' critical thinking of L2 learning in order to improve learners' L2 learning in the future study.

2. METHODOLOGICAL STUDIES
2.1. Research Questions
1. Do social media-apps have any effects on learners' second language learning?
2. What are the effects of using social media-apps to support learners' second language learning?
3. What are the students' attitudes towards social media-apps to integrate students' L2 learning?
4. How can social media-apps influence and integrate students' L2 learning?

2.2. Research Tools
The two methods included tests taking and focus-group interview were designed to observe and receive data analysis for both quantitative and qualitative analysis. The questionnaires are constructed with multiple-choice questions and information questionnaires to observe and receive data analysis. Data collection were conducted with the two methods of mixed research such as quantitative and qualitative approaches, which were employed to examine the effects of practitioners' participation to improve their L2 learning proficiency through using social media-apps. The two undergraduate student classes majoring in English Literature, learning at a university located in Cambodia, were taken part in the data collection for both quantitative and qualitative analysis. The instructors lecturing at the higher education institutions were also the main stakeholders to interview for data collection.

2.3. Participants
Sixty-five undergraduates (Cambodians) majoring in English literature at a higher education institution and instructors were taken part in the data gathering of this study. Thirty-five participants were in the first year of undergraduate studies, and other thirty participants were the second year; those practitioners have majored in English literature. There were thirty-eight schoolgirls among the sixty-five undergraduate students. The eighteen lecturers were interviewed to receive information relevant to using social media-apps to integrate learners' L2 learning improvement. These participants were the main stakeholders to be involved in the study of this research.

2.4. Procedures of Research
The participants were designed to take the tests of pre-survey and post-survey, pre-tests and post-tests and focus-group interview to observe and receive data collection. The participants were randomly conducted to observe

and receive data collection for both quantitative and qualitative analysis. The lecturers were also taken part in the data gathering with interview questionnaires conducted. After the sample was completed, the researcher instructed practitioners to denote on the effects of using social media-apps to develop the learners' L2 learning with higher critical thinking.

2.5. Data Analysis

The data collection from the two questionnaire surveys and students' scores in the tests and focus-group interview were gathered and analyze. Both quantitative and qualitative data analysis were gathered; the quantitative analysis involved various procedures such as descriptive statistics and practicality analysis. The quantitative data analysis also was mainly from the tests on the effects using social media-apps to develop learners' critical thinking of second language learning. Thus, data gathered were analyzed and synthesized by using the IBM SPSS 21 to analyze the data gathering from the test-takings and focus group interview questionnaires.

3. RESULTS

The results of the current study showed that the social media-apps such as computer-apps, mobile-apps, and web-apps have been influenced and integrated the non-native learners' L2 learning challenges with higher critical thinking. The study also identified the significance of L2 learning improvement through using social media-apps. Particularly, the article illustrated the significance of the study results as shown in tables below.

3.1. Do Social Media-apps Have Any Effects on Learners' L2 Learning Improvement?

The result of the present study showed that the social media-apps (included computer-apps, mobile-apps, and web-apps) have been integrated and influenced learners' L2 learning improvement with higher critical thinking. According to the pre-survey and post-survey, the study had resulted the significance of using social media-apps (for example, Facebook apps, Email apps, Messenger apps, YouTube apps, and so on) which have been integrated and influenced learners' L2 leaning improvement as shown in table 1 and 2.

Table 1: Descriptive statistics of effects of social media-apps to integrate learners' L2 learning by using pre-survey

Factor	N	Responses of Pre-survey				
		Facebook M (SD)	Email M (SD)	Messenger M (SD)	YouTube M (SD)	LinkedIn M (SD)
Computer-Apps	65	80.2500 (5.62724)	80.4000 (5.51982)	81.6300 (4.75894)	81.9300 (4.52910)	81.8950 (3.39217)
Web-Apps	65	75.6900 (4.74862)	74.9400 (5.36935)	76.0400 (5.22850)	78.7850 (4.88082)	76.6400 (3.77086)
Mobile-Apps	65	82.3450 (3.21075)	75.3400 (4.66593)	77.9850 (4.40661)	81.1450 (2.84540)	79.3850 (4.316334)

