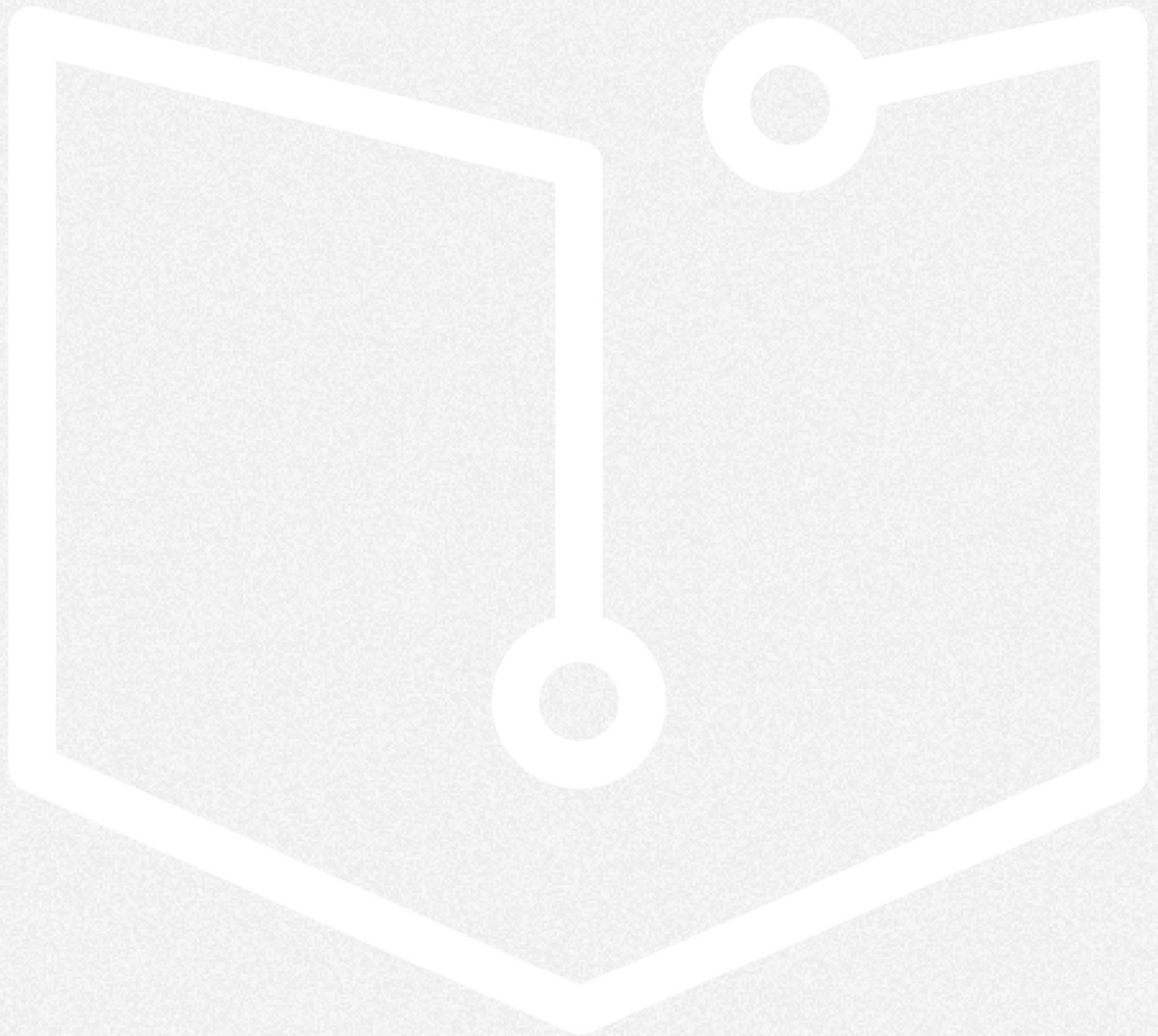




Find out more at tewtjournal.org

THE
**Journal of Teaching
English with Technology**

Vol. 22 NO.1 January 2022



UNIVERSITY of
NICOSIA

UMCS
MARIA CURIE-SKŁODOWSKA UNIVERSITY

www.tewtjournal.org

The Journal of
**Teaching English
with Technology**
(TEwT)

Publishers



UNIVERSITY
of NICOSIA



UMCS
MARIA CURIE-SKŁODOWSKA UNIVERSITY

**IATEFL Poland Computer Special Interest
Group**

**ISSN 1642-
1027**



Editors-in-Chief

Jarosław Krajka

Maria Curie-Sklodowska University, Poland (Journal Founder)

Chris Alexander

University of Nicosia, Cyprus (Thematic Issues' Editor)

Assistant Editors

Robert Oliwa

East European State Higher School in Przemyśl, Poland
(Assistant to the Editor)

Ferit Kilickaya

Mehmet Akif Ersoy University, Turkey
(Assistant Editor, Statistics Editor)

Hussein Meihami

Imam Khomeini International University, Iran
(Assistant Editor, Social Media Assistant)

Dmitry Apraksin

IT Editorial Support
(University of Nicosia Director of IT)

Honorary Reviewers

Antonie Alm, University of Otago, New Zealand

Abdelmajid Bouziane, Hassan II Mohammadia University, Morocco

Tita Beaven, Open University, UK

Stan Bogdanov, New Bulgarian University, Bulgaria

Jack Burston, Cyprus University of Technology, Cyprus

Robert Dębski, Jagiellonian University, Poland

Maria Jose Luzon Marco, University of Zaragoza, Spain

Joy Lynn Egbert, Washington State University, USA

[The late] Deny Arnos Kwary, Universitas Airlangga, Indonesia

Stewart Martin, University of Hull, UK

Spyros Papadakis, Hellenic Open University, Greece

Salomi Papadima, Cyprus University of Technology, Cyprus

(The late) Włodzimierz Sobkowiak, Adam Mickiewicz University, Poland

Vance Stevens, Petroleum Institute, Abu Dhabi

Ursula Stickler, Open University, UK

Mark Warschauer, University of California, USA

Shona Whyte, Universite Nice, France

Katerina Zourou, University of Luxembourg, Luxembourg

Board of Reviewers

Atef Odeh Suleiman AbuSa'aleek, Qassim University, Kingdom of Saudi Arabia

Katarzyna Alexander, University of Nicosia, Cyprus

Nagaletchimee Annamalai, School of Distance Education, Universiti Sains Malaysia, Penang

Yudhi Arifani, Universitas Muhammadiyah Gresik, Indonesia

Somayeh Baniasad-Azad, University of Isfahan, Iran

Ruba Fahmi Bataineh, Yarmouk University, Jordan

Maria Carmen Campoy Cubillo, Universit Jaume I, Spain

Letizia Cinganotto, INDIRE, Italy

Elisa Corino, Università degli Studi di Torino, Italy

Alejandro Curado Fuentes, University of Extremadura, Spain

Reza Dashtestani, University of Tehran, Iran

Salu Dsouza, CHRIST (Deemed to be University)

Shirin Shafiei Ebrahimi, Universiti Teknologi Malaysia, Malaysia

Gülsüm Songül Ercan, Dokuz Eylül University, Turkey

Jalil Fathi, University of Kurdistan, Iran

Agnieszka Gadomska, University of Social Sciences and Humanities, Poland

Elżbieta Gajek, Warsaw University, Poland

Carolina Girón-García, Universitat Jaume, Spain

S Gopinath, Periyar Government Arts College, India

Akhmad Habibi, Universiti Malaya, Indonesia

Jozsef Horvath, University of Pecs, Hungary

Arburim Iseni, University of Tetova, Macedonia

Kristi Jauregi, University of Utrecht, the Netherlands

Anna Kamont, Higher School of Linguistics, Poland

Ferit Kilickaya, Mehmet Akif Ersoy University, Turkey (Statistics Editor)

Maria Kordaki, University of the Aegean, Greece

Vladimir Krasnopolsky, East Ukrainian Volodymyr Dahl National University, Ukraine

Malgorzata Kurek, College of Foreign Languages, Czestochowa, Poland

Anissa Khaldi, Abou Bekr Belkaid University of Tlemcen, Algeria

Mohammad Reza Khodashenas, University of Applied Science and Technology, Iran

James Leigh, University of Nicosia, Cyprus

Mariusz Marczak, Jagiellonian University, Poland

Azza Ashraf Mohammed, Misr University for Science and Technology, Egypt

Mohammed Ali Abdullah Mohsen, Najran University, Saudi Arabia

Amirul Mukminin, Jambi University, Indonesia

Musa Nushi, Shahid Beheshti University, Iran

Alireza Omid Oskouei, Qom University of Medical Sciences, Iran

Susan Jacques Pierson, Cabrini College, USA

Joanna Pitura, Pedagogical University of Cracow , Poland

Anna Franca Plastina, Universita della Calabria, Italy

Salah Mohammed Salih, Koya University, Iraq

Christine Savvidou, University of Nicosia, Cyprus

Dnyaneshwar Babulal Shirode, Savitribai Phule Pune University, India

Maria Grazia Sindoni, University of Messina, Italy

Xavier Pradheep Singh, St. Joseph's College (Autonomous), Trichy, India

Mateusz-Milan Stanojević, University of Zagreb, Croatia

Farhad Tabandeh, Sharif University of Technology, Iran

Dara Tafazoli, Newcastle University, UK

Unes Tase, University of Tehran, Iran

Michael Thomas, University of Central Lancashire, UK

Cornelia Tschichold, Swansea University, UK

Katarina Tuinamuna, Australian Catholic University, Australia

Anna Turula, University of Social Sciences, Warsaw, Poland

Levent Uzun, Uludag University, Turkey

Alexandra Santamaría Urbieto, Universidad Internacional de La Rioja, Spain

Karin Vogt, Pädagogische Hochschule Heidelberg, Germany

ABSTRACTING AND INDEXING



ELSEVIER
Scopus



Australian Government
Australian Research Council

www.tewtjournal.org

REVIEWING PROCEDURE

- Each publication is reviewed by at least two external reviewers.
- Since the language of publication is English, at least one reviewer is a native speaker of English.
- At least one reviewer has a different affiliation country than the author.
- The submissions are subject to the double-blind review process.
- Every care is taken so that there is no conflict of interest between the authors and the reviewers.
- The review is made in a written form with a clear conclusion on acceptance or rejection of the submission.
- The reviewing procedure and the reviewer file are published on the Journal's website at <http://www.tewtjournal.org/reviewingprocedure.html>
- The names of reviewers for particular issues are not revealed, instead, once a year, the aggregate list of reviewers for the entire volume is published.

ALL THE SUBMISSIONS SHOULD BE SENT TO

tewtjournal@unic.ac.cy

AND

Jarek Krajka, jarek.krajka@gmail.com

Chris Alexander, alexander.c@unic.ac.cy

VOLUME 22, ISSUE 1

FROM THE EDITORS

Chris Alexander and Jarosław Krajka

1

ANALYZING SOCIAL MEDIA USE IN TEFL VIA THE TECHNOLOGY ACCEPTANCE MODEL IN INDONESIAN HIGHER EDUCATION DURING THE COVID-19 PANDEMIC

3

Amirul Mukminin, Muhaimin Muhaimin, Lantip Diat Prasajo, Khaeruddin Khaeruddin, Akhmad Habibi, Lenny Marzulina and Kasinyo Harto

THE USE OF VLOGGING TO ENHANCE SPEAKING PERFORMANCE OF ESL STUDENTS IN A MALAYSIAN SECONDARY SCHOOL

23

Shoba Andiappan, Goh Hock Seng and Soo Ruey Shing

MOBILE-MEDIATED INTERACTIONAL FEEDBACK (MMIF) EFFECT ON IRANIAN LEARNERS' ACQUISITION OF ENGLISH ARTICLES

40

Thana Hmidani and Narges Zareian

INTEGRATING PROJECT-BASED LEARNING, TASK-BASED LANGUAGE TEACHING APPROACH AND YOUTUBE IN THE ESP CLASS: A STUDY ON STUDENTS' MOTIVATION

62

Manuel Rodríguez-Peñarroja

EFL LEARNERS' ENGAGEMENT AND LEARNING MOTIVATION IN TEAM-BASED MOBILE LANGUAGE LEARNING THROUGH WHATSAPP

82

David Imamyartha, Eka Wahjuningsih, Alifiyah A'yunin, Asih Santihastuti, Mitasari, Dinda Laura Trisna Ayu Fauzie and Ervin Candra Hari Andika

FROM THE EDITORS

by **Chris Alexander and Jarosław Krajka**

University of Nicosia, Cyprus/ Maria Curie-Skłodowska University, Poland

alexander.c @ unic.ac.cy & jarek.krajka @ gmail.com

The Journal of *Teaching English with Technology* (TEwT) strives to be as close as possible to what is considered cutting-edge educational technology suitable for the teaching and learning of English as a second or foreign language. With this pivotal objective in mind, recently, an analysis was undertaken of published TEwT papers with high numbers of reader downloads as part of a move to a new and updated TEwT [site](#), which was launched recently in January 2022. Moreover, the top twenty downloaded papers and the top downloaded three issues by overall downloads on the old site have been made available [here](#) on this new site. Unsurprisingly, topical and contextualised ESOL research focussed strongly on innovative educational technology use appears to resonate the most with our readers. In addition, with regard to the new TEwT site, more features have been added. For instance, all TEwT papers now have laboriously been tagged, and with the use of the ‘search’ field, on the right of the menu bar, it is hoped that paper visibility, searchability and even citability will be improved significantly. There is also a dedicated resource [page](#) for lesson plans now, and please note that as of this year, lesson plans will be published on this resource page rather than in actual issues, which are more academic in nature. Furthermore, a past reviewers’ [page](#) has also been included to document the invaluable support previous academics have given to the Journal over the years. Additionally, to enhance support for aspiring authors, the TEwT submissions’ page is being upgraded with more information on the submission process. Likewise, there is a new quick-reference full issues’ [page](#) for issues from 2016 onwards, and the new site Download Manager has a much more professional ‘look and feel’ to it—click [here](#) to see an example of this new and impressive article link format!

We would like to thank Vlad Kolev of the Technology Enhanced Learning Centre and Panayiotis Toumpas of the Computer Centre at the University of Nicosia for their support of the Editors in this move to the new TEwT web page.

It is in this new and shiny online packaging that we bring to you the best *Teaching English with Technology* can offer, cutting-edge research in technology-enhanced teaching and learning procedures. As usual, a rich mix of interests, contexts, countries and learners makes a new issue a truly inspiring read.

To start with, social media use during the COVID-19 pandemic teaching is investigated in the context of Indonesian higher education by **Amirul Mukminin, Muhaimin Muhaimin, Lantip Diat Prasajo, Khaeruddin Khaeruddin, Akhmad Habibi, Lenny Marzulina** and **Kasinyo Harto**. The authors put to test a valid and reliable model that explains variance to measure factors affecting social media use in TEFL during the COVID-19 pandemic, which, given its consecutive waves (fifth in Poland at the moment!), is bound to be of even greater importance in the near future.

The use of vlogging in enhancing speaking performance of secondary school students has been investigated by **Shoba Andiappan, Goh Hock Seng** and **Soo Ruey Shing** (Malaysia). The quasi-experiment proved statistically significant improvement in students' speaking scores after vlogging-enhanced instruction.

As no issue would be complete without a paper on m-learning, also this month mobile-assisted learning is brought up by **Thana Hmidani** (Turkish Republic of Northern Cyprus) and **Narges Zareian** (Iran). The study entitled "Mobile-Mediated Interactional Feedback (MMIF) Effect on Iranian Learners' Acquisition of English Articles" explored interactional feedback (IF) in a Telegram-mediated environment (MMIF) and compared it with in-class IF to solve the problem of students who were unable to attend classes regularly due to family or schoolwork conditions.

YouTube-based ESP instruction is the context for the next contribution by **Manuel Rodríguez-Peñarroja** (Spain). The study examined the effects of merging of project-based learning sequenced into different communicative tasks on ESP students' motivation, revealing that high mean scores in the motivation subscales studied along with positive correlations between motivation and participants' academic performance.

Finally, a team of Indonesian researchers (**David Imamyartha, Eka Wahjuningsih, Alifiyah A'yunin, Asih Santihastuti, Mitasari, Dinda Laura Trisna Ayu Fauzie** and **Ervin Candra Hari Andika**) portrayed EFL learners' interactivity and motivational dynamics when engaged in team-based mobile learning (TBML) through WhatsApp within the environment of English for Academic Purposes. The findings emphasize the potency of WhatsApp as a learning platform which engages language learners in supportive micro and macro learning environment as the pre-cursor to elevated motivation, self-regulation, and pedagogical rethinking.

We wish you good reading and much health in those troubled times!

ANALYZING SOCIAL MEDIA USE IN TEFL VIA THE TECHNOLOGY ACCEPTANCE MODEL IN INDONESIAN HIGHER EDUCATION DURING THE COVID-19 PANDEMIC

by **Amirul Mukminin**,

Universitas Jambi, Jambi, Indonesia

amirul.mukminin @ unja.ac.id, muhaimin @ unja.ac.id

Muhaimin Muhaimin,

Universitas Padjadjaran, Bandung, Indonesia

muhaimin @ unpad.ac.id

Lantip Diat Prasojo

Universitas Negeri Yogyakarta, Indonesia

lantip @ uny.ac.id

Khaeruddin Khaeruddin, Akhmad Habibi

LPDP Indonesia, Jakarta, Indonesia

khaeruddin.khaeruddin @ uon.edu.au, akhmad.habiibi @ unja.ac.id

Lenny Marzulina and Kasinyo Harto

Universitas Islam Negeri Raden Fatah, Palembang, Indonesia

lennymarzulina_uin @ radenfatah.ac.id, kasinyoharto_uin @ radenfatah.ac.id

Abstract

This survey study utilized an extended Technology Acceptance Model (TAM) to understand factors affecting Social Media Use in Teaching English as a Foreign Language (SMU-TEFL) during the COVID-19 pandemic to help improve the integration of effective and efficient technology with traditional education methods. The initial survey instrument that was used was adapted from prior studies and was validated through content validity, piloted, and distributed to 287 EFL faculty members from ten Indonesian universities. Factor analyses (exploratory and confirmatory) were conducted to purify the instrument. Path analysis through Covariance-Based Structural Equation Modelling (CB-SEM) was used to assess correlations of the hypotheses which were supported by the Pearson correlation coefficient. The findings of the study informed a valid and reliable model that sufficiently explains variance to measure factors affecting SMU-TEFL during the Covid-19 pandemic. Six significant relationships out of eight hypothetical statements were confirmed and elaborated. It is recommended that future research be conducted in order to improve the integration of technology into TEFL courses, especially in pandemic situations.

Keywords: social media; use; Covid-19; TEFL; factor analysis

1. Introduction

Historically, humanity has had to face many different public health crises (Taubenberger et al., 2019). Nevertheless, the new virus which was found to have originated in Wuhan, China (the Corona Virus Disease 2019, COVID-19) has been an unprecedented situation in modern times, with billions of people forced to stay at home or in quarantine. No one could have predicted the level of impact this pandemic would ultimately have on humanity. However, modern technology has made facing the current situation much easier when compared to similar situations in the past.

Governments around the world were not be prepared for the level of disruption caused by COVID-19. In education, schools and universities around the world closed their gates in order to try and slow the spread of the virus, which has inevitably affected the instructional process of billions of students. This unprecedented condition has significantly influenced the lives of teachers and students. The closure of schools has led to an accelerated implementation of distance education through technology. Online technology was the main tool used for governments and other parties, such as the World Health Organization, to communicate their suggestions and policies. From e-marketing to distance learning, technology has had a significant role in supporting the world economy. Technology was also used to maintain a social life during lockdowns. One of the most common technologies used during the pandemic was social media.

Social media has made it easier for users to communicate, interact, and network during the COVID-19 pandemic. In education, social media could improve distance learning experiences by facilitating teaching activities and contributing to the establishment of new learning models (Kompen et al., 2019). Research aimed at exploring the use of social media during a pandemic like COVID-19 is still limited. Therefore, this study was conducted to elaborate on factors affecting the use of social media in higher education. With a representative sample of Indonesian EFL faculty members, the current study aimed at making an empirical examination of a valid and reliable instrument for an extended Technology Acceptance Model (TAM). The study also estimated the direct effects of all constructs based on the TAM for Social Media Use in TEFL (SMU-TEFL) during COVID-19.