The table 1 resulted that the computer-apps such as Facebook, email, messenger-apps, YouTube, and LinkedIn were very important for learners to integrate their L2 learning improvement in proficiency. For example, according to the computer-apps, the results showed that the computer-apps had increasingly influenced learners' L2 learning improvement with the study significance of the means as Facebook's mean=80.2500, email's mean=80.4000, messenger's mean=81.6300, YouTube's mean=81.9300, and LinkedIn's mean=81.8950. On accordance to these results, the computer-apps have extremely influenced and integrated learners' L2 learning improvement. Similarly, the study also showed that the web-apps had influenced learners' L2 learning improvement with the great results of study significance included the Facebook's mean=75.6900, email's mean =74.9400, messenger's mean=76.0400, YouTube's mean=78.7850, and LinkedIn's mean= 76.6400. Particularly, the means of computer-apps were higher than the means of web-apps. Overall, the results of the scientific study showed that the mobile-apps had rapidly integrated and influenced the learners' L2 learning improvement with the great significance of the study existing the means of Facebook's mean=82.3450, email's mean=75.3400, messenger's mean=77.9850, YouTube's mean=81.1450, and LinkedIn's mean=79.3850. As a result, the means of computer-apps and mobile-apps were greater than the means of web-apps. As shown in table 1, the social media-apps have been increasingly integrated and influenced the learners' L2 learning improvement with higher critical thinking and challenges.

Table 2: Descriptive statistics of effects of social media-apps to integrate learners' L2 learning using post-survey

Factor	N	Responses of Post-survey				
		Facebook M (SD)	Email M (SD)	Messenger M (SD)	YouTube M (SD)	LinkedIn M (SD)
Computer-Apps	65	81.5000 (4.82264)	80.5500 (5.44276)	81.8800 (4.51053)	81.9800 (4.51216)	82.0450 (3.42598)
Web-Apps	65	77.0900 (3.80718)	75.9400 (4.47312)	77.5900 (3.98205)	79.4800 (4.23961)	77.0900 (3.62301)
Mobile-Apps	65	82.5450 (3.01496)	76.3400 (3.77002)	78.8350 (4.01055)	81.4950 (2.65320)	79.0900 (4.10113)

Table 2 resulted that there were the statistical variables of significance in the post-survey, even though the post-survey identified that the means of computer-apps and mobile-apps already scored higher than the means of web-apps for their using Facebook, email, messenger, YouTube, and LinkedIn. The results of table 2 had identified that the means of computer-apps, web-apps, and mobile-apps such as means of computer-apps of Facebook = 81.5000, email = 80.5500, messenger = 81.8800, YouTube = 81.9800, and LinkedIn = 82.0450; web-apps of Facebook = 77.0900, email = 75.9400, messenger = 77.5900, YouTube = 79.4800, and LinkedIn = 77.0900; mobile-apps of Facebook = 82.5450, email = 76.3400, messenger = 78.8350, YouTube = 81.4950, and LinkedIn = 79.0900. The results of the post-survey scores (means) denoted that the computer-apps' and mobile-apps' scores (means) significantly surpassed the web-apps' scores (means). Therefore, the social media-apps have been increasingly integrated and influenced the learners' L2 learning improvement with challenges and higher critical thinking.

3.2. Students' abilities towards asocial media-apps integrated learners' L2 learning
Based on the two surveys of the students' abilities towards using social media-apps applied in L2 learning to develop their critical thinking, the results showed that the students have assigned their goal-setting plan to use the social media-apps to integrate L2 learning. Table 3 and 4 illustrated the responses of factors that the students have assigned to improve their L2 learning abilities with higher critical thinking and learning challenges and talents through using the social media-app.