2. Literature review

2.1. Social media

Social media is classified as the group of software in the Web 2.0 domain. It is defined as innovative technology that supports social networking through texts, images, audio, and video

(Zanamwe et al., 2013). Social media can be categorized into ten groups of tools, and these tools can be anything from publishing applications to virtual worlds. Social media is also described as web-based applications that facilitate communication with a digital approach (Leonardi et al., 2013). In education, social media has been one of many technologies educators have utilized in establishing new strategies and approaches for instructional purposes. The majority of studies that have been conducted on social media examined how the tools were used individually, such as Facebook (Manca, 2020), Twitter (Tang & Hew, 2017), Instagram (Douglas et al., 2019), and YouTube (Ashidiqi et al., 2019). For example, students in higher education were reported to have improved their performance levels by using social media such as Facebook when compared to their performance using traditional learning methods (Roblyer et al., 2010). In general, researchers from across the world have examined factors affecting social media use in education in different contexts and settings (Table 1). It is important to understand these factors when developing and revising policies regarding social media use throughout educational institutions. The examination of these also helps to understand changes in social media innovation and culture, as well as any academic issues that are a result of these changes. Social media has the potential to be an important tool in promoting the ideas of both students and teachers, which in turn facilitates a better learning process. The productive use of social media in teaching can result in a more dynamic learning environment.

Table 1. Studies on factors affecting social media in education

Sources	Method	Context
(Akçayır, 2017)	Mix method; 658 faculty members; turkey	Faculty use
(Ansari & Khan, 2020)	Survey; 360 university students; India	
(Manu et al., 2021)	Mix method; 338 university students; Ghana	Students' engagement
(Al-Rahmi et al., 2015)	Survey; 323 university students; Malaysia	
(Junco et al., 2011)	Experimental; 125 students; USA	Academic achievement
(Azizi et al., 2019)	Survey; 360 university students; Iran	
(Hamadi et al., 2021)	Survey; 151 university students;	Learning performance

(Badri et al., 2017)	Survey; 32,376 school students; Abu Dhabi	
(Al-Qaysi et al., 2021)	Bibliography; 57 articles	Higher education
(Al-Rahmi et al., 2018)	Survey; 723 university students; Malaysia	

2.2. Social media use in TEFL

In TEFL, previous researchers have highlighted that the use of social media applications such as Facebook, Instagram, YouTube, and Twitter improved language learning (Chen et al., 2011; Compernelle & Abraham, 2009; Habibi et al., 2018; Hsieh et al., 2017; Ibarra, 2018; Mei, 2019; Mondahl & Razmerita, 2014; Triana et al., 2020; Wong et al., 2017). For example, Mei (2019) proposed a valid and reliable framework to measure the effects of an EFL program on preparing pre-service teachers' use of technology, including social media. Triana et al. (2020) disclosed the degree of social media integration among college students informing three important functional findings: text creation, text sharing, and text reproducing. Meanwhile, Hsieh et al. (2017) demonstrated the positive effects of LINE (a social media application) on language learning, which proved to be quite significant. Gender difference was also found to be significant in regard to learning performance with i-Map, with female students outperforming male students (Chen et al., 2011). Ibarra (2018) investigated polytechnic students' positive responses to the use of Facebook in their learning process. The use of social media in EFL classrooms supported language learning by providing collaborative learning opportunities which lead to successful foreign language acquisition (Mondahl & Razmerita, 2014). Another study by Compernelle and Abraham (2009) revealed that integrating blogs into English writing classes can motivate students to write and gives them an opportunity for self-expression.

Even though there have been many studies regarding the integration of social media into the TEFL area, few studies have explored the factors affecting the use of social media for TEFL, especially during a pandemic like COVID-19. Thus, this study utilized an extended TAM to understand these factors.

2.4. Technology Acceptance Model (TAM)

TAM was introduced by Davis (1989), and consists of four core variables: perceived ease of use, perceived usefulness, intention to use, and usage behavior. These core variables were often complemented by certain external variables that were regarded as representations of personal capabilities in certain settings and contexts. These variables are different across cultures and

places, and therefore require an exact definition for each individual study. The definitions of terms which apply to the variables in this study are exhibited in Table 2.

Table 2. The concepts of TAM variables for this research

Variable	Concept
Perceived ease of use	The level to which a faculty member believes that using social media in TEFL during COVID-19 would be easy
Perceived usefulness	The level to which a person believes that a faculty member believes that using social media in TEFL during COVID-19 would enhance work performance
Attitude	A person's certain behavior linked with the use of social media in TEFL during Covid-19
Facilitating condition	The degree to which a person believes that organizational and technical resources exist to support the use of social media in TEFL during Covid-19
SMU-TEFL	Faculty member's social media use in teaching English as a foreign language during Covid-19

3. Methodology

3.1. Conceptual model and hypotheses

This study was conducted from March to July 2020 during the university closure in Indonesia. Co-funded by Universitas Jambi and the Indonesia Endowment Fund for Education (LPDP Indonesia), the current study utilized a survey as the data collection method. The study's proposed model used an extended TAM with a predictive approach. Eight hypotheses of the study's direct relationships were outlined based on the extended TAM (Figure 1); facilitating condition will positively affect the perceived ease of use (H1); facilitating condition will positively affect perceived usefulness (H2); perceived ease of use will positively affect perceived usefulness (H3); perceived usefulness will positively affect attitude (H4); perceived ease of use will positively affect attitude (H5); perceived usefulness will positively affect SMU-TEFL (H6); attitude will positively affect SMU-TEFL (H7); and perceived ease of use will positively affect SMU-TEFL (H8).

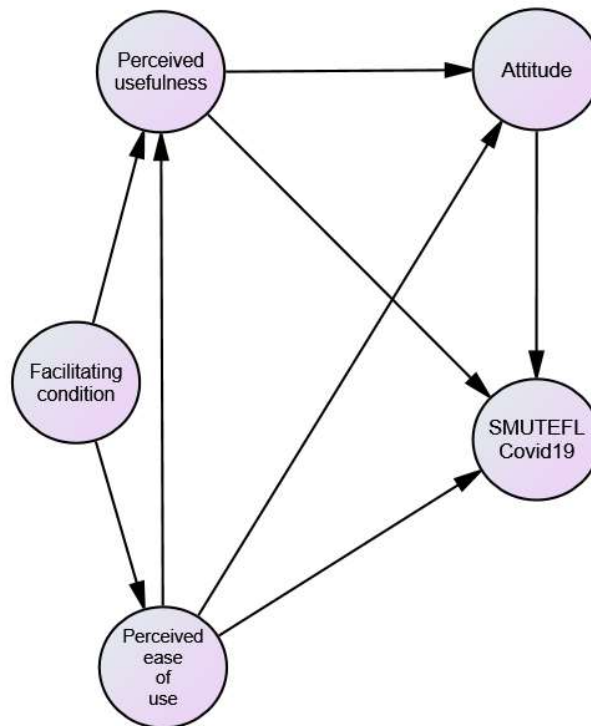


Figure 1. Proposed model

3.2. Instrumentation

At the beginning of the process, the instrument establishment involved a discussion with four educational experts through Zoom; which is an online-based video communication application as part of content validity. The decision to drop some original indicators was taken through an in-depth discussion with the involved experts to meet the context and setting of the population. In this study, responses to the indicators were measured on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The original indicators of TAM for perceived usefulness (4 indicators) and perceived ease of use (4 indicators) were adapted (Davis, 1986). For attitude, three indicators were adapted from the study of Sadaf et al. (2012). The adaptation of Teo et al.'s (2018) work was conducted for facilitating condition (3 indicators). Guided by Habibi et al. (2020a) and Aslan and Zhu (2017), the SMU-TEFL was established with eight indicators. The survey was translated through back-translation strategies from English to Indonesian and vice versa, with assistance from two professional translators. In purifying the instrument to be valid and reliable for the Indonesian setting and context, some statistical approaches were addressed, namely Content Validity Index (CVI), Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA).

The examination of validity and reliability in research is one of the most fundamental steps regarding the establishment and implementation of research instruments for educational,

psychological, or organizational purposes (Roberts & Bilderback, 1980). Validity depicts the decision quality resulting from an assessment. Regarding the validity of educational technology instruments, researchers have explored various statistical analyses that elaborated on both teachers' and students' perceptions (Dasig & Pascua, 2016; Dong et al., 2015; Habibi et al., 2020a). Some steps in examining the validity and reliability of research instruments have been previously addressed, namely content validity and Exploratory Factor Analysis (EFA) (Habibi et al., 2020b), EFA and Confirmatory Factor Analysis (CFA) (Dong et al., 2015), as well as pre-test and post-test design (Dasig & Pascua, 2016). Regarding the TAM, Melas et al. (2011) developed their study through factor analysis for the data validation. Zheng and Li (2020) implemented a measurement model to test the validity and reliability.

3.3. CVI and pilot study

A CVI approach aimed at validating the instruments in an initial stage was used, and involved some experts (Habibi et al., 2020a). Ten experts in the educational technology and policy fields were supposed to assess the instrument. The indicators of the instrument were examined on a 4-point scale with 1 = not relevant/not clear to 4 = very relevant/very clear (Habibi et al., 2020a). Lynn (1986) suggested that the measurements, namely item level (I-CVI) and scale level (S-CVI), should be assessed by informing a value of 3 or 4 scored by the experts. Then the results should be divided by the experts' total number. By involving ten experts, the I-CVI must not be $< .780$. In addition, the S-CVI was the average of agreement = $S-CVI/AVE$. The adequate score for the S-CVI should be $> .800$. One of the eight indicators of SMU-TEFL (Use 8 = $.675$) was dropped due to scoring lower than the cut-off value of I-CVI of $> .780$. After the CVI analysis, a pilot study was conducted with 30 EFL faculty members from an Indonesian university. They were requested to comment on the indicators and note if the indicators were confusing, so that they may be revised. A reliability evaluation through the assessment of Cronbach's alpha was done, and no scores of alpha below $.700$ were evaluated (Pallant, 2005).

3.4. Data collection

After the CVI and pilot study processes were complete, the instrument was shared with respondents through a simple random sampling technique. An online-based instrument was shared with EFL faculty members at ten Indonesian universities, five public and five private institutions. Two hundred and eighty-seven responses were recorded (Table 3). There were 41 (14.29%) male respondents and 246 (85.71%) females. One hundred and fifty-eight (56.10%) respondents worked for public universities, while 126 (43.90%) respondents worked for private

universities. Teaching experience varied amongst the respondents, with 59 (20.56%) respondents having below five years of teaching experience and 228 (79.44%) respondents with above five years of teaching experience. We referred to the working experience category of Al-Eyd et al. (2018); with novice teachers being defined as having less than five years of teaching experience and experienced teachers with more than five years of experience.

Table 3. Demographic information

Information	Frequency	Percentage
Gender		
Male	41	14.29
Female	246	85.71
Institution ownership		
Public	161	56.10
Private	126	43.90
Teaching experience		
< 5 years	59	20.56
> 5 years	228	79.44

3.5. Data analysis

The normality assessment of the data was conducted by calculating the values of Skewness (-1 to +1) and Kurtosis (-2 to +2). In addition to the normality assessment, multicollinearity issue was also reported. This emerges in correlation matrixes with correlations of $> .900$ (Prasojo et al., 2020). Overall descriptive statistics were also presented before the data was computed for the EFA.

The main statistical examination of the current study was elaborated through EFA and CFA for the assessment of the data factor analysis. Additionally, CB-SEM was done to report direct relationships among the variables as well as the fit model (Hair et al., 2010). Because the instrument was adapted from previous studies in English, the EFA was addressed to achieve new factors from the population characteristics in the Indonesian language (Zainudin, 2012). With the EFA approach, a principal component analysis procedure was utilized to calculate unrelated linear groups towards observed factors with some statistical requirements, namely Kaiser Meyer Olkin, Bartlett's Test of Sphericity, eigenvalue, communality, and factor loading. The Kaiser Meyer Olkin values should be higher than .500. Bartlett's Test of Sphericity should be significant at $p < .05$. Eigenvalue should be greater than 1.0 and a communality of $< .300$ should also be

eliminated. The loading value should be more than .400 when confirming a satisfactory factor for the questionnaire (Hair et al., 2010).

Following the EFA, the CFA approach was processed through some indices in confirming the EFA results. The computation of Chi-Square Test (χ^2), the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square of Residual (SRMR), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI) should be confirmed and informed (Prasojo et al., 2020). In achieving a fit model, the threshold values offered by Hair et al., (2010) were applied; RMSEA = \leq .080, SRMR = \leq .080, TLI = \geq .900, and CFI = \geq .900 (Hair et al., 2010; Kline, 2015).

For CB-SEM, some cut-off values in the CFA were also applied for the assessment of the final model; RMSEA = \leq .080, SRMR = \leq .08, TLI = \geq .900, and the CFI = \geq .900. The path coefficient and p-value are informed in detail for the final report of the relationships among the hypothetical variables (Hair et al., 2010; Kline, 2015; Zainudin, 2012). In supporting the path analysis, a correlational analysis using the Pearson correlation coefficient was addressed. Using Evans' (1996) guideline, the value of r guideline was set at 00-.19 for very weak, .20-.39 for weak; .40-.59 for moderate, .60-.70 for strong, and .80-1 for very strong.

4. Results

4.1. Normality of the data

The Skewness and Kurtosis value of each construct was satisfactory (Table 4). The Skewness values ranged from -.365 to -.111 and the Kurtosis values between -.332 and 1.494. For the multicollinearity, initial inter-correlations process with Pearson correlation coefficient amongst the constructs ranged from .326 to .555 or less than .900. As a result, the discriminant validity of the variables was achieved (Hair et al., 2010). The average mean of perceived usefulness was ($M = 3.759$; $SD = .492$), perceived ease of use ($M = 3.842$; $SD = .760$), attitude ($M = 3.767$; $SD = .646$), facilitating condition ($M = 3.457$; $SD = .725$), and SMU-TEFL ($M = 3.813$; $SD = .797$).

Table 4. Skewness, Kurtosis, M, and SD

	Skewness	Kurtosis	Scale items	M	SD
Perceived usefulness	-.157	1.050	PU1	3.753	0.652
			PU2	3.861	0.670
			PU3	3.732	0.643

			PU4	3.690	0.737
Perceived ease of use	-.196	-.316	PEOU1	3.899	0.762
			PEOU2	3.812	0.743
			PEOU3	3.742	0.791
			PEOU4	3.913	0.745
Attitude	-.275	1.012	AT1	3.645	0.679
			AT2	3.655	0.645
			AT3	3.732	0.615
Facilitating condition	-.111	1.494	FC1	3.495	0.770
			FC2	3.300	0.705
			FC3	3.575	0.700
SMU-TEFL	-.365	.332	USE1	3.951	0.796
			USE2	3.728	0.773
			USE3	3.927	0.779
			USE4	4.070	0.735
			USE5	3.690	0.847
			USE6	3.627	0.817
			USE7	3.697	0.833

4.2. Exploratory factor analysis (EFA)

Table 5 presents the cross-loading, communality, and eigenvalue of the data. The Kaiser Meyer Olkin value of the data was satisfactory (.850), and Bartlett's Test of Sphericity was 1265.862 ($p < .01$). Through Varimax rotation, five factors (perceived usefulness, perceived ease of use, attitude, facilitating condition, SMU-TEFL) that are identical with the seminal theory of the TAM; the eigenvalues ranged from 1.028 to 7.024. Communality values were satisfactory, ranging from .441-.825. Two indicators (Use5 and Use7) were dropped from the scale because the cross-loading values were identified.

Table 5. EFA results

Factor	Item	Component					Communality	Eigenvalue
		1	2	3	4	5		
SMU-TEFL	Use3	.851					.832	7.024
	Use2	.774					.713	
	Use4	.771					.712	
	Use1	.626					.560	
	Use6	.483					.441	

Perceived usefulness	PU4	.787	.692	2.180
	PU3	.782	.640	
	PU2	.698	.684	
	PU1	.672	.669	
Perceived ease of use	PEOU4	.781	.716	1.721
	PEOU2	.767	.735	
	PEOU1	.711	.726	
	PEOU3	.662	.629	
Facilitating condition	FC3	.847	.814	1.369
	FC1	.830	.825	
	FC2	.773	.672	
Attitude	AT3		.859	1.028
	AT2		.845	
	AT1		.731	

4.3. Confirmatory factor analysis (CFA)

By calculating different data samples, CFA was done in an attempt to verify the results of EFA (Hair et al., 2010). The initial or first measurement model did not obtain fit indices. The TLI score was .887, which means it did not meet the threshold value of $> .900$. Therefore, we dropped one indicator (Use 6) due to the issue of a low loading value. A covariance was drawn with a headed arrow between PEOU3 and PEOU4 due to a high value of the modification indices between both. As a result, the second computation on the CFA achieved good fit indices (CFA; $\chi^2 = 292.459$, $\chi^2/df = 2.359.190$, RMSEA = .069, SRMR = .029, TLI = $\geq .916$, and the CFI = .932). Cronbach's alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) were computed for the reliability assessment. Values of .600 - .700 are satisfactory for Cronbach's alpha. Meanwhile, CR should be above .600, and AVE should be above .500. Table 6 informs that the instrument is valid and reliable since all values exceed the cut-off points.

Table 6: CFA results

Variable	Indicators	loadings	CR	AVE	α
Perceived usefulness	PU1	.820	.821	.730	.814
	PU2	.690			
	PU3	.700			
	PU4	.710			
Perceived ease of use	PEOU1	.740	.820	.727	.825
	PEOU2	.850			
	PEOU3	.640			

	PEOU4	.680			
Attitude	AT1	.820	.831	.786	.841
	AT2	.680			
	AT3	.860			
Facilitating condition	FC1	.880	.837	.793	.829
	FC2	.750			
	FC3	.750			
SMU-TEFL	USE1	.690	.825	.735	.824
	USE2	.700			
	USE3	.820			
	USE4	.730			

4.4. Pearson correlation coefficient and CB-SEM results

The findings of the study for the correlational analysis through the Pearson correlation coefficient reported that all relationships were significant. The highest coefficient was between perceived usefulness and perceived ease ($r = .555, p < .01$) while the lowest relationship was between perceived usefulness and facilitating condition which was significant and weak ($r = .326, p < .01$). Table 7 informs all relationships among variables.

Table 7. Pearson correlation results

	Perceived usefulness	Perceived ease of use	Facilitating condition	Attitude	SMU-TEFL
Perceived usefulness	1	.555**	.326**	.470**	.479**
Perceived ease of use	.555**	1	.382**	.373**	.543**
Facilitating condition	.326**	.382**	1	.444**	.413**
Attitude	.470**	.373**	.444**	1	.375**
SMU-TEFL	.479**	.543**	.413**	.375**	1

** . Correlation is significant at the 0.01 level (2-tailed).

The computation results of the path analysis through CB-SEM inform that the structural model of the study was in a good model fit; $\chi^2 = 328.892, \chi^2/df = 2.610, RMSEA = 0.071, SRMR = \leq .036, TLI = .901$ and $CFI = .918$. All loading values were in the range from .640 to .880, surpassing the standard of .500 suggested by Zainudin (2012). The hypothetical structural information for the finalized model indicated some correlations among hypothesized factors of SMU-TEFL for the context of Indonesian EFL faculty members' use of social media in teaching

during COVID-19. The final model can be utilized as a reference whether to agree or debate the previous research on variance explanation to measure factors that affect the social media integration in teaching.

Adapting the TAM, there were no indirect relationships found in this study. Therefore, eight hypotheses were included and six of them were found to be supported by the findings of the study (Table 8 and Figure 2). Hypothesis (H1) was supported since facilitating condition was found to be significant in affecting perceived ease of use ($\beta = .474$; $p < .001$). H2 was also confirmed where facilitating condition positively affected perceived usefulness ($\beta = .155$; $p < .05$). Perceived ease of use significantly influenced perceived usefulness, supporting H3, ($\beta = .539$; $p < .001$). For H4, perceived usefulness had a strong effect on attitude ($\beta = .604$; $p < .001$). In affecting SMU-TEFL, perceived ease of use, H8, was a stronger factor ($\beta = .493$; $p < .001$) than perceived usefulness, H6 ($\beta = .252$; $p < .05$). On the other hand, two insignificant correlations (H5 and H7) were informed. Perceived ease of use was insignificant in relation to its effect on attitude ($\beta = .130$; $p = .185$), and attitude was insignificant on its affect SMU-TEFL ($\beta = .073$; $p = .268$).