Table 3: Students' abilities towards asocial media-apps integrated learners' L2 learning by using pre-survey

Factor	N	Responses of Pre-survey				
		Facebook M (SD)	Email M (SD)	Messenger M (SD)	YouTube M (SD)	LinkedIn M (SD)
Goal-setting of Social Media-apps Use	65	80.8000 (5.41003)	76.4400 (4.19503)	82.2300 (4.41756)	80.0850 (3.38888)	82.5950 (3.01723)
Self-motivation of social media-apps use	65	76.6900 (4.17283)	81.0500 (4.76859)	77.0400 (4.62151)	82.2300 (4.21640)	80.0850 (3.51991)
Self-assessment of social Media-apps use	65	82.4450 (3.24029)	76.3400 (3.94734)	78.3850 (4.43660)	81.1450 (2.84540)	76.6400 (3.77086)

According to the statistical variables of significance of the observed questionnaire in the pre-survey, table 3 showed that there were significant variable of Facebook, Email, Messenger, YouTube, and LinkedIn use. The results of the study had shown that the goal-setting of social media-apps use had the means of Facebook = 80.8000, Email =76.4400, Messenger = 82.2300, YouTube = 80.0850., and LinkedIn = 82.5950; the self-motivated of social media-apps use had the means of Facebook = 76.6900, Email = 81.0500, Messenger = 77.0400, YouTube = 82.2300, and LinkedIn = 80.0850; and the self-assessment of social media-apps use had the means of Facebook = 82.4450, Email =76.3400, Messenger = 78.3850, YouTube = 81.1450., and LinkedIn = 76.6400. As a result, learners have carried out the advantages of using social media-apps to integrate and improve their L2 learning improvement, for example they have used Facebook apps or other apps to improve their L2 learning such as practicing understanding

Table 4: Students' abilities towards asocial media-apps integrated learners' L2 learning by using post-survey

Factor	N	Responses of Post-survey				
		Facebook M (SD)	Email M (SD)	Messenger M (SD)	YouTube M (SD)	LinkedIn M (SD)
Goal-setting of Social Media-apps Use	65	82.8500 (5.27581)	77.0900 (3.97014)	82.1800 (4.30784)	80.2300 (3.33926)	82.3950 (3.12654)
Self-motivation of social media-apps use	65	77.7900 (3.15460)	81.2000 (4.55782)	78.5900 (3.00244)	82.3300 (4.12860)	80.2850 (3.24382
Self-assessment of social Media-apps use	65	82.7450 (2.89054)	77.6400 (3.07081)	79.4850 (3.19082)	81.9450 (2.10750)	77.8900 (2.99577)

The result in table 4 was shown that before the treatment, there was not significant variable in all factors. But, after the treatment, there were differential variables of significance of the post-survey. The results had shown that the goal-setting of social media-apps use had the means of Facebook = 82.8500, Email = 77.0900, Messenger = 82.1800, YouTube = 80.2300, LinkedIn = 82.3950; the self-motivated of social media-apps use had the means of Facebook = 77.7900, Email = 80.2000, Messenger = 78.5900, YouTube = 82.3300, LinkedIn = 80.2850; and the self-assessment of social media-apps use had the mean of Facebook = 82.7450, Email = 77.6400, Messenger = 79.4850, YouTube = 81.94500, LinkedIn = 77.8900. Based on the results of this study, the learners had used the social media-apps to integrate and improve their L2 learning with higher critical thinking.

3.3. Effects of Using Social Media-apps Integrated Learners' L2 Learning
The study resulted that using social media-apps integrated students' L2 learning improvement with higher critical thinking provided the appropriate effects of study significance to integrate the students' L2 learning. Table 5 illustrated the results of the Facebook's means, Email's means, Messenger's means, YouTube's means, and LinkedIn's means by using the questionnaires of pre-test, post-test, and focus group interview.

Table 5: Results of Pre-test, Post-test bet and focus group interview

Test	N	Responses of Pre-test, Post-test, and Focus-group Interview				
		Facebook M (SD)	Email M (SD)	Messenger M (SD)	YouTube M (SD)	LinkedIn M (SD)
Pre-test	65	83.3000 (4.94975)	77.8400 (3.99689)	82.8300 (3.82555)	80.6300 (3.37936)	82.6950 (2.78520)
Focus-group Interview	65	79.7400 (2.59360)	81.7000 (3.90479)	79.0400 (2.55886)	82.6300 (3.88589)	80.3850 (3.08294)
Post-test	65	82.9950 (2.60616)	78.2900 (2.65645)	79.7350 (2.95177)	82.0950 (1.95569)	78.5900 (2.19327)

As shown in table 5, there was a significant difference of the means of the pre-test scores, post-test scores, and focus-group interview scores of the Facebook, Email, Messenger, YouTube, and LinkedIn. For the pre-test scores, the means of pre-test were Facebook's mean = 83.3000, Email's mean = 77.8400, Messenger's mean = 82.8300, YouTube's mean = 80.6300, LinkedIn's mean = 82.6950. The results of descriptive statistics of the focus-group interview, identified that the mean of focus group interview were Facebook's mean = 79.7400, Email's mean = 81.7000, Messenger's mean = 79.0400, YouTube's mean = 82.6300, LinkedIn's mean = 80.4550. In this study, the results also showed that the means of the post-test were Facebook's mean = 82.9950, Email's mean = 78.2900, Messenger's mean = 79.7350, YouTube's mean = 82.0950, LinkedIn's mean = 78.5900. Particularly, the results were shown that the means of pre-test, focus-group interview, and post-test were different through the descriptive statistics. According to the study, it resulted that there were statistical variables of significance of the observed and researched results of a study of social media-apps integrated learners' critical thinking of L2 learning.

3.4. Students' attitudes towards social media-apps integrated learners' L2 learning
On according to the observational results of students' attitudes towards using social media-apps integrated learners' L2 learning improvement, the study resulted that the students' attitudes were explained in table 6 below.

Table 6: Students' attitudes towards social media-apps integrated learners' L2 learning with higher critical thinking

Items	Responses	Agreement %	Disagreement %	Neutrality %
Achievement of Social Media-apps Use	My learning and thinking abilities of social media-app uses have been improved.	83.20	5.50	11.30
	My abilities of self-reflection and self-motivation to use the social media-apps have been enhanced.	75.40	10.10	14.50
	My critical thinking of using social media-apps integrated L2 learning had been improved.	88.30	5.40	6.30
Attitude towards the Social Media-apps Use	I like the new technological social media-apps integrated L2 learning improvement.	90.50	4.30	5.20
	I have more opportunities to develop my critical thinking of L2 learning through using social media-apps.	85.40	6.50	8.10
	I would like to be active through using social media-apps to improve my L2 learning.	75.60	11.20	13.20
	The social media-apps provide learners opportunities to integrate and improve their L2 learning with higher critical thinking.	88.50	6.30	5.20
Teachers' roles	The teacher's roles are challenged towards teaching, facilitating, and motivating students to be more active with their higher critical thinking of L2 learning improvement through using the social media-apps.	87.60	5.10	7.30
Students' behaviors and outcome of social media-apps use	I have opportunities to improve my L2 learning behaviors and outcomes through using the modern technologies of social media-apps.	92.20	3.50	4.30
	I have chances to improve my critical thinking of L2 learning through using social media-apps.	86.70	5.20	8.10
Attitudes towards the activities	The activities have raised and promoted my awareness of L2 learning improvement through using social media-apps.	84.30	7.50	8.20
	The activities have appropriately adjusted and assigned my confidence of managing my own L2 learning improvement through using the social media-apps.	93.40	3.50	3.10

As shown in table 6, the study resulted that most of the students have behaved with the positive attitudes towards L2 learning improvement with higher thinking abilities, self-reflection, self-motivation, and self-assessment to improve their L2 learning outcomes in proficiency, and have extremely adapted their behaviors of L2 learning with challenges through using social media-apps. As the achievement of L2 learning improvement, most of L2 learners had identified the higher critical thinking, self-reflection, self-motivation, and self-correction which were very necessary to improve their L2 learning proficiency. They also suggested that practicing and improvement of L2 learning through using social media-apps and productive conceptions of L2 learning development will provide them the cognitive perspectives and developmental features to improve their L2 learning behaviors and outcomes. As a result, the study showed that the learners will have opportunities to improve their L2 learning in order to ensure that they will have enough ability to integrate their L2 learning through using the social media-apps.

4. DISCUSSION

According to the results of this study, the learners will have enough opportunities to develop and adapt their L2 learning with higher critical thinking and challenges through using social media-apps. The social media-apps were preferred to the modern social digital platforms that have extremely changed the ways of people communicate and interact, in particular the learners use social media-apps to support and integrate their L2 learning with higher critical thinking (McFarland & Ployhard, 2015). Similarly, the social media-apps were referred to the computer-apps, mobile-apps, and web-apps that were the types of the social digital platforms that have provided learners differential information relevant to the studied fields that they have pursued. Particularly, the social media-apps were assigned as the modern technologies that have been revolutionized and changed the ways of people connect, communicate, and develop their relationships, especially learners use these app-frameworks to integrate and develop their L2 learning improvement with higher critical thinking (Beal & Strauss, 2008); Derks & Bakker, 2013).