Table 8. CB-SEM Results

				β	S.E.	C.R.	p	Label
H1	Facilitating condition	→	Perceived ease of use	.474	.070	6.741	$p < .001$	Significant
H2	Facilitating condition	→	Perceived usefulness	.155	.066	2.357	$p < .05$	Significant
H3	Perceived ease of use	→	Perceived usefulness	.539	.077	6.959	$p < .001$	Significant
H4	Perceived usefulness	→	Attitude	.604	.110	5.479	$p < .001$	Significant
H5	Perceived ease of use	→	Attitude	.130	.098	1.325	.185	Insignificant
H6	Perceived usefulness	→	SMU-TEFL	.252	.100	2.528	$p < .05$	Significant
H7	Attitude	→	SMU-TEFL	.073	.066	1.108	.268	Insignificant
H8	Perceived ease of use	→	SMU-TEFL	.493	.091	5.409	$p < .001$	Significant

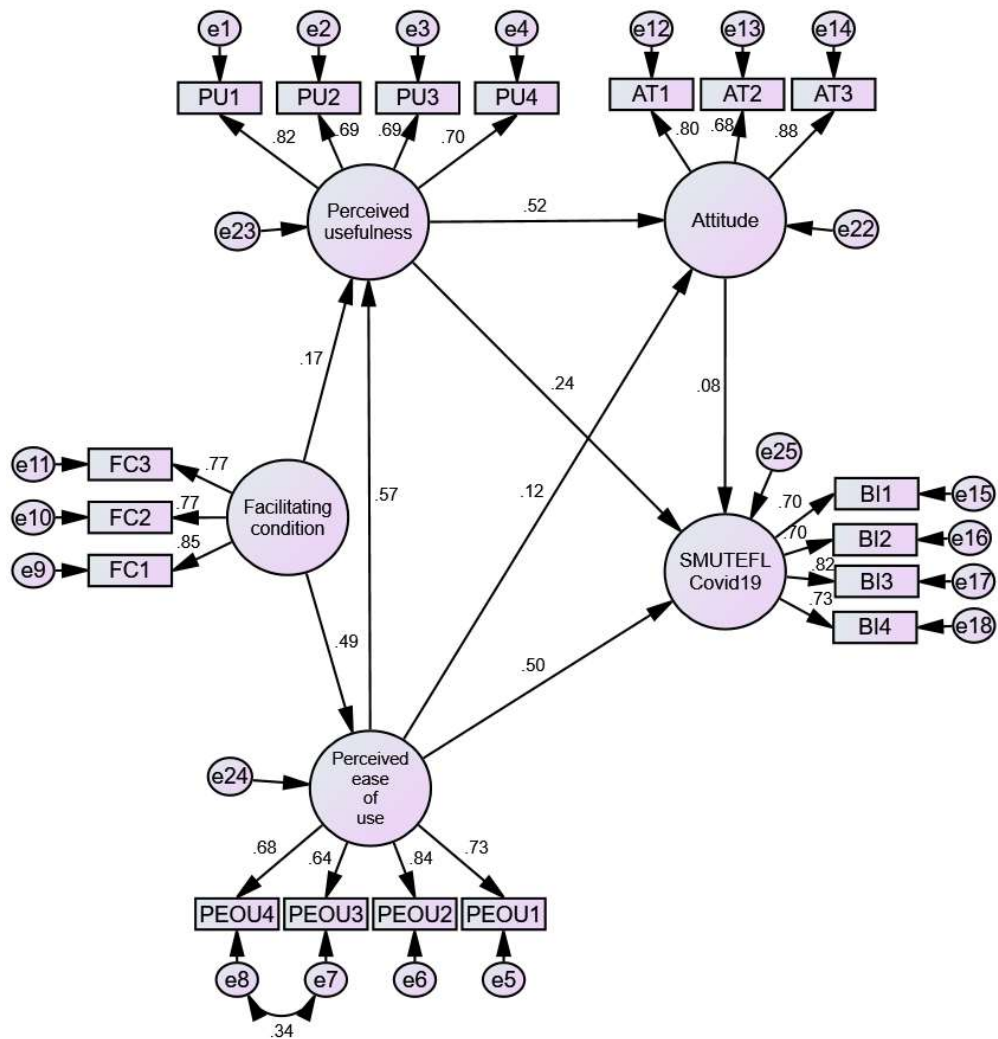


Figure 2. Final model

5. Discussion

Besides examining the relationship of the proposed hypotheses, this study was aimed at developing and validating the SMU-TEFL scale to understand factors affecting SMU-TEFL during COVID-19. The final-measured scale has been proceeded through EFA and CFA. The EFA procedure is a method used to inform unidentified factors of a proposed model in academic research. The EFA process for instrument development in educational technology integration has also been utilized by other studies (Habibi et al., 2020b; Dong et al., 2015). Meanwhile, CFA is an important tool in confirming the measurement model of the proposed model; which is a guideline to measure for factors affecting the use of social media in TEFL. This can be used to improve online-based technology . Similar procedures of CFA have been addressed by previous

sources (Dong et al., 2015; Habibi et al., 2020b; Melas et al., 2011). A total of 18 indicators on the scale showed proper psychometric properties. This can provide future studies with an academic reference to study TEFL faculty members' social media integration during pandemics like Covid-19.

In this study, the TAM was successfully extended to the model fit for CB-SEM by adding one external factor (facilitating condition) which was relevant to social media integration during the Covid-19 pandemic in Indonesia. The path process through the CB-SEM informed that the validated model is suitable for the context and setting of Indonesian TEFL; however, it might also suit other contexts and settings. It was revealed that perceived usefulness and perceived ease of use were strong predictors for the SMU-TEFL during the Covid-19 pandemic. According to the results, when social media is beneficial and user-friendly, Indonesian EFL faculty members will prefer integrating it with their teaching methods during a pandemic. Even though the current situation is much different than normal conditions, several previous studies that have highlighted similar results (e.g., Buabeng-Andoh et al., 2019; Rejón-Guardia et al., 2019; Teo et al., 2018) strengthen this finding. Attitudes towards social media were influenced by perceived usefulness. This indicates that the benefits of social media can influence the respondents' behavior towards the use of social media in TEFL courses during the Covid-19 pandemic. Prior research in normal teaching and learning conditions also found similar results (Buabeng-Andoh et al., 2019; Teo et al., 2018). Hypotheses (H1 and H2) were also corroborated by the findings of this study, which confirmed that facilitating condition significantly influenced perceived ease of use and perceived usefulness. Similar results were also revealed by Habibi et al. (2018) and Nikou and Ecomides (2019), who show that conditions or beliefs that support the use of social media in TEFL during the COVID-19 pandemic are key predictors of perceived ease of use and perceived usefulness. The last relationship found to be positively significant was between perceived ease of use and perceived usefulness ($\beta = .539$; $p < .001$). This proves that beliefs in the benefits of using social media in TEFL during the Covid-19 pandemic were driven by their ease of use in teaching. On the other hand, two insignificant relationships were revealed between perceived ease of use and attitude as well as between attitude and SMU-TEFL. In contrast, previous studies revealed that these two relationships were significant (Buabeng-Andoh et al., 2019; Habibi et al., 2018; Lai et al., 2012; Teo et al., 2018).

6. Conclusion

In the current situation of the COVID-19 pandemic, the use of technology to support the teaching and learning process is unavoidable. Therefore, the promotion of the effective use of technology

like social media should always be considered for various contexts during a pandemic. Due to the closure of many educational institutions, the use of social media is expected to provide advantages for both teachers and students. In order to conduct further in-depth studies regarding this situation, a valid and reliable instrument to measure the integration of technology for distance learning should be developed. This study provides a new framework for future studies to follow in order to examine the integration of technology in education during a pandemic. Based on the TAM, eight hypotheses were proposed in this study, and six of them were supported. The development of a scale involved phases such as EFA and CFA, in order to produce one that was valid and reliable.

Through the procedures of CB-SEM in SPSS, the findings inform related stakeholders, mainly EFL faculty members in developing countries, on how to better prepare themselves with the effective use of technology during similar kinds of pandemics in the future. Providing the faculty members with adequate facilities to support distance learning is very important. Motivating them to learn the use of social media as an efficient and effective tool in teaching is similarly important. In this study, EFL faculty members were the respondents. In future studies, faculty members from many different fields should also be considered as research samples. Students' perception is similarly important. Differences among varying demographics, such as access to technology during school closures, should also be considered for future research.

Acknowledgment

This research was fully funded by the Indonesian Ministry of Research and Technology / National Agency for Research and Innovation, No. B/87/E3/RA.00/2020. We would also thank LPDP Indonesia for the involvement of its two scholarship awardees.

References

- Akçayır, G. (2017). Why do faculty members use or not use social networking sites for education? *Computers in Human Behavior*, 71, 378-385. <https://doi.org/10.1016/j.chb.2017.02.028>
- Al-Eyd, G., Achike, F., Agarwal, M., Atamna, H., Atapattu, D. N., Castro, L., Estrada, J., Ettarh, R., Hassan, S., Lakhani, S. E., Nausheen, F., Seki, T., Stegeman, M., Suskind, R., Velji, A., Yakub, M., & Tenore, A. (2018). Curriculum mapping as a tool to facilitate curriculum development: A new School of Medicine experience. *BMC Medical Education*, 18(1), 185. <https://doi.org/10.1186/s12909-018-1289-9>
- Al-Qaysi, N., Mohamad-Nordin, N., & Al-Emran, M. (2021). Factors affecting the adoption of social media in higher education: A Systematic review of the technology acceptance model. *Studies in Systems, Decision and Control*, 295, 571-584. https://doi.org/10.1007/978-3-030-47411-9_31
- Al-Rahmi, W. M., Alias, N., Othman, M. S., Marin, V. I., & Tur, G. (2018). A model of factors affecting learning performance through the use of social media in Malaysian higher education. *Computers and Education*, 121, 59-72. <https://doi.org/10.1016/j.compedu.2018.02.010>

- Al-Rahmi, W. M., Othman, M. S., Yusof, L. M., & Musa, M. A. (2015). Using social media as a tool for improving academic performance through collaborative learning in Malaysian higher education. *Review of European Studies*, 7(3), 265-275. <https://doi.org/10.5539/res.v7n3p265>
- Alkahtani, S. A. (2011). EFL female faculty members' beliefs about CALL use and integration in EFL instruction: The case of Saudi higher education. *Journal of King Saud University - Languages and Translation*, 23(2), 87-98. <https://doi.org/10.1016/j.jksult.2011.04.004>
- Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*, 7(1), 1-16. <https://doi.org/10.1186/s40561-020-00118-7>
- Aslan, A., & Zhu, C. (2017). Investigating variables predicting Turkish pre-service teachers' integration of ICT into teaching practices. *British Journal of Educational Technology*, 48(2), 552-570. <https://doi.org/10.1111/bjet.12437>
- Azizi, S. M., Soroush, A., & Khatony, A. (2019). The relationship between social networking addiction and academic performance in Iranian students of medical sciences: A cross-sectional study. *BMC Psychology*, 7(1), 1-8. <https://doi.org/10.1186/s40359-019-0305-0>
- Badri, M., Nuaimi, A. Al, Guang, Y., & Rashedi, A. Al. (2017). School performance, social networking effects, and learning of school children: Evidence of reciprocal relationships in Abu Dhabi. *Telematics and Informatics*, 34(8), 1433-1444. <https://doi.org/10.1016/j.tele.2017.06.006>
- Buabeng-Andoh, C., Yaokumah, W., & Tarhini, A. (2019). Investigating students' intentions to use ICT: A comparison of theoretical models. *Education and Information Technologies*, 24(1), 643-660. <https://doi.org/10.1007/s10639-018-9796-1>
- Chen, H. R., Hwang, J. P., Wu, T. T., Huang, Y. M., & Hsueh, H. T. (2011). Assessment of implementing a digital game-based learning system over Facebook. *Proceedings of the 2011 11th IEEE International Conference on Advanced Learning Technologies, ICALT 2011*. <https://doi.org/10.1109/ICALT.2011.191>
- Chen Hsieh, J. S., Wu, W. C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, 30, 1-21. <https://doi.org/10.1080/09588221.2015.1111910>
- Compernelle, R. A. van, & Abraham, L. B. (2009). Interactional and discursive features of English-language weblogs for language learning and teaching. *Electronic Discourse in Language Learning and Language Teaching*, 25, 193-212. <https://doi.org/10.1075/llt.25.15com>
- Dasig, D. D., & Pascua, S. M. (2016). Effects of digital learning objects in teaching realtime system. *Site*, 2013, 1488-1498.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319-339. <https://doi.org/10.2307/249008>
- Dong, Y., Chai, C. S., Sang, G. Y., Koh, J. H. L., & Tsai, C. C. (2015). Exploring the profiles and interplays of pre-service and in-service teachers' technological pedagogical content knowledge (TPACK) in China. *Educational Technology and Society*, 18(1), 158-169.
- Douglas, N. K. M., Scholz, M., Myers, M. A., Rae, S. M., Elmansouri, A., Hall, S., & Border, S. (2019). Reviewing the role of Instagram in education: Can a photo sharing application deliver benefits to medical and dental anatomy education? *Medical Science Educator*, 29(4). <https://doi.org/10.1007/s40670-019-00767-5>
- Ibarra, F. D. (2018). Is Facebook beneficial for writing practice? Ecuadorian polytechnic students speak up! *Teaching English with Technology*, 18(3), 3-17.

- Habibi, A., Yusop, F. D., & Razak, R. A. (2020a). The dataset for validation of factors affecting pre-service teachers' use of ICT during teaching practices: Indonesian context. *Data in Brief*, 28, 1-7. <https://doi.org/10.1016/j.dib.2019.104875>
- Habibi, A., Mukminin, A., Riyanto, Y., Prasojo, L. D., Sulistiyo, U., Sofwan, M., & Saudagar, F. (2018). Building an online community: Student teachers' perceptions on the advantages of using social networking services in a teacher education program. *Turkish Online Journal of Distance Education*, 19(1), 46-61. <https://doi.org/10.17718/tojde.382663>
- Habibi, A., Yusop, F. D., & Razak, R. A. (2020b). The role of TPACK in affecting pre-service language teachers' ICT integration during teaching practices: Indonesian context. *Education and Information Technologies*, 25(3), 1929-1949. <https://doi.org/10.1007/s10639-019-10040-2>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis: International version* (7th ed.). Upper Saddle River, NJ: Pearson Education.
- Halek, M., Holle, D., & Bartholomeyczik, S. (2017). Development and evaluation of the content validity, practicability and feasibility of the Innovative dementia-oriented Assessment system for challenging behaviour in residents with dementia. *BMC Health Services Research*, 17(1), 554. <https://doi.org/10.1186/s12913-017-2469-8>
- Hamadi, M., El-Den, J., Azam, S., & Srritanaviriyakul, N. (2021). Integrating social media as cooperative learning tool in higher education classrooms: An empirical study. *Journal of King Saud University - Computer and Information Sciences*, in press. <https://doi.org/10.1016/j.jksuci.2020.12.007>
- Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27(2), 119-132. <https://doi.org/10.1111/j.1365-2729.2010.00387.x>
- Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling* (4th ed.). New York: Guilford Publications.
- Lai, C., Wang, Q., & Lei, J. (2012). What factors predict undergraduate students' use of technology for learning? A case from Hong Kong. *Computers and Education*, 59(2), 569-579. <https://doi.org/10.1016/j.compedu.2012.03.006>
- Larosiliere, G. D., McHaney, R., & Kobelsky, K. (2016). The effects of it management on technology process integration. *Journal of Computer Information Systems*, 56(4), 341-351. <https://doi.org/10.1080/08874417.2016.1164494>
- Leonardi, P. M., Huysman, M., & Steinfield, C. (2013). Enterprise social media: Definition, history, and prospects for the study of social technologies in organizations. *Journal of Computer-Mediated Communication*, 19(1), 1-19. <https://doi.org/10.1111/jcc4.12029>
- Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), 382-386. <https://doi.org/10.1097/00006199-198611000-00017>
- Manca, S. (2020). Snapping, pinning, liking or texting: Investigating social media in higher education beyond Facebook. *Internet and Higher Education*, 44. <https://doi.org/10.1016/j.iheduc.2019.100707>
- Manu, B. D., Ying, F., Oduro, D., & Boateng, S. A. (2021). Student engagement and social media in tertiary education: The perception and experience from the Ghanaian public university. *Social Sciences & Humanities Open*, 3(1), 1-12.
- Mondahl, M., & Razmerita, L. (2014). Social media, collaboration and social learning - A case-study of foreign

- language learning. *Electronic Journal of E-Learning*, 12(4), 339-352.
- Mei, B. (2019). Preparing preservice EFL teachers for CALL normalisation: A technology acceptance perspective. *System*, 83, 13-24. <https://doi.org/10.1016/j.system.2019.02.011>
- Melas, C. D., Zampetakis, L. A., Dimopoulou, A., & Moustakis, V. (2011). Modeling the acceptance of clinical information systems among hospital medical staff: An extended TAM model. *Journal of Biomedical Informatics*, 44(4), 553-564. <https://doi.org/10.1016/j.jbi.2011.01.009>
- Muhaimin, Habibi, A., Mukminin, A., Pratama, R., Asrial, & Harja, H. (2019). Predicting factors affecting intention to use Web 2.0 in learning: Evidence from science education. *Journal of Baltic Science Education*, 18(4), 595-606. <https://doi.org/10.33225/jbse/19.18.595>
- Ashidiqi, M. N. A., Rohmatiah, A., & Rahmah, F. A. (2019). Youtube free quran education as a source of Islamic education learning materials and media. *Khalifa: Journal of Islamic Education*, 3(2), 126-141.
- Nikou, S. A., & Economides, A. A. (2019). Factors that influence behavioral intention to use mobile-based assessment: A STEM teachers' perspective. *British Journal of Educational Technology*, 50(2), 587-600. <https://doi.org/10.1111/bjet.12609>
- Pallant, J. (2005) *SPSS Survival guide: A Step by Step Guide to Data Analysis Using SPSS for Windows* (3rd Ed.). New York: Open University Press.
- Polit, D. F., & Beck, C. T. (2009). International gender bias in nursing research, 2005-2006: A quantitative content analysis. *International Journal of Nursing Studies*, 46(8), 1102-1110. <https://doi.org/10.1016/j.ijnurstu.2009.02.002>
- Prasojo, L. D., Mukminin, A., Habibi, A., Marzulina, L., Sirozi, M., & Harto, K. (2018). Learning to teach in a digital age: ICT integration and EFL student teachers' teaching practices. *Teaching English with Technology*, 18(3), 18-32.
- Rejón-Guardia, F., Polo-Peña, A. I., & Maraver-Tarifa, G. (2020). The acceptance of a personal learning environment based on Google apps: the role of subjective norms and social image. *Journal of Computing in Higher Education*, 32(2), 203-233. <https://doi.org/10.1007/s12528-019-09206-1>
- Roberts, D. M., & Bilderback, E. W. (1980). Reliability and validity of a statistics attitude survey. *Educational and Psychological Measurement*, 40(1). <https://doi.org/10.1177/001316448004000138>
- Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. V. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *Internet and Higher Education*, 13(3), 134-140. <https://doi.org/10.1016/j.iheduc.2010.03.002>
- Sadaf, A., Newby, T. J., & Ertmer, P. A. (2012). Exploring factors that predict preservice teachers' intentions to use web 2.0 technologies using decomposed theory of planned behavior. *Journal of Research on Technology in Education*, 45(2), 171-196. <https://doi.org/10.1080/15391523.2012.10782602>
- Tang, Y., & Hew, K. F. (2017). Using Twitter for education: Beneficial or simply a waste of time? *Computers and Education*, 106, 97-118. <https://doi.org/10.1016/j.compedu.2016.12.004>
- Taubenberger, J. K., Kash, J. C., & Morens, D. M. (2019). The 1918 influenza pandemic: 100 years of questions answered and unanswered. *Science Translational Medicine*, 11(502), 5485. <https://doi.org/10.1126/scitranslmed.aau5485>
- Teo, T., Sang, G., Mei, B., & Hoi, C. K. W. (2019). Investigating pre-service teachers' acceptance of Web 2.0 technologies in their future teaching: a Chinese perspective. *Interactive Learning Environments*, 27(4), 530-

546. <https://doi.org/10.1080/10494820.2018.1489290>
- Torres Kompen, R., Edirisingha, P., Canaleta, X., Alsina, M., & Monguet, J. M. (2019). Personal learning Environments based on Web 2.0 services in higher education. *Telematics and Informatics*, 38, 194-206. <https://doi.org/10.1016/j.tele.2018.10.003>
- Triana, H. W., Wirman, E. P., Kustati, M., Reflinaldi, Rahmi, A., & Nelmawarni. (2020). Social practice on facebook: Critical discourse analysis in the process of text production. *Studies in English Language and Education*, 7(1), 1-21. <https://doi.org/10.24815/siele.v7i1.15170>
- Wong, L. H., Chai, C. S., & Aw, G. P. (2017). Seamless language learning: Second language learning with social media. *Comunicar*, 25(50), 9-21. <https://doi.org/10.3916/C50-2017-01>
- Zainudin, A. (2012). *A Handbook on SEM (Structural Equation Modeling) Using AMOS*. Shah Alam, Malaysia: Universiti Teknologi MARA Press.
- Zanamwe, N., Rupere, T., & Kufandirimbwa, O. (2013). Use of social networking technologies in higher education in Zimbabwe: A learners' perspective. *International Journal of Computer and Information Technology*, 2(1), 0746.
- Zheng, J., & Li, S. (2020). What drives students' intention to use tablet computers: An extended technology acceptance model. *International Journal of Educational Research*, 102, 101612. <https://doi.org/10.1016/j.ijer.2020.101612>

THE USE OF VLOGGING TO ENHANCE SPEAKING PERFORMANCE OF ESL STUDENTS IN A MALAYSIAN SECONDARY SCHOOL

by **Shoba Andiappan**

SMK Tinggi Setapak, 53200 Kuala Lumpur, WP Kuala Lumpur, Malaysia

Shoba_andiappan @ yahoo.com

Goh Hock Seng (Corresponding author)

Universiti Pendidikan Sultan Idris, 35900 Tanjong Malim, Perak, Malaysia

goh.hs @ fbk.upsi.edu.my

and **Soo Ruey Shing**

Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia

rssoo @ unimas.my

Abstract

This study investigates the effect of a vlogging project on Malaysian ESL students' speaking performance in a secondary school. Additionally, the students' experience and perception of making and using vlogs in their language learning were also investigated. To this end, a mixed-methods approach was adopted and the data was collected from 73 participants. A quasi-experiment was conducted to determine the effect of the vlogging project while a questionnaire and a retrospective self-report were utilised to obtain the participants' views pertaining to their experience in creating vlogs. The findings indicate statistically significant improvement in the ESL students' speaking scores. Additionally, the participants viewed the vlogging project positively and perceived it as a student-friendly learning tool which can also promote self-evaluation and function as a source of motivation. Drawing on the findings, ESL teachers should consider the pedagogical benefits of vlogs and incorporate them as an instructional technique in the language classrooms. This study indicates that the use of vlogs warrants further research in order to inform the feasibility and pedagogical impact of using vlogs to enhance students' speaking skills.