As shown in the study results, the students have used the social media-apps included computer-apps, mobile-apps, and web-apps (for example Facebook, Email, Messenger-apps, YouTube, LinkedIn, and so on) to integrate and support their L2 learning proficiency (Elefant, 2011; Kaplan & Haenlein, 2010; Boyed & Ellison, 2007; Lenhart et la. 2010). In accordance, the online learning resources (Websites/Web-apps) were the social digital platform information sharing and constructed from the multiple modes of social digital information-photograph, videos, and interact tools (Mayer, 2002; Beach & Willows, 2017; Duncan-Howell, 2010). Similarly, the results have shown that the modes of online learning resources were offered information about the students' attitudes towards online professional learning.

Overall, the results have shown that the social media-apps or social media platforms are served as the modern technological tools to facilitate many organization activities and learning contexts such as collaborative product development, knowledge creation to share communities and collaborative learning and creativity (Daghfous & Ahmad, 2015; Bonsön & Flores, 2011; Peppler & Solomou, 2011). According to the study results, computer is preferred to a kind of social media-apps included numerous apps such as Facebook-app, Google-app, dictionary-app, www-app, and so on (McNulty, Sonntag & Sinacore; 2009). Mobile-app is also referred to a type of social media-apps that preferred to the digital learning resources used by L2 learners (Deutsch & Frese, 2014). Beach & Willows (2017) suggested that the web-app is also implied to the online learning resource that learners have used to develop and integrate their L2 learning proficiency with higher critical thinking and challenges.

5. CONCLUSION

The article is assigned to examine the effects of using social media-apps to support and integrate learners' L2 learning improvement with higher critical thinking. On accordance to the results of the study, the social media-apps are been conducted as the modern technologies to integrate learners' L2 learning improvement through challenged activities (McFarland & Ployhard, 2015). The social media-apps are preferred to the social digital platforms that facilitate the learners' L2 learning activities and support students' learning with numerous social media resources; these social media-apps referred to the computer-apps, mobile-apps, and web-apps that have served the learners' L2 learning requirement and needs (Akar & Topçu, 2011). In accordance, the study has also resulted that the popular social media-apps that the learners have assigned to develop their L2 learning were Facebook, Email, Messenger-apps, YouTube, LinkedIn, and so on. In the current context, the social media-apps included computer-apps, mobile-apps, and web-apps are very popular for L2 learners to improve their learning (Gambao & Gonçalves; 2014). Particularly, the computer-apps, mobile-apps, and web-apps were established to construct the students' L2 learning with higher critical thinking (Chen, Fay & Wang, 2011). According to Cascio & Aguinis (2008), the social media-apps (for example, Facebook, YouTube, LinkedIn, and other social media-apps) are preferred to global phenomenon and scientific scrutiny that contribute the psychological science to serve the learners' learning with higher critical thinking, cognitive creation, and challenged learning activities. Overall, the L2 learners are encouraged and prompted to use the social media-apps for their L2 learning improvement. The instructors are also motivated and suggested to use the social media-apps applied in their teaching contexts in order to help students improve their critical thinking of L2 learning. For this article, the researcher has attempted to do further research in the future study in order to improve learners' L2 learning proficiency through using social media-apps.

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Brief biography

Since 2010, I was an associated teacher of English taught at Samdach Heng Samrin Anlungchrey High School. From 2015 – 2016, I was a Higher Educator of English taught at Samdach Heng Samrin Anlungchrey High School. I had also taught English at the Cambodian University For Specialties (CUS). From 2016 to 2017, I have been a Higher Educator of English and have taught English at UHST. But, now I am a PhD Student majoring in Foreign Linguistics and Applied Linguistics, studying at the School of Foreign Languages and Literature (SFLL) of Shandong University (SDU) located in Jinan City, Shandong Province of China.