Keywords: video-based blogs (vlogs); asynchronous computer-mediated communication; out-of-class learning; ESL students; speaking

1. Introduction

Speaking has been widely recognized as a vital language skill and has received vast attention in English as a second language (ESL) research. Despite the focus and importance placed on the teaching of speaking across various educational contexts, it remains as one of the most challenging language skills to both ESL learners and teachers.

For some learners, speaking is often a challenging skill because it requires heavy cognitive processing. Bygate (2006) noted that in order to successfully and meaningfully communicate in a second language (L2), learners are required to employ a complex cocktail of elements comprising linguistic, non-linguistic and contextual para-linguistic features which all make speaking a difficult skill to ESL learners. Therefore, it is imperative for ESL teachers to devise activities that will help learners to automatize the aforementioned cognitive processes. Furthermore, speaking in a second language is particularly challenging for learners who speak more than one language due to native-language-interference related anxiety (Nurul Lina, 2010). L2 learners, especially those at the beginner-levels, often lack the confidence to converse in the target language due to possible first language interference and their lack of proficiency. Besides, they are also afraid of being judged for their mistakes. As such, teachers need to create an innovative and conducive environment which would encourage learners to speak confidently despite interference from their native language.

As for teachers, the challenge of teaching speaking to L2 learners could be attributed to a few pedagogical reasons. First, there is limited contact time for students to practise L2 speaking (Song, 2009). Based on the Malaysian syllabus, English language lessons constitute less than 3 hours per week. Teachers are expected to teach all the language skills, grammar and literature component within this limited contact time. As a result, students lack opportunities to practise L2 speaking. Second, large class size is often an obstacle in providing sufficient opportunities for individual students to practise speaking in class. Having many students in a class would understandably restrict the quantity and quality of teacher-student and student-student interactions, and thus students have to compete with their peers to get a chance to practise speaking (Chen, 2011; Huang, 2015; Sun, 2009). This issue highlights the need to create more individualized speaking opportunities for learners. The third most prominent challenge in the teaching of speaking is the dominance of drill-based pedagogies in some contexts that are often exam-oriented and tailored to improve students' written English proficiency rather than speaking (Hsu, 2016).

One way to overcome the aforementioned limitations is to create opportunities for students to increase their speaking time outside the classroom. However, a significant obstacle to this approach is that many ESL students lack the social support, for instance, a circle of peers who can engage in English language conversations with them. Fortunately, the development of Web 2.0 technologies seems to potentially fulfil the need for out-of-class speaking opportunity. The combination of computer-mediated communication (CMC), one of the affordances that Web 2.0 technologies have generated, and affordable video-recording gadgets enables learners

to communicate with one another using innovative tools and applications. One such tool which has the potential to facilitate speaking practice is “vlogging”, which is “a portmanteau of the words video and blog (blog is itself a portmanteau of web and log)” (Watkins, 2012, p. 197).

The advancement of Web 2.0 technologies allows internet users to transform from individuals who passively consume content to contributors who can actively produce and provide content (Price, 2007). This implies that the use of vlogs could also encourage individuals to take part in CMC using their second language (L2) or any foreign language because they could actively communicate with an online community. As Moon and Lim (2013) assert, blogs are, among the many innovative tools, “best received in the field of education in general and foreign language education” due to their unique characteristics (p. 122). They are used by Internet-users to express their opinions and disseminate information. As a video equivalent of blogs, vlogs could be beneficial tools for speaking practice as they can be employed to increase out-of-class speaking opportunities and compensate for the limited contact time and speaking practice in class.

Although there is a growing body of research analysing the use of vlogs in language learning, most studies are explanatory in nature, in that they focus mostly on learners’ perceptions of integrating vlogs into language learning. Additionally, the existing literature in the field of English language teaching has not extensively examined the actual impact of vlogs on learners’ spoken language performance. Thus, given the potential that vlogs offer in facilitating in-class and out-of-class speaking practice, the present study was conducted to investigate the effects of using vlogs on ESL students’ spoken English performance. The students’ perceptions of integrating vlogs into their language learning and their experiences in making vlogs were also captured in the study.

2. Literature review

2.1. The application of SCMC and ACMC in language learning

Based on the temporal features, computer-mediated communication (CMC) can be categorised into two types, namely synchronous CMC (SCMC) and asynchronous CMC (ACMC) (Dix, Finlay, Abowd & Beale, 1993). SCMC, as the term ‘synchronous’ suggests, refers to computer-aided interactions which take place in real-time (Simpson, 2002). This implies that SCMC requires participants of an interaction to be online simultaneously. In contrast, ACMC does not necessitate its participants to be online at the same time. As such, it is a delayed form of

interaction, in that the interlocutors can respond to each other's messages at their own pace and convenience.

In language learning contexts, the application of either SCMC or ACMC depends upon the learners' level of proficiency. Levy and Stockwell (2006) posit that SCMC is better suited for high-proficiency learners because of the nature of its communication which requires immediate response. For instance, when taking part in a video-conferencing, the interlocutors are required to make and respond to comments spontaneously in a rapid fashion, without much time for preparation, review, rehearsals or repair. Thus, only students with higher language proficiency will be able to carry out a successful SCMC interaction by meeting SCMC's cognitive demands for faster language production. Students of lower language proficiency would not be able to fulfil these requirements and hence, might feel de-motivated by the potential communication breakdown.

Therefore, Huang (2015) recommends ACMC for lower-proficiency learners because its linguistic demands are considerably lesser than those of SCMC. ACMC can be conducted via e-mails, text-based blogs, discussion forums, voice bulletin boards, audio-based blogs and video-based blogs. The non-immediate nature of ACMC based on innovative tools and applications allows the interlocutors more time to produce, review and correct their language before publishing their completed written or spoken product. For this reason, language learners who are of lower proficiency would certainly find ACMC a less-intimidating experience for them to practise using the target language, while not missing out on the element of interactivity.

2.2. Vlogs

Blogs and specifically video-based blogs (vlogs) are considered one of the most phenomenal applications in language education (Hsu, 2016). Due to their pedagogical value, numerous studies have investigated the effects of using vlogs in language learning. For instance, Wagener (2006) experimented with the use of video-based speaking activities and found increased degrees of independent learning skills. Similarly, Shih's (2010) study on undergraduate-level ESL learners in Taiwan revealed that vlogging activities contributed towards higher levels of speaking confidence, cooperative learning and independent learning. Similar results were also reported in Hung's (2011) study within the English for Specific Purposes (ESP) field on Taiwanese undergraduates' perception towards vlogging. The undergraduates in the study reported gains in terms of motivation, independent learning skills, peer-supported learning and technical skills. In another study conducted in a Malaysian university context, Balakrishnan (2013) blended vlogging into the usual face-to-face communication activities and found that

her learners perceived vlogs to be an effective supplementary tool in improving their public speaking skills, especially in terms of fluency.

In terms of its effects on lexical and syntactic acquisition, Huang and Hung's (2010) study indicated that vlogs significantly improved the learners' oral performance in terms of total words and lexical richness although it did not increase their syntactic complexity. Sun (2012) investigated the effectiveness of vlogs on Taiwanese college-level EFL learners' speaking performance and their perceived gains in their speaking proficiency. Although the results showed no significant improvement in the students' speaking proficiency, it indicated enhanced levels of confidence from the learners' perspective. Likewise, Göktürk (2016) examined if vlogs enhanced Turkish EFL learners' oral performance, and reported that although vlogs did not lead to a significant improvement in the students' oral fluency, there was an overall increase in the students' oral proficiency, confidence and risk-taking.

Although the previous studies have reported promising results on the use of vlogs in language learning, there are some challenges that both educators and learners would encounter when engaging in a vlog-aided pedagogy. The first challenge is related to the unfamiliarity with technology and low Internet literacy. Becvar (2007) states that most teachers are hesitant to incorporate vlogs into their speaking lessons because they find the technicalities of publishing a vlog to be highly intimidating. This is especially noticeable among educators who are not adept with technology and the Internet. Likewise, students who are not accustomed to these concepts may also find a vlog project to be overwhelming and choose to opt out of the vlogging tasks and, hence, impede the successful implementation of a vlog project.

The second possible drawback to a vlog project stems from its individualized and learner-centred nature. Watkins (2012) claims that a vlog project may be impractical with large classes. This is because the implementers (or the teachers) would struggle during the feedback stage of vlogging. It would certainly be time-consuming for a teacher to view each student's vlog and then post individual comments on each video if it involves many students. This would be a huge burden for the teacher adding on to the existing amount of workload waiting to be completed.

The third form of challenge is related to learners' "affective interferences" (Hung, 2011, p. 744). According to Hung, some participants admitted that the vlog project induced a certain level of anxiety in them, as they were required to share their videos to a large group of audience. Although it was not real-time communication, they did not feel comfortable having many viewers watching their video clips. Hence, although much research into the use of vlogs indicates positive outcomes, there are also other studies that reported no significant effects

besides reporting observed challenges that need to be addressed in future research. It is hoped that this research will contribute to the body of knowledge with regard to the use of vlogs considering its potential benefits in the field of language teaching and learning.

3. Methodology

3.1. The aim of the study

This study aims at answering the following research questions:

1. Is there a significant difference between the mean scores of the pretest and the posttest in speaking performance obtained by the experimental group using vlogs?
2. How do the participants perceive the use of vlogs after their experience?

The design used in achieving the aims of the study is a mixed-methods approach involving quasi-experiment and retrospective self-report.

3.2. Participants and the context

A Malaysian national secondary school was the context for the present study. The participants comprised 73 Form 3 students (lower secondary). The students' English language proficiency ranged from low to intermediate levels. Additionally, they spoke little to no English outside the English classroom and the majority of them came from families who spoke their vernacular language(s) at their home and hence lacked exposure to the English language. All the students had mobile phones with video-recording and internet connection.

3.3. Research design and procedure

The mixed-methods approach was used to answer the research questions posed which require the use of both quantitative and qualitative methods (Creswell, 2018). A quasi-experimental design of one-group pretest-posttest (Fraenkel, Wallen & Hyun, 2015) was utilised to determine the effects of vlogging on the students' speaking skills whereby the independent variable was the vlogging project and the speaking performance was the dependent variable.

The treatment in this study comprised an eight-week long vlogging project. The participants were assigned a topic each week. Among the topics were 'food review', 'how I spent my holiday', 'story-telling' and 'be a tour guide'. In addition to the topics, two requirements were set for the vlog entries. Firstly, each video clip (see Figure 1) had to be at least two minutes long. Secondly, the participants were instructed to use only English language while speaking in the video clips. For each vlog entry, the participants were given a week's

time to plan, record, edit and publish their vlog entries by uploading it onto a private Facebook group. After uploading their videos, the participants were required to watch at least one of their peers' vlogs and post a comment on it (see Figure 2). Their comments had to be written in English and contain two positive points as well as one suggestion for improvement. Besides that, each participant was also required to complete a weekly retrospective self-report on their experience of vlogging.



Figure 1. Screenshot of sample vlog



Figure 2. Sample students' comments

Prior to the treatment, a speaking test (i.e. the pretest) was conducted with the participants, who were not informed of their pre-test scores in order to avoid the testing threat to internal validity. After the pre-test, they were briefed on the ways to produce and upload their vlogs onto the Facebook group. During the treatment period (week 2 to week 9), the students were required to attend their usual English language lessons and produce one 2-minute long vlog entry every week following the topics given. After the treatment, another speaking test was conducted in week 10 and the test served as the posttest and was rated using the method as in the pre-test. As the final step, the participants filled in a questionnaire to indicate their perceptions of the vlogging project.

3.4. Research instruments

The pretest and posttest mentioned above were the instruments used in determining the effect of the vlogging project. In the pre-test, students were asked to speak individually on one topic assigned by the raters. The topic assigned was randomly chosen from a list of five topics, which were obtained from a previously used Spoken Interaction Assessments conducted in the Form Three Assessment (*Pentaksiran Tingkatan 3*), one of the Malaysian public examinations. As for the posttest, the 2018 Spoken Interaction Assessment was used. The format of the post-test was similar to the pre-test in that the participants were assessed individually on their spoken English proficiency. The participants' spoken interaction in the pre- and post-tests were assessed by two raters. Before the actual scoring, both raters scored five students' sample spoken interaction in order to establish inter-rater consistency and norms of scoring. The raters used the Generic

Marking Descriptor for Spoken Interaction developed and prescribed by the Malaysian Ministry of Education for the English Language examination. The rating scale includes four basic assessment criteria – personal response, fluency, language accuracy and pronunciation. The maximum score for the test is 20 marks.

The other instruments of the study, a retrospective self-report and a questionnaire, were used to examine how the participants perceived the vlogging experience. As mentioned earlier, all the participants were asked to produce a retrospective self-report each week during the treatment period. A template was provided to help them write the reports. Prompts in the template were open-ended and had no word-limit for the responses. The prompts act as a guide for them to reflect on their vlogging experience. The participants shared the preparations they made for each week's vlog recording, a brief reflection of their speaking skill, plans for improvement and a personal evaluation of their performance in the current vlog compared to the previous week's.

The questionnaire was another instrument used and it was adapted from Yang's (2003) study on the integration of portfolio among EFL students. The questionnaire consists of 20 items constructed on a 5-point Likert scale, indicating their perceptions towards the vlog project. The items are grouped into four domains: (i) vlogs as a facilitator of learning, (ii) vlogs as a student-friendly tool, (iii) vlogs as a tool for self-evaluation, and (iv) vlogs as a source of motivation.

3.5. Findings

3.5.1. Effects of vlogging

A null hypothesis – 'H₀: There is no significant difference between the mean scores of the pretest and posttest in the speaking test at the end of the vlog project' was set to determine if the treatment has a significant effect. The hypothesis was stated as non-directional and hence, employed a 2-tailed non-directional test. The level of significance was set at $p < 0.05$, in line with the standard preselected probability level used in educational research (Gay et al., 2012). The descriptive statistics for the pretest and posttest obtained are shown in Table 1.

Table 1. Descriptive statistics for the pre-test and post-test

	N	Mean	Std. Deviation
Pre-vlog	73	15.16	1.81

Post-vlog	73	16.99	2.51
-----------	----	-------	------

Table 1 shows the performance of the students before the treatment ($M = 15.16$, $SD = 1.81$) and after the treatment ($M = 16.99$, $SD = 2.511$), indicating an increase of 1.83 in the means after the treatment. A paired samples t-test was then conducted to compare the means and the results are given in Table 2.

Table 2. Results of Paired samples t-test

	Mean	SD	Std. Error Mean	95% CI for Mean Difference		t	df	Sig. (2- tailed)
				Lower	Upper			
				Posttest-Vlog – Pretest Vlog	1.83			

Results of the t-test indicated that the increase was statistically significant, $t(73) = 9.143$, $p < .05$. The null hypothesis was thus rejected and hence, the results showed that the students had performed better in their speaking test after going through the vlogging project.

3.5.2. Perceptions towards vlogs

The students' perceptions towards the vlogging project were obtained through the questionnaire and triangulated with the students' comments in the self-retrospective report. Details of the students' responses to the items in the questionnaire can be seen in the appendix. It should be noted that the analysis and description of the students' responses to the questionnaire items are combined together as either positive ('Agree' and 'Strongly Agree') or negative ('Disagree' and 'Strongly Disagree').

Generally, the students view the vlogging project very positively. With regard to first domain (Vlogs facilitates learning; items 1, 3, 7, 10, 11, 13, 17), every item received very high percentages of agreement i.e. from 89.0% to 100%. Such overwhelming positive responses strongly show that the students are agreeable to the points that vlogs enable them to improve their speaking skills independently according to their learning style even outside the classroom, and importantly, vlogs provide the opportunity to watch and learn from their classmates.

Feedback given through the self-retrospective reports, as shown in Excerpts 1 and 2, reflect the students' excitement in being able to make vlogs to introduce their own culture (the excerpts are shown verbatim without corrections to grammar errors).

Excerpt 1

I recorded this vlog at a Hindu temple...my cousins were disturbing when I did my vlog. I had to do some rehearsals because my cousins were disturbing me while I did my vlog.

Excerpt 2

I had a chance to film about what the mosque looks like inside and shared to my non-Muslim friends.

Domain 2 (Items 2, 4, 15, 19, 20) seeks to find out from the students if vlog is a student-friendly tool. Interestingly, strong disagreements (69.9% - 97.3%) were registered towards negatively worded items and thus indicating positive views towards the idea that vlogs do not take up a lot of their time (69.9%) nor does it increase their workload (97.3%). With such perceptions, it is no surprise that a majority of them (80.8%) are willing to continue making vlogs after the project.

Nonetheless, there is a small number of students who provided a few notable comments through the self-retrospective reports. For instance, one student viewed the vlogging project as a hassle by stating, "I didn't like it because the topic was quite hard and also was a disturbance for me.". Another student who was experiencing shyness expressed her dislike of the vlogging project, "I don't like this vlog because I must do recording at public and I feel shy.". Hence, such comments are indeed valuable and should be taken note of when getting students to produce vlogs.

Domain 3 (items 8, 9, 14, 16, 18) examined whether the students viewed vlogs as a tool to encourage self-evaluation in ESL learning. As shown in the table (see Appendix), the students unanimously (100%) stated that the vlog project showed their learning progress. Additionally, they perceived the vlogs as being helpful in showing their strengths and weaknesses in English (91.8%), and in promoting self-reflection on their English language learning (86.3%). The pedagogical value of vlogging in encouraging self-evaluation among the students was also reflected in their self-retrospective reports. The vlogs enabled the students to 'see' themselves and self-evaluate. This can be seen in the following student responses.

Excerpt 3

I am good at describing but I talked less. I didn't like my hand movements and my tone

Excerpt 4

I am good at editing videos using stickers and themes. But I really want to stop making silly sounds. Other than that, I want to discover more words in my next vlog.

The students also responded very positively to items in Domain 4 (items 5, 6, 12) indicating that they perceived the vlog project to be motivating. This can be seen when 98.6% of them agreed that the project has increased their willingness to speak in English (98.6%) and that it allowed them to talk about topics that interest them (97.3%). The project also made them realise that they can learn English anytime and anywhere. Such views certainly bode well for the learning of English (or any language for that matter) especially the speaking skills in an environment where English is hardly used outside the English classroom. These findings are further supported by the students' feedback in self-retrospective reports. As one student stated, "I liked making the 'How to...' vlog entry because I could show my gaming skills to my classmates". Similarly, another student wrote that, "I loved the Food Review vlog because I am basically a food lover. I absolutely love trying out new food!".

4. Discussion

The t-test results indicate that the vlog project had a positive impact on the participants' English speaking performance. Such results corroborates with the results obtained in many similar studies (e.g. Göktürk, 2016; Shih, 2010) and further confirms the pedagogical value of using vlogging in enhancing learners' ESL speaking. The results of this study also corresponds to Krashen's (1982) Acquisition-Learning Hypothesis to a certain extent. According to this hypothesis, language learners benefit more when they acquire a language in an informal context while taking part in authentic and meaning-focused interactions, as compared to learning it in a formal and accuracy-focused setting. Therefore, it could be deduced that the participants' involvement in the vlogging project allowed them to 'acquire' the language in addition to 'learning' it in the formal language classroom. As Sun (2009) postulates, the task-based nature of vlogging project "promotes authentic and purposeful language use" (p. 98).

As for the students' perception of vlogs after their experience, it can be seen that most of the students view the project positively in all the four domains examined. The pedagogical value of vlogs in enhancing the speaking skills is clear. Of note is the value of learning from each other especially by watching and listening to their more proficient friends. This finding is consistent with the findings in Hung's (2011) and Huang's (2015) studies where the participants also reported experiencing peer learning in the respective vlogging projects. Such perceptions of peer learning provide further evidence to the notion of the Zone of Proximal Development (ZPD) by Vygotsky (1978), where learning occurs through interaction when they are in a 'zone' with more knowledgeable others. As they used the features of Facebook to view, comment and

provide feedback on their peers' vlogs, the project became an environment which stimulated learning for the less proficient learners as they were supported by their more proficient classmates.

Finally, the students viewed the vlog project as a source of motivation. This was evident as they felt less hesitant to speak in English and volunteered to be tested for their speaking skills based on the vlogging project. Similar responses were also noted by Huang (2015), whereby learners expressed decreased speaking anxiety and increased motivation to take risks and make mistakes while talking. These findings lend support to Krashen's (1982) Affective Filter Hypothesis, which advocates lower levels of anxiety and higher motivation levels to facilitate learners' language learning. Since vlog is an asynchronous form of CMC, it allows delayed interaction in that students have the flexibility of time to rehearse and review their recordings before publishing it for public viewership.

5. Conclusion

The outcomes of this study lead to two conclusions. First, ESL students could improve their speaking proficiency with the support of vlogging activities which are incorporated into language learning. Vlogs could be used as a supplementary tool to the conventional speaking activities to increase their learners' extensive speaking practice and increase motivation beyond the lesson hours. Nonetheless, the use of vlogs should also take into consideration the 'public nature' of the vlogging activities and as such may not suit certain types of personalities among the students. With this in mind, teachers should strive to set up a comfortable and safe vlogging environment as it is teachers' responsibility to cater to students' learning needs which match their diverse backgrounds and learning styles.

It should be noted that the positive outcome of the experiment is limited and may not be generalised due to the experimental design used which may be considered a weak design as numerous threats to internal validity are not addressed. Despite such a limitation, the design was used due to the context of the study which is a secondary school and carried out within the constraints of existing timetable and intact groups. However, the results provide useful insights into the pedagogical usefulness of vlogs in an authentic setting. That said, future research should employ true experimental designs to determine the effects of vlogs on the speaking skill.

Acknowledgement

We would like to thank the two anonymous reviewers for their constructive comments on our paper.

References

- Balakrishnan, V. D. (2013). *Students' perception on learning public speaking skills using face-to-face communication and video blogging*. (Masters' thesis): Universiti Teknologi Malaysia. Retrieved from <http://www.fp.utm.my/epusatsumber/pdffail/ptkghdfwP2/Vimala%20Devi%20AP%20Balakrishnan.TP.pdf>
- Becvar, L. A. (2007). *Social impacts of a video blogging system for clinical instruction*. Retrieved from <http://portal.acm.org/citation.cfm?id=1240866.1240973>
- Bygate, M. (2006). Areas of research that influence L2 speaking instruction. In E. U. Juan & A. M. Flor (Eds.), *Current Trends in the Development and Teaching of the Four Language Skills* (pp. 159-186). Berlin: Mouton de Gruyter.
- Chen, H. H. J. (2011). Developing and evaluating an oral skills training website supported by automatic speech recognition technology. *ReCALL*, 23(1), 59-78. <https://doi.org/10.1017/S0958344010000285>
- Creswell, J. W. & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Los Angeles: Sage Publishing.
- Dix, A., Finlay, J., Abowd, G., & Beale, R. (1993). *Human Computer Interaction*. Hemel Hempstead: Prentice Hall.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to Design and Evaluate Research in Education* (9th ed.). Boston, MA: McGraw Hill.
- Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational Research: Competencies for Analysis and Applications* (10th ed.). Boston, MA: Pearson Education
- Göktürk, N. (2016). Examining the effectiveness of digital video recordings on oral performance of EFL learners. *Teaching English with Technology*, 16(2), 71-96. <https://tewtjournal.org/issues/volume-2016/volume-2016-issue-2/>
- Huang, H. C. (2015). From web-based readers to voice bloggers: EFL learners' perspectives. *Computer Assisted Language Learning*, 28(2), 145-170. <https://doi.org/10.1080/09588221.2013.803983>
- Huang, H. T., & Hung, S. T. (2010). Effects of electronic portfolios on EFL oral performance. *Asian EFL Journal*, 12(2), 192-212. Retrieved December 7, 2021, from <https://www.asian-efl-journal.com/main-editions-new/effects-of-electronic-portfolios-on-efl-oral-performance/index.htm>
- Hung, S. T. (2011). Pedagogical applications of vlogs: An investigation into ESP learners' perceptions. *British Journal of Educational Technology*, 42(5), 736-746. <https://doi.org/10.1111/j.1467-8535.2010.01086.x>
- Hsu, H. C. (2016). Voice blogging and L2 speaking performance. *Computer Assisted Language Learning*, 29(5), 968-983. <https://doi.org/10.1080/09588221.2015.1113185>
- Krashen, S. D. (1982). *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon Press.
- Levy, M., & Stockwell, G. (2006). Computer-mediated communication. In M. Levy & G. Stockwell (Eds.), *CALL Dimensions: Options and Issues in Computer-Assisted Language Learning* (pp. 84-109). Mahwah, NJ: Lawrence Erlbaum.
- Moon, D., & Lim, D. K. (2013). Using weblogs in foreign language classrooms: Possibilities and challenges. *International Journal of Software Engineering and Its Applications*, 7(5), 121-128, doi: <https://dx.doi.org/10.14257/ijseia.2013.7.5.12>
- Nurul Lina Abdul Rahman. (2010). *A Study on Second Language Speaking Anxiety among UTM Students*. Universiti Teknologi Malaysia. Retrieved from

http://www.fp.utm.my/epusatsumber/pdf/fail/ptkghdfwp2/p_2009_8820_f013b49b69214066bb1d506db_e65d3e8.pdf

- Price, K. (2007). Afterward: The future is now. In J. Egbert & E. Hanson-Smith (Eds.), *CALL Environments: Research, Practice, and Critical Issues* (pp. 437-454). Alexandria, VA: TESOL.
- Shih, R. C. (2010). Blended learning using video-based blogs: Public speaking for English as a Second Language Students. *Australasian Journal of Educational Technology*, 26(6), 883-897. <https://doi.org/10.14742/ajet.1048>
- Simpson, J. (2002). Computer-mediated communication. *ELT Journal*, 56(4), 414-415. <https://doi.org/10.1093/elt/56.4.414>
- Song, J. W. (2009). An investigation into the effects of an oral English diary using a voice bulletin board on English spoken performance. *Multimedia-Assisted Language Learning*, 12(1), 125-150.
- Sun, Y. C. (2009). Voice blog: An exploratory study of language learning. *Language Learning & Technology*, 13(2), 88-103. Retrieved from <http://lt.msu.edu/vol13num2/sun.pdf>
- Sun, Y. C. (2012). Examining the effectiveness of extensive speaking practice via voice blogs in a foreign language learning context. *CALICO Journal*, 29(3), 494-506.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Wagener, D. (2006). Promoting independent learning skills. *Computer Assisted Language Learning*, 19, 279-286. <https://doi.org/10.1080/09588220601043180>
- Watkins, J. (2012). Increasing student talk time through vlogging. *Language Education in Asia*, 3(2), 196-203. doi:10.5746/LEiA/12/V3/I2/A08/Watkins
- Yang, N. D. (2003). Integrating portfolios into learning strategy-based instruction for EFL college students. *IRAL - International Review of Applied Linguistics in Language Teaching* 41(4), 293-317. doi:10.1515/iral.2003.014

Appendix. Students' responses on the vlog project (N=73)

Items	Strongly disagree (%)	Disagree (%)	Not sure (%)	Agree (%)	Strongly agree (%)
1. The vlog project offered me an opportunity to learn good speaking skills from my classmates.	-	-	-	40 (54.8)	33 (45.2)
2. The vlog project takes up a lot of my time.	31 (42.5)	22 (30.1)	20 (27.4)	-	-
3. The vlog project helped me to improve my English language speaking skills.	-	-	2 (2.7)	26 (35.6)	45 (61.7)
4. The vlog project increased my workload.	51 (69.9)	20 (27.4)	2 (2.7)	-	-
5. The vlog project allowed me to talk about my personal interests.	0	2 (2.7)	0	35 (48.0)	36 (49.3)
6. The vlog project increased my willingness to speak in English.	-	-	1 (1.4)	34 (46.6)	38 (52.0)
7. The vlog project allowed me to learn English according to my learning style.	-	-	3 (4.1)	25 (34.2)	45 (61.7)
8. Preparing a vlog requires good video recording and editing skills.	-	-	2 (2.7)	41 (56.2)	30 (41.1)
9. The vlog project helped me to understand my strengths and weaknesses in English.	-	-	6 (8.2)	45 (61.7)	22 (30.1)
10. The vlog project helped me to learn English independently.	-	-	3 (4.1)	22 (30.1)	48 (65.8)
11. Watching other friends' vlogs helped me to have a better idea about vlogging.	-	-	0	21 (28.8)	52 (71.2)
12. I feel the vlog project made me realize that I can learn English anytime and anywhere, not just in the classroom.	-	-	3 (4.1)	29 (39.7)	41 (56.2)
13. Vlogs can show my efforts in learning English outside the English classroom.	-	-	7 (9.6)	34 (46.6)	32 (43.8)
14. The vlog project is a good tool to show my learning progress.	-	-	0	41	32

				(56.2)	(43.8)
15.	I still don't understand why we need to take part in the vlog project.	18 (24.6)	51 (69.9)	4 (5.5)	- -
16.	When making the vlogs, I had a chance to reflect on my English language learning.	-	-	10 (13.7)	24 (32.9)
17.	The vlog project helps me to instil a habit of listening to, speaking, reading and writing in English regularly.	-	-	8 (11.0)	37 (50.7)
18.	I would like the teacher to assess my speaking skills by the vlog project.	-	-	9 (12.4)	32 (43.8)
19.	My experience of making vlogs has been a successful one.	-	-	8 (11.0)	30 (41.1)
20.	I will continue to make vlogs after this vlog project.	-	-	14 (19.2)	22 (30.1)
					37 (50.7)

MOBILE-MEDIATED INTERACTIONAL FEEDBACK (MMIF) EFFECT ON IRANIAN LEARNERS' ACQUISITION OF ENGLISH ARTICLES

by **Thana Hmidani**

University of Kyrenia, Girne, TRNC

thana.hmidani @ kyrenia.edu.tr

and **Narges Zareian**

Bu-Ali Sina University, Hamedan 65178, Iran

zareianarges @ gmail.com

Abstract

The role of interactional feedback (IF) has been the interest of researchers in communicational context. Some studies have shown low rate of improvement following IF in a classroom setting, hence a shift to computer-assisted feedback. This study explored IF in a mobile-mediated environment (MMIF) on Telegram and compared it with in-class IF. The aim was to solve the problem of students who were unable to attend classes regularly due to family or schoolwork conditions. Forty highschool and undergraduate students of low intermediate level were randomly assigned to two groups. The experimental group attended three sessions out of six: an introductory one for pre-test and the procedure; a halfway session for face-to-face discussions with the teacher; and one for post-test and assessment of the procedure. The control group attended six regular classes. The experimental group sent their compositions online to the teacher who highlighted the mistakes and posted them to be discussed by the learners who were further divided into subgroups of five for more opportunity to participate and by the teacher who provided more feedback when needed. Data were collected from the first and last compositions produced in-class by both groups and results were compared with a focus on article use. The mixed method study revealed that MMIF is advantageous and time-saving.

Keywords: English articles; Interactional feedback; Iranian learners; mobile-mediation; self-repair

1. Introduction

Many L2 studies have investigated the effectiveness of feedback on learning improvement from different aspects, such as strategies for providing feedback and how the students

respond to this feedback, but the majority of them focused on teachers' feedback and there is often limitation in negotiation between teachers and learners (Ellis, 2008).

Interactional feedback is a kind of corrective feedback that occurs in the context of communicative interaction (Nassaji, 2015). It is provided through recasts (implicit feedback) or metalinguistic information (explicit feedback) to deal with communication or linguistic problems through negotiation (Nassaji, 2016). It can also be provided through many strategies such as reformulations, prompts, and metalinguistic feedback. These feedback strategies are called input-providing as they provide target-like input for the learners (Ellis, 2009).

On the other hand, the Internet has changed the interaction habits of the learners through distant learning environments in Iran using tools such as blogs, wikis and portfolios, which minimized the need of physically attending the traditional classes (Faramarzi, Tabrizi & Chalak, 2019). In one study, Dashtestani (2016) indicated that language learners have positive attitudes toward mobile learning and suggested guidelines to enhance communication between learners and teachers to facilitate interactive learning.

Researchers report multiple advantages of peer online feedback. Some studies find it effective because peers try to be friendly, supportive and more reassuring when they want to provide online feedback (Ma, 2019). It is also mentioned that online peer interaction leads to more revision of linguistic codes (Arnold, Ducate & Kost, 2012). Thus, online interactions might be effective for improving the accuracy among EFL learners.

The focus of this study is on English articles (*a*, *an*, *the*, and *0(zero)*) whose grammatical significance might not be realized unless the learners get directly involved in production (Nassaji & Swain, 2000). In Persian, definiteness/indefiniteness is heavily governed by semantics and in some instances the indefinite marker is not necessarily used. While English expresses definiteness using the article 'the', Persian may/may not use definite marker in a noun phrase and in some cases they may use a prefix called *-ra* to show that the speaker has an individual in mind that is known to the hearer, so definiteness/indefiniteness depends on the different interpretations of the sentence (Karimi, 1989).

The present research aims to check the effect of mobile-mediated interactional feedback (MMIF) provided by Telegram (a mobile application) on the acquisition of the English articles. Telegram is a widely used social media tool (SMT) in Iran because it is a free application and easy to use. This application can be used for sending/receiving texts,

images, audios and videos and also different formats of documents like Microsoft Word (*.doc), and portable document format (*.pdf). Besides, this application is greatly used for creating discussion groups or forums in language learning thus serving to enhance the teaching and learning process (Ibrahim et al., 2016).

Thus, the present study is an empirical attempt to determine how interactional feedback could be used, processed and contributes to language development employing online learning environment.

2. Literature review

2.1. Interactional feedback

Given the role of feedback on second language (L2) teaching and learning, studies identified different types of corrective feedback. Two types of feedback which raise debates in different studies are “direct” and “metalinguistic” feedback. Direct feedback involves providing the students with the correct form while metalinguistic feedback entails supplying the students with metalinguistic clue based on the nature of the error they have committed (Ellis et al., 2008). Direct feedback combined with metalinguistic explanation proved to be more effective than direct feedback alone (Sheen, 2007).

On the other hand, some researchers state that these feedbacks should occur in the context of communicative interaction to improve modification process. In this respect, Nassaji (2016) introduced interactional feedback as a kind of corrective feedback which opens an opportunity for the interlocutors to make their input more comprehensible and highlight linguistic problems in negotiation. This negotiation can happen in single or multiple moves and motivates the learners to correct erroneous utterance in the course of interaction (Nassaji, 2016). It is also claimed that not only the errors but also the communicative process will be under consideration in negotiation, which can consequently provide beneficial information for the learners to focus on the language they use (Bruton, 2009).

However, the question arises whether this interaction should be provided by the teacher or peers. Some studies show that both teacher and peer feedback are effective in students' revision (e.g., Tsui & Ng, 2000; Yang, Badger & Yu, 2006) while the characteristics of the feedback seem to differ in these two groups. According to Ruegg (2015), there are some differences in feedback types between teachers and peers as teachers provide more

feedback regarding issues on meaning while peers tend to give insight about the organization of the writing. Ma (2020) also stated that peers provide more feedback on meaning than on form (language) issues. Moreover, some studies proved that the learners who receive feedback in interaction are more willing to communicate and more confident to provide peer feedback (e.g., Sato, 2013; Vasquez & Harvey, 2010).

All in all, the extensive body of research in the past few decades conducted in various contexts determine how interactional feedback can be applied and contribute to language learning. These studies seem to be in line with Vygotsky's theory of sociocultural perspective (Vygotsky, 1986) and emphasize that learning cannot be achieved in isolation, rather it is viewed as a process which occurs in interaction.

2.2. Technology-Assisted Language Learning

The use of technology has recently become increasingly popular in education as a result of digital revolution (Collins & Halverson, 2018). Respectively, computer-assisted feedback has attracted the attention of many academics because it provides an environment in which learning is facilitated through feedback and interaction, so one can learn at any time and in any place (Liu & Chen, 2015). However, some scholars suggest that the nature, type, and degree of online feedback and its effect differ from face-to-face interaction (Nassaji, 2016). Thorne, Black and Sykes (2009) call for a wider use of technology in L2 contexts considering that L2 classrooms provided "limited opportunities for committed, consequential and longer term communicative engagement" (p.804), whereas engaging learners in virtual environments and online games opens up new horizons for them and provides them with opportunities to have "long periods of language socialization, [...] creative expression and language use as tools for identity development and management" (p.802). They also put emphasis on hybridized communication where users combine print-based texts with some features of face-to-face conversations on electronic devices. The research also explores the way in which the audience's feedback can mark an improvement in writing as writers try to build awareness to interact with a specific audience in mind, and think about the way they could transfer the meaning through language choice to make themselves understood by the reader (Thorne et al, 2009).

In a similar vein, on-line collaborative tasks have reported to have positive effect on error correction. Through such tasks, the students not only provide feedback on their partners'

writing but also practice their own English writing skill when they are giving explanations to the correction (Zou, Wang, & Xing , 2016).

2.3. Mobile-Assisted Language Learning

Research shows that currently more than 7 billion mobile devices are subscribed worldwide (ITU, 2015), which indicates that the life of millions of people is influenced by the advent of mobile technologies. Mobile devices have currently created new opportunities for language learners to take pictures, watch videos, send text messages, browse the Internet and access social networking applications. Many studies were conducted to create new tasks and investigate the effect of using mobile devices for learning a language (Gedik et al., 2012; Gromik, 2012). Kukulska-Hulme and Shield (2008) have introduced Mobile-Assisted Language Learning (MALL) as a useful methodology supporting various learning such as collaborative learning and social contact. Unlike Computer-Assisted Language Learning (CALL), MALL uses portable, personal devices enabling the users to access new ways of learning which is continuous and spontaneous across varieties of contexts. Learners are equipped with different input modalities like iPods, MP3 players and mobile phones but researchers show that the most frequently used handheld devices is mobile phones (Talan, 2020).

In a meta-analysis study, Burston (2015) reported the advantage of MALL in learning outcomes and explained that technocentricity was one of the reasons for lacking pedagogical innovation of many recent MALL projects in exploitation of communicative affordances of mobile devices. These days, many software applications which were available on computers can be used on smartphones. In case of learning, Google applications (Vurdien, 2020), mobile blogging system (Huang et al., 2009) and game-based learning (Lin et al., 2018) are some of the practical means of collaboration which are available on smartphones.

One of the advantages of MALL is that instructors would play the role of facilitators rather than of teachers. Accordingly, learners can do some activities outside the classroom and still be engaged with the lesson. We applied the same concept in the current study and used a mobile application (Telegram) to motivate the learners to self-regulate and to enhance interaction.

Mobile applications are deemed convenient tools for improving different skills such as reading, speaking and listening but writing has always been the learners' weak point even

though they are provided with a lot of tasks (Yan, 2019). To the best of our knowledge, there are rather few studies on mobile-mediated interactional feedback that could provide opportunities for the learners to improve writing skills (e.g., Vurdien, 2020; Yan, 2019). Therefore, this study will examine whether or not MMIF could pave the way for the learners to develop their writing proficiency, particularly in acquiring the English articles through interactions on social networking sites.

3. Methodology

3.1. The aim of the study

Based on the above-mentioned issues the current study will seek answers to the following questions:

1. Are there any statistically significant differences between the effectiveness of MMIF and the traditional feedback (One-way feedback from the teacher) on the acquisition of articles by lower intermediate Iranian EFL learners?
2. Does MMIF plus a limited number of in-class sessions have any significant effect on the acquisition of the English articles of lower intermediate Iranian EFL learners?
3. Does interactional feedback in a classroom setting have any significant effect on the acquisition of the English articles of lower intermediate Iranian EFL learners?
4. What are the learners' general perceptions of MMIF compared with the interactional feedback in classroom setting?
5. What are the learners' perceptions of the advantages and disadvantages of MMIF compared with the interactional feedback in classroom setting?

To achieve the goal, the researchers focused on negotiation and activities done outside the class such as sharing different documents, engaging in on-line discussions or leaving. Moreover, the target structure chosen for this study was articles used in obligatory contexts in some specific discourses such as narratives.

3.2. Participants and the context

The participants in this study are high school students (45%) and university undergraduates (55%) aged between 16 and 24. The participants were assigned to lower intermediate level of English as per the placement test which they took upon entry to the academy. None of them

has ever been taught by a native teacher or been to an English-speaking country and they had never had any experience with blogs.

To improve their English proficiency, Iranian students usually enrol in language academies, but they have trouble attending them regularly because of their school/ university assignments. To solve the problem of attendance, we agreed with our participants to meet with their teacher three times throughout the course: once at the beginning, another half-way through the course (after three weeks) and the third time at the end of the course. During these sessions, the teacher gives the students feedback on their writing and discusses their mistakes. They had to write one composition per week (six in total) and send them to their teacher on groups formed by the language academy on Telegram.

The academy's educational system was based on the communicative method which focuses on the functional use of everyday language. Many people from different background attend this language academy as public sector in Iran has various drawbacks and does not help the EFL learners survive in real communication (Maftoon et al., 2010). Recently, the academy provided the "Hybrid System" which is an effort to address the learners' and institutional needs in providing movies, online tests and other supplementary activities to enhance learning. It aims at integrating the traditional and distant learning in order to benefit from the mix of classroom and distributed learning environment (Shale, 2002). However, none of the learners in this study benefited from the online products because it is computer-based and does not run on mobile phones. On the other hand, the academy recently formed discussion groups on Telegram and Instagram which were well received by the learners.

3.3. Design and procedure

As a true random selection of participants of the current study was not feasible and we wanted to evaluate the intervention, the quasi-experimental method was employed to create comparison in a small available sample size (Cook & Campbell, 1979). Thus, Oxford Placement Test (OPT) was administered to 47 learners who were selected by convenience sampling. Based on the results, 7 students were excluded from the study because they failed to get the score required for the lower intermediate level, which is between 30 to 39 out of 60, so we were left with 40 participants.

The participants were randomly divided into two groups, each comprising 20 who were 20 years old on average. After the assignment of the groups, the pre-test, treatment, and

post-test phases followed and finally quantitative and qualitative analysis were carried out on the obtained data.

The study and the control groups were both taught by a PhD candidate, who is also one of the researchers, and has a twelve-year experience in EFL teaching.

3.4. Data collection tools and procedures

The topics of the compositions were drawn from the second writing tasks of general IELTS. In this task, the candidates were asked to write a formal essay to present their idea on a point of view, argument or problem. A questionnaire was also made for checking the reaction of the participants to a dynamic assessment of writing skill. The questionnaire (Appendix A) was sent to two professors of the field to confirm the validity and reliability of the instrument to be utilized in this study. The content validity was checked and the instrument was evaluated to ensure that the items are desirable for the construct domain. Moreover, the inter-rater reliability was calculated and found to be above .92. Then, the discrepancies were negotiated to reach the consensus. The first question in this questionnaire checked the participants' general perception of the program and the other two questions enquired about their perceptions of the advent ages and disadvantages of MMIF.

In their first session at the institute, both experimental and control groups were asked to write their first composition between 140-190 words to serve as a pre-test for both groups.

The experimental group was then asked to join a newly-formed group on Telegram as a substitute for their traditional classes. They were divided into four sub-groups comprising five learners each. This subdivision was meant to make the discussions online more focused and to give the learners a better opportunity to participate. The learners were informed that their compositions should be written online and sent to their teacher who would examine them, highlight the mistakes, number them for easy reference, and post them on Telegram to be discussed and corrected by the sub-groups. They had one week to leave their comments and join different discussions. The discussions centred on the content of the compositions and the highlighted mistakes (Appendix B). The participants were allowed to leave messages or upload any files for further explanation.

The teacher would be monitoring the discussions on Telegram and making sure that all participants contributed their input to discussions. She would review the reports and provide feedback online. When she noticed that the learners had communicative breakdowns

or had difficulties in distinguishing the mistakes, she would join the discussions and provide some explanations to facilitate the interaction (Appendix C). She would also make a list of the most recurring mistakes to discuss them during the mid-program meeting. The learners would also have two more meetings with the teacher: one in the third week where face-to-face discussions of the most recurrent mistakes would take place and the last meeting would be at the end of the course for writing the last composition and assessing the MMIF procedure by answering a semi-structured questionnaire with three questions.

The control group would meet weekly with their teacher to discuss the content of the topics and their mistakes on four compositions. This group did not participate in the online discussion or have access to it. They only had interactional feedback in the classroom which was mostly teacher-centered interaction.

The research took six weeks during which six compositions were written by both groups, four of which were checked by the experimental group, while the first and the last one were used as pre- and post tests for further analysis and no feedback was provided for them.

To study the effect of MMIF and its difference from relying solely on feedback done in class, we initially highlighted the number of obligatory contexts for using the articles and compared the means of percentage of correct instances of the use of articles in the pre-test and the post-test of both groups using the Statistical Package for the Social Sciences (SPSS 20) for computing descriptive and inferential statistics. We ran two independent sample t-tests to compare the percentage of correct instances of the use of articles in the study and control groups before and after the treatment. The independent sample t-test compares the means of two unrelated groups, namely, the study and control groups. We also ran two dependent sample t-tests to compare the percentage of correct instances before and after the treatment within the groups to see if any improvement took place.

In order to acquire qualitative insight into the feedback of the learners about the program and triangulate the findings, we distributed a semi-structured questionnaire containing three questions to the participants in the study group and we used the technique of ‘quantitizing’ the answers (Tashakkori & Teddlie, 1998). ‘Present’ in this technique is indicated by 1 for what the researchers could see while ‘absent’ is shown by 0 to indicate what the researchers could not see (Sandelowski, Voils & Knafl, 2009). We opted for this technique because it is considered a key operation in mixed method analysis. It involves

converting qualitative data into numerical codes to be processed statistically (Dorney, 2007). This means that qualitative data can be numerically represented in scores and scales. In this respect, the researchers could prioritize the advantages and disadvantages of MMIF for further analysis. Accordingly, two experts were asked to analyze the semi-structured questionnaire given to the learners, categorize the data and present the frequency of the given information so that the most significant or frequent statements from the data were numerically presented.

4. Findings

This study was done to investigate the effect of MMIF on the acquisition of the English articles compared with interactional feedback done solely in classroom setting, and to identify its advantages and disadvantages from the learners' perspective. In total, 40 learners participated; their compositions were checked with focus on the correct use of English articles, their mistakes were highlighted by the teacher and metalinguistic feedback was provided by both the teacher and their peers. Twenty participants, or the study group, were assigned to interact with each other and react to the papers numbered and posted by the teacher on a social networking site called 'Telegram' easily accessed from their mobile phones and to meet in class at three points in the course: at the beginning where the learners were introduced to the new strategy of negotiating their mistakes and correcting them on Telegram, half way through the course where the teacher gives feedback on the recurrent mistakes, and at the end for the post-test.

We initially determined the numbers of obligatory and correct instances of English articles namely *a*, *an*, *the* or *0*. Table 1 below indicates the number of obligatory, correct instances and the percentage of the correct use of the articles in both control and study groups in the pre- and post-tests.

Table 1. Sum and mean of the numbers of obligatory contexts, correct instances and the percentage of correct instances of articles

Written feedback per group on "Telegram"		Number of Obligatory Contexts		Number of Correct Instances		Percentage of Correct instances
		Sum	Mean	Sum	Mean	
Experimental	Pre-test	537	26.85	479	23.95	88.73
	Post-test	571	28.55	551	27.55	96.38

Control	Pre-test	512	25.60	447	22.35	86.50
	Post-test	513	25.65	455	22.75	88.67

Furthermore, an independent-sample t-test was run to compare the mean percentage of correct instances of the use of articles in the pre-test of both groups. The results indicated that there was no significant difference between the experimental ($M= 88.73$, $SD=5.36$) and control ($M= 86.50$, $SD=7.22$) groups. Table 2 shows the mean results of both groups on the pre-test ($p=.27>0.05$). Thus, it can be claimed that the two groups were almost homogeneous in terms of their understanding of the proper use of the English articles prior to the main study.

Table 2. Independent Samples Test; pre-test of the study by groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Pretest	Equal variances assumed	1.63	.21	1.10	38	.27	2.22	2.01	-1.84	6.29
	Equal variances not assumed			1.10	35.05	.27	2.22	2.01	-1.85	6.31

To answer the first research question, the mean and the standard deviation of percentage of correct instances in the use of articles in the post-test of both groups were compared, the mean and the standard deviation of the experimental group were 96.38 and 4.55, respectively, while those of the control group stood at 88.67 and 6.69, respectively.

An Independent Sample t-test was run to compare the means of percentage of correct instances in the use of articles in the post-test of both groups (Table 3). As the table shows, the Sig. value for Levene's test was larger than .05, thus we used the first line in the table, which refers to Equal variances assumed. Accordingly, the difference between the mean scores turned out to be significant ($t(38) = 4.25$, $p=0.00<0.05$). Thus, there was a statistically significant difference between the study and control groups on the acquisition of articles. Furthermore, the effect size was computed ($d= 1.34$) which shows that effect size was very

large (Leech, Barrett & Morgan, 2013). In other words, MMIF had a significant positive effect on increasing the EFL learners' accuracy in the use of articles.

Table 3. Independent Samples Test; post-test of the study by groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Post-test	Equal variances assumed	1.89	.17	4.25	38	.00	7.71	1.81	4.04	11.37
	Equal variances not assumed			4.25	33.45	.00	7.71	1.81	4.03	11.39

To answer the second research question, a dependent t-test (called the paired-sample t-test) was run to compare the means between the pre- and post-tests of the study group. The mean and the standard deviation of the pre-test in the experimental group were 88.73 and 5.36, respectively, while those of the post-test stood at 96.38 and 4.55, respectively. The result of the dependent t-test ($p = .00 < 0.05$) (Table 4) shows that there is a significant difference between the pre-test and the post-test of the experimental group in writing compositions.

Table 4. Paired-Sample Test; Pre-test and post-test of the study in the study group

	Paired Difference					t	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the difference				
				Lower	Upper			
Pair 1 Pretest-Posttest	-7.65	7.44	1.66	-11.13	-4.17	-4.60	19	.00

To answer the third question of the study another paired-sample t-test was run to compare the mean of the pre- and post-tests of the control group. The mean and the standard deviation of the pre-test in the control group were 86.50 and 7.22, respectively, while those of the post-

test stood at 88.67 and 6.69, respectively. The result of the dependent t-test ($p = .20 > 0.05$) (Table 5) shows that there was not a significant difference between the pre-test and the post-test of the control group in the assigned writing compositions.

Table 5. Paired-Sample Test; Pre-test and post-test of the study in the Control group

	Paired Difference					t	df	Sig. (2-tailed)
			95% Confidence					
	Mean	Std. Deviation	Std. Error	Interval of the difference				
			Lower	Upper				
Pair 2 Pretest-Posttest	-2.17	7.47	1.67	-5.66	1.32	-1.29	19	.20

The overall results prove that MMIF had a significant positive effect on increasing EFL learners' percentage of correct instances of the use of articles, while relying solely on interactional feedback inside the classroom was not enough to improve the learners' proper use of the articles.

To answer the fourth research question, the results of the questionnaire show that apart from one of the participants, all of them found the program useful and practical. It was a good solution for their inability to attend classes regularly.

To answer the fifth research question, the frequency of the mentioned advantages and disadvantages of MMIF was presented in Figures 1 and 2.

Figure 1 shows the learners' perception of the advantages of MMIF over in-class interactional feedback alone. Based on the data, the most important advantage of MMIF was the practicality of the program. In other words, the majority of the learners (15 learners) were interested in MMIF as it was practical. The other important advantages are 'learners learn from others' error' (13 learners), 'learners are self-regulated' (10 learners). The participants indicated many other advantages such as 'it increases self-awareness', 'feedback is effective' and 'learners do extra practices' which could motivate the learners to sustain in the program.

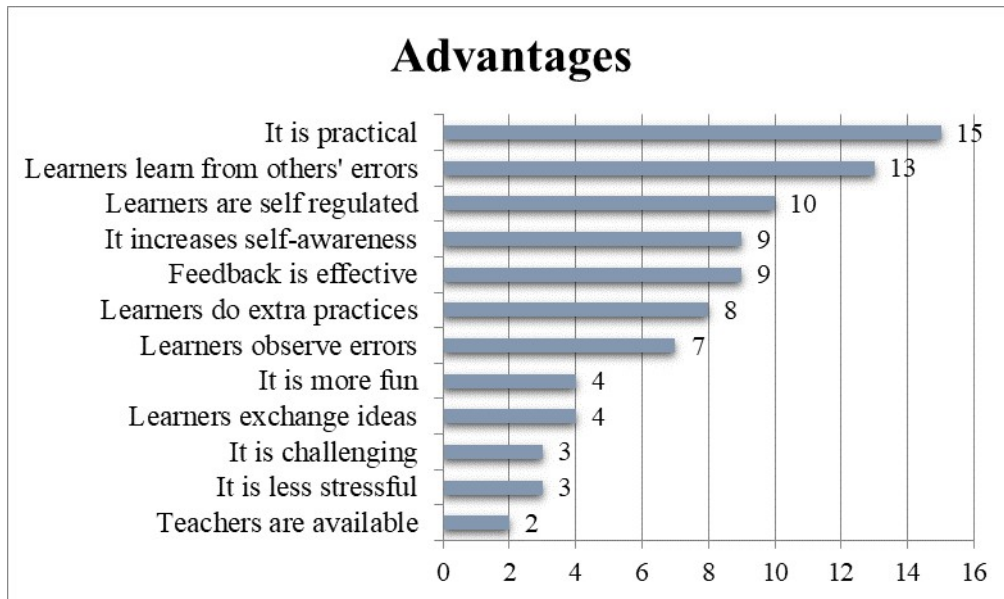


Figure 1. The advantages of MMIF compared with the interactional feedback in classroom setting alone

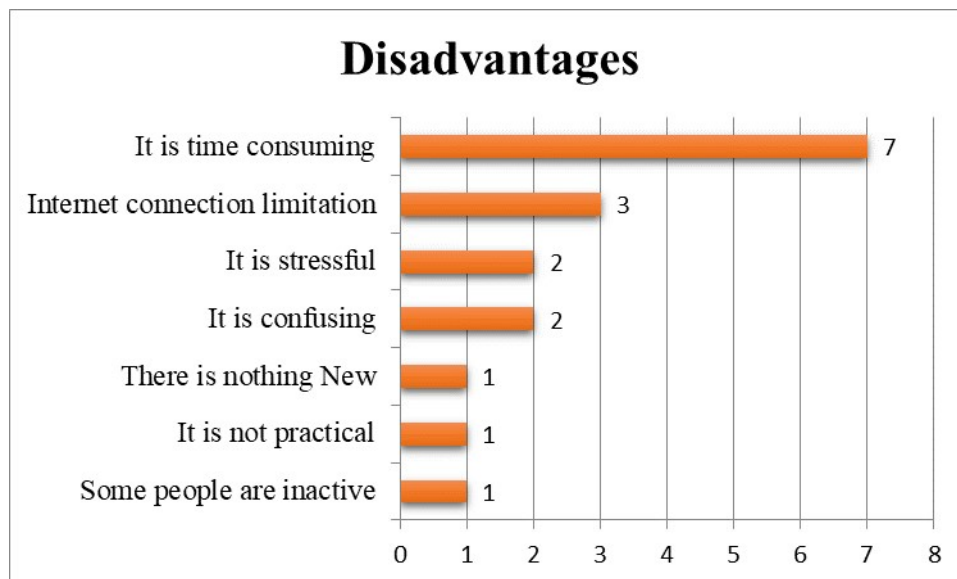


Figure 2. The disadvantages of MMIF compared with the interactional feedback in classroom setting

Figure 2 reveals the most prominent disadvantage of MMIF as indicated by 7 learners that it is time-consuming. The other disadvantages of MMIF are reported to be 'internet connection limitation' (3 learners), that 'it is stressful' (2 learners), that 'it is confusing' (2 learners), that 'there is nothing new' (1 learner), that 'it is not practical' (1 learner), and that 'some people are inactive' (1 learner).

The comparison of the advantages and disadvantages of MMIF showed that most of the participants talked positively about the program and the advantages outweighed the disadvantages. Moreover, apart from one of the participants who had personal reason, all of them benefited from the program and agreed to continue it.

5. Discussion

The current study was designed to probe the effectiveness of MMIF on L2 learners' acquisition of articles and investigate the learners' perceptions of the advantages and disadvantages of MMIF. The findings indicated that mobile-mediated interactional feedback is positively correlated with accurate use of articles in EFL learners' compositions. These results support the idea that social interaction would result in joint accomplishment and contribute to L2 learning tasks (Swain, 2010). In addition, the attitude of the learners in the experimental group supported the effectiveness of MMIF in complementing the classroom style feedback. In other words, the teachers in traditional classes usually held the floors and corrected the errors and the learners were the mere recipients of information but by attending this program, the learners had more responsibilities and operated within a frame not solely directed by the teachers in teacher-fronted interactions.

The findings of the current study are in line with many other studies such as Azari's (2017) research on process-based writing in which the learners could publish their written drafts and receive feedback from both the teacher and other learners using blogs. However, the learners in our study had no time to attend the class regularly and at the same time they were unwilling to have their name published in any groups with their errors highlighted. Thus, in this study, individual learners sent their compositions to the teacher who examined and highlighted the mistakes, and removed the names before posting them on Telegram. In this respect, the teacher could prevent face-threatening acts.

Similar to the current study, Gedik et.al. (2012) stated that mobile learning can be a stimulus for the learners to start their work which might not otherwise be possible. Moreover, mobile learning is required by the students as a support mechanism for their face to face learning. However, some limitations with cellular phones (i.e., screen size, bandwidth) might prevent the learners from full engagement in on-line instruction.

Gromik (2012) also mentioned the advantages of learners' engagements and argued that mobile learning can motivate the learners to participate in on-line tasks and recollect

their prior cognizance of the target language. In addition, cell phones provide students with the opportunity to recognize their weak points in writing, empower them to improve and assess their performance.

The results are also consistent with what Zou et al. (2016) found in their study. Their findings showed that learners benefited from the corrections provided by their partners on the wiki platform and they enjoyed correcting language errors for each other. Similarly, the learners in the current study declared that one of the prominent advantages of the program was learning from others' errors.

The findings of the present study corroborate the results in the recent study done by Haghghi et al. (2019), which showed that Iranian learners willingly accept Telegram as an efficient application in EFL learning. The authors indicated that Iranian students are highly familiar with Telegram and they do not need any courses for learning the functionality of this application. They added that the messages and other materials will always be accessible in Telegram groups which enables the applicants to review them any time of the day.

However, the results showed some rather contradictory results as some participants mentioned some disadvantages of the program but almost all of them (95%) asked to continue this program. This discrepancy could be attributed to limitations on the Internet access in Iran. Most people purchase it monthly with different speed limits and it is not free of charge. Moreover, the high rate of interactions required from the learners, specifically peer interaction, put the learners out of their comfort zone as they were required to negotiate the meaning and forms to prove their point of view.

In a 2018 study, Kukulska-Hulme and Viberg mentioned some similar positive aspects of mobile interactions such as providing individual and collaborative tasks, awareness raising, providing opportunities for negotiating meaning in mutual encouragement. However, few negative aspects are also mentioned such as technical problems and feelings of uncertainty or confusion which are in-line with the present study.

Furthermore, the participants in this study seemed not to be aware of defects in their language and so they needed to notice them by any means. This is in line with Nassaji (2011), who found that self-repair is followed by elicitation, Ellis (2009) who introduced some feedback strategies and called them input-providing and other researchers who also proved them to be effective (Erlam, Ellis & Batstone, 2013; Ammar & Spada, 2006; Lyster, 2004).

6. Conclusion

Using applications on mobile devices in EFL context is now commonplace in many countries. This might support the acceptance of MMIF among teachers and learners. In this study, we tried to lay the foundation for mobile-mediated interactional feedback (MMIF), which supports on-line interactional activities, and we applied it in dealing with one grammatical notion of the English language, namely, the English articles. Peer collaboration, feedback strategies and instructor guidance were delivered outside the classroom setting to enhance the learners' understanding and compensate for their inability to attend classes regularly. Our findings shed light on the positive role of MMIF in EFL contexts and confirm that such a process can help learners collaborate more with one another, reflect on their own and others' mistakes and consequently consolidate their learning.

These findings could have some far-reaching implications. Firstly, MMIF can be used as a pedagogical tool to facilitate L2 writing proficiency in big classes where teachers cannot devote much time to dealing with errors. Secondly, we believe that the present study should not be restricted to EFL contexts, but to other areas of language learning as well. Thirdly, it is essential for educators to rethink the issue of learner engagement making use of mobile technologies in interactive contexts as these might encourage learners to make use of their spare time and space outside the classroom. In addition, when providing online materials, teachers need to consider download time unless such an issue could be a strong drawback. Finally, the program may give the learners a chance to talk about their difficulties with the group members or in some specific situations privately with the teachers by sending messages. This is in contrast with traditional classes where teachers have limited opportunities to talk to the learners in person because of their high number and because teachers usually have some classes back to back and the breaks are short.

Like many other studies, the findings of the current study are subject to some limitations. First, the project used a convenience sample which was relatively small in size that may limit the generalizability of the findings. Thus, more research needs to be done with different and larger communities to be able to generalize the results. Second, the present improvement is probably short-term which might turn into a long-term one, but a delayed post-test should prove it. In this respect, the researcher could measure retained learning of each group and check that the level of significance is greater than chance.

Acknowledgement

I would like to thank the two anonymous reviewers for their constructive comments on my paper.

References

- Ammar, A., & Spada, N. (2006). One size fits all?: Recasts, prompts, and L2 learning. *Studies in Second Language Acquisition*, 28(4), 543-574. <https://doi.org/10.1017/S0272263106060268>
- Arnold, N., Ducate, L., & Kost, C. (2012). Collaboration or cooperation? Analyzing group dynamics and revision processes in wikis. *CALICO Journal*, 29(3), 431-448.
- Azari, M. H. (2017). Effect of weblog-based process approach on EFL learners' writing performance and autonomy. *Computer Assisted Language Learning*, 30(6), 529-551.
- Bruton, A. (2009). Designing research into the effects of grammar correction in L2 writing: not so straightforward. *Journal of Second Language Writing*, 18(2), 136-140. <https://doi.org/10.1016/j.jslw.2009.02.005>
- Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4-20. <https://doi.org/10.1017/S0958344014000159>
- Collins, A., & Halverson, R. (2018). *Rethinking education in the age of technology: The digital revolution and schooling in America*. New York: Teachers College Press.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Chicago: Rand McNally.
- Dashtestani, R. (2016). Moving bravely towards mobile learning: Iranian students' use of mobile devices for learning English as a foreign language. *Computer Assisted Language Learning*, 29(4), 815-832. <https://doi.org/10.1080/09588221.2015.1069360>
- Dorney, Z. (2007). *Research methods in applied linguistics*. Oxford, UK: Oxford University Press.
- Ellis, R. (2009). Corrective feedback and teacher development. *L2 Journal*, 1(1), 3-18. <https://doi.org/10.5070/l2.v1i1.9054>
- Erlam, R., Ellis, R., & Batstone, R. (2013). Oral corrective feedback on L2 writing: Two approaches compared. *System*, 41(2), 257-268. <https://doi.org/10.1016/j.system.2013.03.004>
- Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, 36(3), 353-371. <https://doi.org/10.1016/j.system.2008.02.001>
- Faramarzi, S., Tabrizi, H. H., & Chalak, A. (2019). Telegram: An Instant Messaging application to assist distance language learning. *Teaching English with Technology*, 19(1), 132-147.
- Gass, S. M. (2003). Input and interaction. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 224-255). Malden, MA: Blackwell.
- Gedik, N., Hanci-Karademirci, A., Kursun, E., & Cagiltay, K. (2012). Key instructional design issues in a cellular phone-based mobile learning project. *Computers & Education*, 58(4), 1149-1159. <https://doi.org/10.1016/j.compedu.2011.12.002>
- Gromik, N. A. (2012). Cell phone video recording feature as a language learning tool: A case study. *Computers & Education*, 58(1), 223-230. <https://doi.org/10.1016/j.compedu.2011.06.013>

- Haghighi, H., Jafarigohar, M., Khoshsima, H., & Vahdany, F. (2019). Impact of flipped classroom on EFL learners' appropriate use of refusal: achievement, participation, perception. *Computer Assisted Language Learning*, 32(3), 261-293. <https://doi.org/10.1080/09588221.2018.1504083>
- Huang, Y. M., Jeng, Y. L., & Huang, T. C. (2009). An educational mobile blogging system for supporting collaborative learning. *Journal of Educational Technology & Society*, 12(2), 163-175.
- Ibrahim, M. N. B., Norsaal, E. B., Abdullah, M. H. B., Soh, Z. H. B. C., & Othman, A. B. (2016). Teaching and Learning Enhancement Based on Telegram Social Media Tool. *Jurnal Intelek*, 11(1), 7-11.
- ITU. (2015). ITU releases 2015 ICT figures. Retrieved from http://www.itu.int/net/pressoffice/press_releases/2015/17.aspx#.V643yJgrLIU
- Karimi, S. (1989). *Aspects of Persian syntax, specificity, and the theory of grammar*. (Unpublished doctoral dissertation). Seattle: University of Washington.
- Kukulka-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271-289. <https://doi.org/10.1017/S0958344008000335>
- Kukulka-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, 49(2), 207-218. <https://doi.org/10.1111/bjet.12580>
- Leech, N., Barrett, K., & Morgan, G. A. (2013). *SPSS for intermediate statistics: Use and interpretation*. New York: Routledge.
- Lin, C. J., Hwang, G. J., Fu, Q. K., & Chen, J. F. (2018). A flipped contextual game-based learning approach to enhancing EFL students' English business writing performance and reflective behaviors. *Journal of Educational Technology & Society*, 21(3), 117-131. <https://www.jstor.org/stable/26458512>
- Liu, P. L., & Chen, C. J. (2015). Learning English through actions: A study of mobile-assisted language learning. *Interactive Learning Environments*, 23(2), 158-171. <https://doi.org/10.1080/10494820.2014.959976>
- Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition*, 26(3), 399-432. <https://doi.org/10.1017/S0272263104263021>
- Ma, Q. (2020). Examining the role of inter-group peer online feedback on wiki writing in an EAP context. *Computer Assisted Language Learning*, 33(3), 197-216. <https://doi.org/10.1080/09588221.2018.1556703>
- Maftoon, P., Yazdani Moghaddam, M., Gholebostan, H., & Beh-Afarin, S. R. (2010). Privatization of English education in Iran: A feasibility study. *The Electronic Journal for English as a Second Language*, 13(4), 1-12.
- Nassaji, H. (2011). Immediate learner repair and its relationship with learning targeted forms in dyadic interaction. *System*, 39, 17-29. <https://doi.org/10.1016/j.system.2011.01.016>
- Nassaji, H. (2015). *The interactional feedback dimension in instructed second language learning: Linking theory, research, and practice*. London: Bloomsbury.
- Nassaji, H. (2016). Interactional feedback in second language teaching and learning: A synthesis and analysis of current research. *Language Teaching Research*, 20 (4), 535-562. <https://doi.org/10.1177/1362168816644940>

- Nassaji, H., & Swain, M. (2000). Vygotskian perspective on corrective feedback in L2: The effect of random versus negotiated help on the learning of English articles. *Language Awareness, 9*(1), 34-51. <https://doi.org/10.1080/09658410008667135>
- Ruegg, R. (2015). The relative effects of peer and teacher feedback on improvement in EFL students' writing ability. *Linguistics and Education, 29*, 73-82. <https://doi.org/10.1016/j.linged.2014.12.001>
- Sandelowski, M., Voils, C. I., & Knafl, G. (2009). On quantizing. *Journal of Mixed Methods Research, 3*(3), 208-222. <https://doi.org/10.1177/1558689809334210>
- Sato, M. (2013). Beliefs about peer interaction and peer corrective feedback: Efficacy of classroom intervention. *The Modern Language Journal, 97*(3), 611-633. <https://doi.org/10.1111/j.1540-4781.2013.12035.x>
- Shale, D. (2002). The hybridisation of higher education in Canada. *The International Review of Research in Open and Distributed Learning, 2*(2), 1-11. <https://doi.org/10.19173/irrodl.v2i2.64>
- Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly, 41*(2), 255-283. <https://doi.org/10.1002/j.1545-7249.2007.tb00059.x>
- Swain, M. (2010). Talking-it through: Languaging as a source of learning. In R. Batstone (Ed.), *Sociocognitive perspectives on language use/ learning* (pp. 112-130). Oxford: Oxford University Press.
- Talan, T. (2020). The effect of mobile learning on learning performance: A meta-analysis study. *Educational Sciences: Theory and Practice, 20*(1), 79-103.
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet interest communities and online gaming. *The Modern Language Journal, 93*, 802-821. <https://doi.org/10.1111/j.1540-4781.2009.00974.x>
- Tsui, A. B., & Ng, M. (2000). Do secondary L2 writers benefit from peer comments? *Journal of Second Language Writing, 9*(2), 147-170. [https://doi.org/10.1016/S1060-3743\(00\)00022-9](https://doi.org/10.1016/S1060-3743(00)00022-9)
- Van Lier, L. (1988). *The classroom and the language learner: Ethnography and second-language classroom research*. London: Longman.
- Vasquez, C., & Harvey, J. (2010). Raising teachers' awareness about corrective feedback through research replication. *Language Teaching Research, 14*(4), 421-443. <https://doi.org/10.1177/1362168810375365>
- Vurdien, R. (2020). Enhancing writing skills via mobile learning and wikis. In B. Zou and M. Thomas (Eds.), *Recent developments in technology-enhanced and computer-assisted language learning* (pp. 99-121). Hershey, PA: IGI Global.
- Vygotsky, L.S. (1986). *Thought and language*. Cambridge, MA: MIT Press.
- Yan, L. (2019). A study on WeChat-based collaborative learning in college English writing. *English Language Teaching, 12*(6), 1-9.
- Yang, M., Badger, R., & Yu, Z. (2006). A comparative study of peer and teacher feedback in a Chinese EFL writing class. *Journal of Second Language Writing, 15*(3), 179-200. <https://doi.org/10.1016/j.jslw.2006.09.004>

Zou, B., Wang, D., & Xing, M. (2016). Collaborative tasks in Wiki-based environment in EFL learning. *Computer Assisted Language Learning*, 29(5), 1001-1018.
<https://doi.org/10.1080/09588221.2015.1121878>

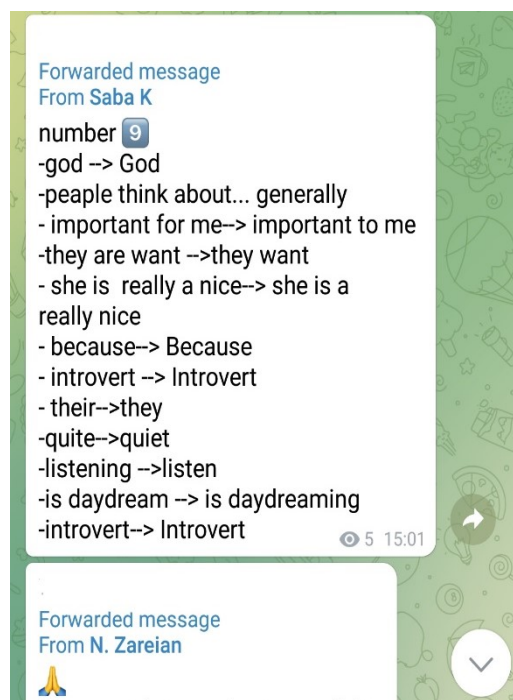
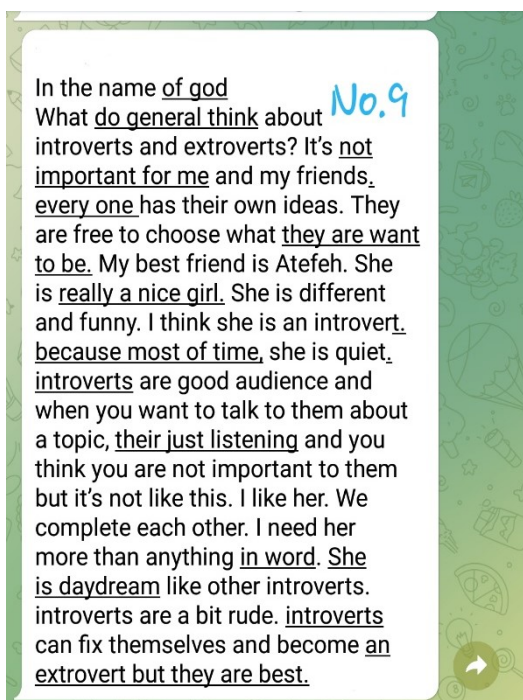
Appendices

Appendix A. The questions which were used in the semi-structured interview

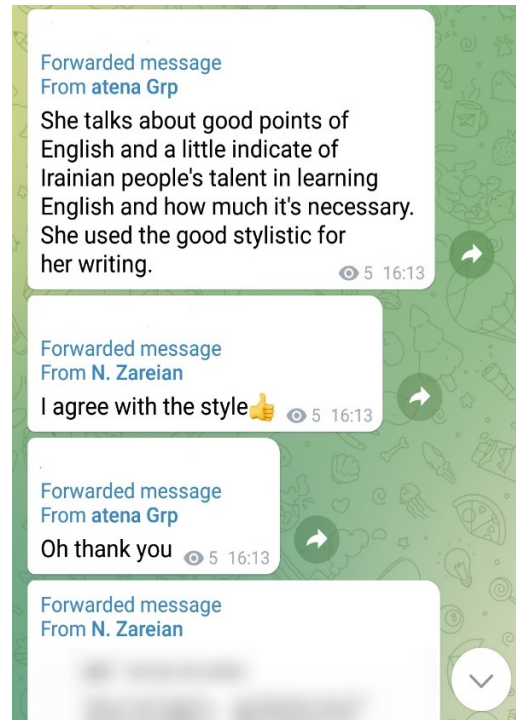
1. How did you find your experience of your current mobile learning?
2. What are the benefits of the mobile learning in this program? Why?
3. What are the drawbacks of the mobile learning in this program? Why?

1. تجربه خود را از یادگیری الکترونیکی با گوشی همراه چگونه ارزیابی می کنید؟
2. مزایا و فواید یادگیری الکترونیکی با گوشی همراه در پژوهش ی اخیر چیست؟ چرا؟
3. نقاط ضعف و چالش های یادگیری الکترونیکی با گوشی همراه در پژوهش ی اخیر چیست؟ چرا؟

Appendix B. An Example of a highlighted composition and the feedback from one of the learners



Appendix C. Interactional feedback between the teacher and the learners



**INTEGRATING PROJECT-BASED LEARNING, TASK-
BASED LANGUAGE TEACHING APPROACH
AND YOUTUBE IN THE ESP CLASS:
A STUDY ON STUDENTS' MOTIVATION**

by **Manuel Rodríguez-Peñarroja**

Universitat Jaume I – IULMA, Castellón, Spain

Universitat de València – SILVA, València, Spain

penarroj @ uji.es

manuel.rodriguez-penarroja @ uv.es

Abstract

ESP courses have been considered as crucial for the academic training of future professionals in different areas of knowledge. Their broad spectrum mainly includes the mastery of a foreign language, the learning of specific terminology, and the development of skills related to students' career needs. Recent research has examined the implementation of the task-based language teaching approach, the design and accomplishment of projects, and the use of technology for the enhancement of digital competence. Nevertheless, few studies have addressed the combination of these three key elements in the ESP class and its effects on students' motivation. This study examines the effects of merging of project-based learning sequenced into different communicative tasks on ESP students' motivation. A research project was designed and structured in communicative tasks integrating the use of YouTube as a source of multimodal input. To measure motivation, an adaptation of the intrinsic motivation questionnaire was administered to students. Results reveal high mean scores in the motivation subscales studied along with positive correlations between motivation and participants' academic performance. These findings may contribute to the body of research that appraises the value of merging different teaching methodologies and approaches for the teaching and learning of ESP disciplines.

Keywords: ESP; PBL; TBLT; ICTs; multimodal input

1. Introduction

Project-based learning (PBL) in the ESP teaching and learning context has been reported to promote cooperation and active learning techniques under a social constructivist learning theory

(Mamakou, 2009). Some of its key aspects include the integration of specific vocabulary and the practice of reading, listening, writing and speaking skills through project accomplishment. Moreover, it tends to allow students to face real problems to be solved, which require the use of authentic language and overcoming tasks that are centred on their future career prospects. The task-based language teaching (TBLT) approach is described as a communicative methodology for language teaching and learning that primarily sees language as a means of communication rather than an object of study (González-Lloret, 2017). It is through meaningful and properly designed and sequenced tasks that learners use and acquire the language communicatively. The relatedness of PBL and the TBLT approach seems convenient due to its step-by-step sequencing, problem-solving scope and communicative nature. Additionally, the last decade has witnessed developments in the application of Information and Communication Technologies (ICTs) and their function in the EFL, ESL, and ESP teaching and learning contexts.

This paper seeks to address the effects of combining PBL, the TBLT approach, and the use of YouTube videos as an ICT source of multimodal input on students' motivation in the ESP class. More specifically, this research aims to study students' motivation degrees after having overcome the project, their perceived value/usefulness towards the project, and the use of YouTube. To do so, a project on analysing TV storytelling advertisements was designed and carried out in groups in an attempt to promote critical thinking skills and the application of cumulative learning in problem resolution.

2. Literature review

2.1. English for specific purposes

The field of ESP has been characterised by the provision of specific language instruction addressing learners' needs in specialised knowledge domains (Işık-Taş & Kenny, 2020). Given the diversity of disciplines covered, both needs analysis of students' skills and knowledge and objective-accomplishment assessment are indispensable in order to design, plan and implement proper ESP programmes. These should consider socio-political and socio-economic contextual needs (Kennedy, 2012) in a more than ever globalised world in which high mobility and different occupational goals and needs are common concerns (Camicciottoli, 2010; Wozniak, 2010).

Despite the bulk of ESP studies concerning the use of language in workplace settings and the teaching and learning approaches already put into practice in higher education (HE) contexts, Basturkmen and Bocanegra-Valle (2018) account for a reduced number of studies reporting ESP design of teaching materials. Such an issue calls into question teachers' beliefs and practices relationship since curricular decisions are mostly informed by teachers' past experiences (MacDonald, Badger, & White, 2001). At this point, needs analysis (Li, 2018) becomes essential as regards teachers' decisions for the devising of convenient teaching practices and outcomes assessment as well. Hence importance must be given to HE in ESP teaching contexts since students are used to being taught general English and their progress to ESP learning requires awareness and knowledge of "key terminology and concepts" (Stoller & Robinson, 2018: 30) among other aspects. Such a transition from general English instruction to ESP should be facilitated through the design of ESP classes in which instructors' roles and materials design are of paramount importance.

Notwithstanding the usefulness of topic-based ESP course books that include the necessary linguistic contents and skills practice, these are sometimes outdated and the tasks and activities presented do not always fit learners' needs in real contexts. As a consequence, it is ESP instructors' role to incorporate authentic and updated materials that meet their needs and promote a positive and active learning environment in an attempt to link students' learning stage with their future professional careers (Vora, 2020). It is true that ESP instructors are not always experts on the knowledge domain of the discipline they are teaching and the selection and design of materials is highly time-consuming; however, students' motivation may be enhanced when provided with real language examples. PBL can be a useful approach to complement ESP coursebooks due to its problem-solving nature and the use of language skills (Peñarroja, 2020b).

2.2. Project-based learning

PBL is an educational approach that promotes students' active role in an attempt to undertake specific questions, issues or problems (Rugen, 2019). In short, PBL "is a general term describing an instructional method that uses projects as the central focus of instruction in a variety of disciplines" (Mamakou, 2009: 464). Such a diversity of fields makes PBL applicability to a range of ESP disciplines feasible and reasonable. When students face a project, they get involved

in a problem-solving process which is authentic and requires different task accomplishments (Mettas & Constantinou, 2007). On that account, any project has to be well contextualised, face authentic needs, and be of an interdisciplinary and cooperative nature (Ambrosio & Hernández, 2018; Corda, Coria, & Medina, 2020). Thus, the outcome of a project is a resulting product that combines linguistic and content knowledge directly related to its real world function.

Estruch and Silva (2006) suggest this instructional method should not replace traditional teaching techniques but work as a complement combined with other methodologies and learning approaches. The authors mention three main characteristics of PBL:

- It offers a multidisciplinary and integrative view of the subject being learnt since students need to apply and interconnect different knowledge areas to overcome a project. The different cognitive abilities required may result in the integration of working techniques and approaches that can guarantee multidisciplinary knowledge enhancement.
- It promotes cooperative work as the group of students is the main work unit. The abilities and requirements to overcome a project usually exceed the capacities of one student working on their own. Then, every member is required to contribute with their own knowledge on the subject, which could lead the group to success and the team members to learn from each other.
- It enhances research encouragement to expand their knowledge on a specific discipline. That can be achieved by developing high-order intellectual skills such as self-learning, self-criticism, problem-solving techniques, and the generation of new ideas through the processing, understanding and dismissal of new information.

Some of the advantages reported as regards the implementation of PBL include its potential to promote motivation (Dörnyei, 2001), the development of problem-solving abilities, social and critical reasoning skills, self-confidence and the learning of academic content knowledge (Hebron & Morris 2012; Stoller, 2006). On the other hand, the drawbacks identified include but are not limited to its focus on summative assessment instead of formative assessment (Rugen, 2019), and the division and achievement of the project workload by team members (Livingstone & Lynch, 2000).

To sum up, the implementation of PBL in the language classroom, i.e. in EFL/ESL/ESP contexts, has been reported as a type of TBLT by Larsen-Freeman and Anderson (2011) in which

language teaching through tasks upholds curricular development and objectives (Jackson & Burch, 2017). Additionally, it may support the main ESP coursebook contents by providing specific content-based practice through project development.

2.3. Task-based language teaching

TBLT is a communicative approach for the teaching of languages which takes task design as essential in the development of instructional units. Ellis (2003) suggests that the core idea of this methodology resides in its potential to grant the chance for language learning and language skills development when working collaboratively in hands-on learning, which is supported by Thomas (2013). Although there are different views on the conception of TBLT and the conceptualisation of tasks, Samuda and Bygate (2008: 69) provide a pedagogical definition of a task as a “holistic activity which engages language use in order to achieve some non-linguistic outcome while meeting a linguistic challenge, with the overall aim of promoting language learning through a process or product or both.” Ellis (2009) argues that a task must have a primary focus on meaning, a “gap” that requires students to infer meaning and express themselves by using their own linguistic and non-linguistic resources, and a main aim which involves the use of language to communicate meaning. Thus, it is task design and the sequencing that can enhance experiential learning by problem-solving and strengthening motivational factors (Tavakoli, Lofti, & Biria, 2019).

González-Lloret (2017) sets out the characteristics of tasks as being goal and meaning-oriented in nature. A task must be communicative and stress the importance of what it communicates instead of what has been linguistically learnt. The language used in a task and the purpose of the task itself should be authentic and reflect real needs in specific contexts. As regards the effectiveness of the task designed, students are thought to accomplish goals through task engagement which may lead them to use language with a purposeful aim. Consequently, language acquisition through communicative tasks is the main goal of the TBLT approach. As regards the implementation of technology, González-Lloret and Ortega (2014) suggest that TBLT task design can potentially benefit from the use of ICT resources owing to their positive motivational impact on students, which may foster language learning.

2.4. ICTs and multimodal input provision

Among the many changes that educational models have undergone in HE contexts, the use of ICTs has been widely researched these days. Their value as tools to foster students' digital competence, their multidisciplinary scope (Constantinou & Papadima-Sophocleous, 2020), and the positive impact found in ESL/EFL/ESP teaching and learning contexts has been reported as promising (Işık-Taş & Kenny, 2020; Kirkgöz & Dikilitaş, 2018; Muñoz-Luna & Taileffer, 2018). One of the manifold applications of ICTs is the provision of multimodal input (Peñarroja, 2020a, 2021) to foster students' multimodal literacy which "is now a widely established concept that refers to the ability to successfully engage with texts that integrate different semiotic resources" (Camiciottoli & Campoy-Cubillo, 2018: 1) and goes hand in hand with digital competence. As the authors suggest, there is a need for instructors to integrate multimodal and multimedia means in their teaching practices due to their presence in students' everyday lives, as a consequence of the growing impact of technological development (Peñarroja, 2020c). In this paper, multimodal input provision is described as the presentation of information that includes verbal and non-verbal modes, and requires visual, auditory and kinaesthetic sensory abilities to be processed and understood (Pellicer-Sánchez, Tragant, Conklin, Rodgers, Serrano, & Llanes, 2020).

As regards access to multimodal input, there are a number of subscription video-on-demand digital platforms such as Amazon, HBO and Netflix. Nevertheless, it is the free access platform YouTube which offers its viewers the highest number of thematically diverse videos in 54 different languages. Bekteshi (2019) suggests the use of YouTube as an educational tool through which accessibility to authentic materials can enhance the generation of new ideas for the development of the ESP curriculum. In the same line, Aprianto (2020) appraises the usefulness of well-selected YouTube contents for language learning since the multimodal texts available are related to a wide variety of topics that allow for content-based materials design. Similarly, Duffy (2008) argues that 2.0 technologies can aid in the language learning process by means of collaborative learning while contributing to EFL learners' motivation (Dodd, Camacho, Morocho, Paredes, Zúñiga, Pinza, Toro, Vargas, Benitez, & Rogers, 2015). Some of the mentioned applications may foster: i) students' critical thinking ability and skills development through the understanding of the information given (June, Yaacob, & Kheng, 2014), ii) their

interest (Kelsen, 2009), and iii) the use of YouTube content as supplementary material (Aprianto, 2020).

2.5. Motivation

In the existing literature, diverse motivational learning constructs have been developed, i.e. the socio-psychological model (Gardner & Lambert, 1972), which studies integrative and instrumental motivation, and the self-determination theory (SDT), which is concerned with intrinsic and extrinsic motivation (Ryan & Deci, 2000). Although seen as a part of a continuum and not mutually exclusive, the authors distinguish between extrinsic and intrinsic motivation. The main difference outlined is students' involvement in the overcoming of a task to test their own abilities i.e. intrinsic, or the accomplishment of the task due to a subsequent reward i.e. extrinsic. Deci and Ryan (2010) developed the intrinsic motivation inventory (IMI) to measure students' intrinsic motivation. This questionnaire consists of different subscales to measure particular motivational aspects. The subscale of *interest/enjoyment* assesses intrinsic motivation itself; *the perceived competence* and *perceived choice* subscales are described as positively predicting students' intrinsic motivation and self-report towards task completion; the *pressure/tension* subscale works as a negative indicator of intrinsic motivation; the *effort* indicator provides information about students' perceived effort when completing the task; the *value/usefulness* scale reflects students' assessment of the learning experience; the last subscale is that of *relatedness* which reveals students' reflections of interpersonal interactions when working in pairs or groups.

Research on motivation has suggested a positive relationship between students' motivation levels and i) ESP teaching and learning (Anwar & Wardhono, 2019; Jafari & Shokrpour, 2012), ii) TBLT (Douglas & Kim, 2014; González-Lloret & Ortega, 2014; Oskoz & Elola, 2014; Tavakoli et al., 2019), iii) different ICTs used, for instance, YouTube (Aprianto, 2020; Bekteshi, 2019; Payne, Campbell, Bal, & Piercy, 2011) web learning, technology-enhanced language learning (TELL) and computer assisted language learning (CALL) (Aleissa, 2017; Francis, 2017), and iv) PBL (Estruch & Silva, 2006). Peñarroja's (2020b, in press) studies revealed positive motivational effects when PBL and ICTs were used as a core methodological basis in the ESP teaching and learning context. Both studies analysed students' motivation; the

main difference residing in the type of project since the first study (2020b) was a collaborative groups project aimed at the design of a corporate web page using the online web pages editor WIX, while the latter (in press) addressed academic writing skills and the use of online automated writing evaluation (AWE) resources i.e. ProWriting Aid, Grammarly and Proofreading.

Given the positive effects in motivation when these teaching approaches and the use of technologies are put into practice, the present study attempts to merge PBL sequenced in communicative tasks and the use of YouTube as an ICT multimodal input source for the teaching of ESP in the Bachelor's programme in Advertising and Public Relations.

3. Methodology

3.1. The aim of the study

The main aim of this research was to study different motivational aspects when PBL and TBLT are put into practice in the English for Communicators ESP class, and YouTube is used as an ICT multimodal input source for the exemplification of specific terminology and the analysis of advertisements. With this in mind, the following research questions (RQ) were formulated:

1. What impact does the methodology put into practice have in the motivational subscales under study?
2. Is there a relationship between students' motivation and their academic performance in the project?
3. What is students' perception as regards the usefulness of the project and the use of YouTube for the understanding of specific terminology?

3.2. Participants and the context

Participants were 89 first-year undergraduate students enrolled in the Bachelor's programme in Advertising and Public Relations at Universitat Jaume I. Due to the incompleteness of data and session absences, 79 students (N=79) participated in the study, with a mean age of (M=18.78). Their English proficiency (M=38.23) was pre-intermediate after completing the Quick Placement

Test (UCLES, 2001) which establishes that values between 30 and 39 out of 60 correspond to a B1 level (Council of Europe, 2018).

3.2. Design and procedure

The instructional model was designed under the TBLT approach. In Table 1 below a summary with the description of the sessions, the instructional treatment and objectives is provided.

Table 1. Instructional treatment design

Tasks/sessions	Instructional treatment	Objectives
Warm-up 1 × 90'	<ul style="list-style-type: none"> • Project description • Explicit instruction: <ul style="list-style-type: none"> ○ Product/service vs brand advertisements ○ Factual vs storytelling advertisements ○ YouTube video on storytelling 	<ul style="list-style-type: none"> • Set objectives, deadlines and group organisation • Familiarise students with different types of advertisements • Introduce new ESP vocabulary • Exposure to multimodal input: YouTube advertisements examples
Pre-task 2 × 90'	<ul style="list-style-type: none"> • Research articles reading: <ul style="list-style-type: none"> ○ Reading comprehension questions ○ Guided discussion in class • Explicit instruction: <ul style="list-style-type: none"> ○ Visual and persuasion techniques • Practice: <ul style="list-style-type: none"> ○ Online reading on branding ○ TV ads analysis ○ Guided discussion in class 	<ul style="list-style-type: none"> • Introduce students to reading academic research articles • Practise reading comprehension skills and information synthesis • Exposure to multimodal input: YouTube examples • Practise oral skills: describe, opine, exemplify and show agreement and disagreement • Introduce new ESP vocabulary (multimodal conceptualisation and exemplification) • Exposure to multimodal input: YouTube examples and analysis
Task 1 × 90'	<ul style="list-style-type: none"> • TV advertisement selection and group analysis 	<ul style="list-style-type: none"> • Enhance cooperative work, share and apply the concepts previously learnt for the analysis • Search of TV advertisements and information related to them
Post-task 2 × 90'	<ul style="list-style-type: none"> • Oral presentations in groups • Feedback provision 	<ul style="list-style-type: none"> • Practice oral presentation skills • Give and receive feedback from the teacher and other students

Throughout the warm-up session, the project, its objectives, deadlines and assessment criteria were described to the students. The organisation of the class in groups of four or five students maximum was arranged as well. Then, students received explicit instruction on the different types of audiovisual advertisements (“ads”) focusing on the distinction of [product or service ads](#) vs [brand ads](#), and [factual or expository ads](#) vs [storytelling ads](#) (Dessart, 2018). Along with the definitions, audiovisual examples were seen in class. Having established the main grounds for the project, the students were invited to watch a [YouTube video](#) (Hoff, 2015), which included a description of storytelling and examples. At the end of the session, they were told to read two research articles related to storytelling advertising by Zambrano (2018), as well as Lundqvist, Liljander, Gummerus, and Van Riel (2013) at home. The first gives insights into the nature and concept of storytelling in printed and audiovisual advertisements while the second is an empirical study on the impact of storytelling on the consumers’ perception of the brand.

The pre-task was divided into two sessions. In the first session, students were told to collaboratively answer two reading comprehension questions per article in order to raise their awareness on storytelling advertisements and their impact on potential customers. Then, different visual and persuasion techniques were explicitly presented to the class along with YouTube audiovisual examples, i.e. multimodal input provision. Some of the visual techniques described were the use of colours, copy, high and low-angle camera shots, the layout of the product, the use of slogans, music, sound effects and voice-over. As regards persuasion techniques, the use of [bandwagon](#), [loaded language](#), [bait and switch](#), [product comparison](#), [emotional appeal](#), [celebrities’ role](#) and [humour](#) were also described and audiovisually exemplified. Then, students read an online text on brand core values (Anthem Branding, 2019) with the purpose of understanding companies’ brand image and its effect in the ads produced. The second session was devoted to the analysis of audiovisual ads in class. Students worked in teams and analysed different storytelling advertisements of competing companies such as Burger King and McDonald’s fast food products and BMW and Mercedes Benz makes of cars. They had to briefly describe the type of product advertised, and determine the main message conveyed and its target audience. Next, they identified the visual techniques and persuasive resources, and their intended effect on

the audience. Their answers were shared in class for discussion. The last part of the class was devoted to the selection of the advertisement to analyse for its posterior presentation.

In the task, students analysed the advertisement selected in groups. Their assignments included the search for information related to the advertisement and company in order to i) identify the brand values, the target audience, main message and secondary ideas/messages if any, ii) describe the storytelling structure, analyse and describe visual techniques and persuasive resources, iii) state their own opinion by summarising their analysis as regards storytelling's intended impact with the specificities of the selected advertisement. The post-task was divided into two sessions devoted to the preparation and performance of oral presentations. Explicit instruction on how to organise and give their presentations was provided to students.

3.3. Instruments for data collection and analysis

Participants' proficiency in English was measured with the Quick Placement Test (UCLES; 2001). The motivational factors under analysis were studied by the completion of an adaptation of the IMI (Deci & Ryan, 2010). Once the project ended, students were given a link to a Google forms questionnaire to rate a total of 25 motivation-related items on a 1 (not at all true) to 5 (very true) Likert scale basis. The questionnaire was divided into the subscales of interest/enjoyment (5 items), perceived competence (5 items), effort/importance (3 items), pressure/tension (2 items), perceived choice (3 items) and value/usefulness (7 items). The internal consistency of the questionnaire was measured by Cronbach's alpha coefficient ($\alpha = .71$). Results were compiled and statistically analysed using SPSS v.26. Students' presentation performance was assessed using the Euroexam B1 marking scheme (Euroexam International, n.d.) and a self-developed rubric to assess the contents derived from their analysis. In order to interpret the results of the different motivation subscales, the following parameters were established:

Table 2. Mean range and motivation degrees (1 to 5 Likert scale)

Mean Range	Motivation degree
3.68–5.00	High
2.34–3.67	Moderate
1.00–2.33	Low

3.4. Results

The first research question was aimed at studying the effects of the methodology put into practice and the use of YouTube as a multimodal input source for vocabulary exemplification and the analysis of ads on students' motivation. Results on the different motivation subscales are presented in Table 3 below.

Table 3. Motivation questionnaire descriptive statistics results

Subscale	Items	Min	Max	Mean	SD
Interest/enjoyment	5	2.80	5.00	3.78	.54
Perceived competence	5	2.20	5.00	3.47	.57
Effort/importance	3	2.67	5.00	4.21	.60
Pressure/tension	2	1.00	5.00	2.61	.90
Perceived choice	3	2.00	5.00	3.89	.75
Value/usefulness	7	2.57	4.71	4.00	.46
Total IMI	25	3.08	4.40	3.75	.27

From the analysis of data, students report a high degree of motivation in the subscales of *interest/enjoyment* (M=3.78) which measures intrinsic motivation per se, *effort/importance* (M=4.21), *perceived choice* (M=3.89), which is a positive indicator of self-reporting and intrinsic motivation, and *value/usefulness* (M=4.00), which implies students' perception of the project as valuable and has a self-regulating and internalisation effect towards the activities and tasks practised. Contrary to the initial expectations, students' mean score in the subscale of *perceived competence* (M=3.47) is moderate. A possible explanation could be the novelty in project accomplishment as first-year students and their mastery of YouTube usage not related to the project requirements. The *pressure/tension* perceived when overcoming the task is low (M=2.61) and that fact may have fostered their intrinsic motivation. Last, the total mean score of the IMI questionnaire, which determines the overall motivation degree, is high as well (M=3.75).

The second research question addressed the relationship between students' overall IMI scores and their academic performance i.e. individually, in group, and total assessment results. With the objective of determining these relations, the Pearson product-moment correlation (r) was computed. Results are presented in Table 4 below.

Table 4. Correlation matrix results

		1	2	3	4
1. Total IMI	Pearson (<i>r</i>)	1	.235*	.246*	.332**
	Sig. (2-tailed)		.037	.029	.003
2. Individual assessment	Pearson (<i>r</i>)	.235*	1	.183	.689**
	Sig. (2-tailed)	.037		.106	.000
3. Group assessment	Pearson (<i>r</i>)	.246*	.183	1	.818**
	Sig. (2-tailed)	.029	.106		.000
4. Total assessment	Pearson (<i>r</i>)	.332**	.689**	.818**	1
	Sig. (2-tailed)	.003	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Results confirm significant positive correlations between students' scores obtained from the IMI questionnaire and their individual performance ($r = .235, p < .05$), group performance ($r = .235, p < .05$), and global assessment ($r = .332, p < .01$). Even the fact that the correlation analysis does not indicate a cause-effect relationship, it could be hypothesised that higher motivation levels promote active engagement and learning by doing which is revealed in students' final marks.

The third research question was directed at the study of students' perceptions and motivation towards the value/usefulness of the project and the use of ICTs (YouTube). Close attention is paid to the items assessing the subscale of value/usefulness from the IMI questionnaire. Results are shown in Table 5 below.

Table 5. Task value/usefulness descriptive statistics results

Item	Min.	Max.	Mean	SD
19. I believe this project could be of some value to me.	2.00	5.00	3.82	.88
20. I would be willing to do this again because it has some value to me.	1.00	5.00	3.89	.94
21. I believe doing this project could be beneficial to me.	2.00	5.00	3.85	.86
22. I believe the use of ICTs could be useful for my studies.	1.00	5.00	4.15	1.06
23. Using ICT resources provides me with information that would lead to better decisions.	1.00	5.00	4.05	.84
24. Using ICT resources improves my work performance.	1.00	5.00	4.03	.98
25. Using ICT resources enhances my effectiveness in my work.	1.00	5.00	3.85	.86

As seen in Table 5, items 19 to 21 present students' opinions of the project itself while items 22 to 25 are directed at the use of ICTs. Students' mean scores as regards their perception of the project value (M=3.82), their willingness to do similar projects (M=3.89), and the perceived benefits implied (M=3.85) are high. Similarly, students' impression in relation to the use of ICT resources (YouTube) has been highly valued with reference to its usefulness (M=4.15), the information accessed (M=4.05), their work performance (M=4.03) and effectiveness (M=3.85). These results point towards students' positive attitude towards the project plan, design and outcomes, and the use of ICT resources as valuable and beneficial for their academic life.

4. Discussion

The results from the first research question may indicate overall positive motivational outcomes in students when PBL is put into practice and structured following the TBLT approach in an ESP teaching and learning context. The mean score results from the motivation questionnaire subscales concur well with Anwar and Wardhono's (2019), and Jafari and Shokrpour's (2012) studies in the ESP contexts of industrial engineering and medicine respectively, particularly the effects of learning experiences and intrinsic motivation on students' learning outcomes. These results provide additional support for the positive impact of PBL experiential learning and motivation enhancement as reported by Dörnyei (2001) and Tavakoli et al. (2019).

The usefulness of YouTube as an ICT resource for the multimodal exemplification and conceptualisation of specific terminology, and the analysis of real advertisements seems to be consistent with Douglas and Kim's (2014) as well as González-Lloret and Ortega's (2014) previous assumptions on the appropriateness of merging TBLT and ICTs for the design of technology-mediated communicative tasks – in particular, its effects on students' active learning, task performance and increasing motivation (Oskoz & Eola, 2014; Peñarroja, 2020b, in press).

For the second research question, the significant correlations between the IMI total results and students' performance underlie the principles of students' active role in multidisciplinary problem-solving tasks that require cooperative work (Mettas & Constantinou, 2007), and promote self-learning and critical thinking abilities (Ambrosio & Hernández, 2018; Corda et al., 2020; Estruch & Silva, 2006). In addition, students' performance results may be

related to task engagement (González-Lloret, 2017) and their learning of content knowledge as suggested by Hebron and Morris (2012) and Stoller (2006).

With reference to the third research question, students have positively valued both the project and the use of YouTube as a means for exemplifying and conceptualising new terminology in the ESP field of study. Our results are in line with the assumptions of Ambrosio and Hernández (2018) and Corda et al. (2020), which highlighted the effects of a well-contextualised project facing students' future real needs that require interdisciplinary knowledge and problem-solving abilities. Achieving experiential learning through the project and the use of YouTube may well have contributed to students' project interest (Kelsen, 2009), the enhancement of critical thinking skills (June et al., 2014), and motivation towards overcoming the project and the use of YouTube (Aprianto, 2020; Dodd et al., 2015).

Nevertheless, the findings of this study should be interpreted with caution due to the number of participants in the study and the specificity of the ESP project designed for first-year students of the Bachelor's programme in Advertising and Public Relations. The use of YouTube as a multimodal input source has helped in promoting students' project engagement, their understanding of specific vocabulary and their motivation towards project accomplishment. ESP instructors must know that the use of ICTs and PBL is highly time-consuming and requires careful planning. The selection of meaningful YouTube videos requires instructors' previous analysis and the use of random videos should be avoided.

5. Conclusion

Motivation is crucial for the activation of students' different learning skills and processes. This paper has investigated the effects of implementing PBL and TBLT approaches and the use of YouTube as an ICT for multimodal input provision on students' motivation in the ESP class. Students have reported overall positive results in the motivational subscales studied. Results from that data unveil significant correlations between students' motivation towards the ESP project and their performance (Anwar & Wardhono, 2019). Correspondingly, students have positively perceived the project tasks and the use of YouTube as previously suggested by González-Lloret and Ortega (2014), Bekteshi (2019) and Aprianto (2020).

This paper has highlighted the importance of experiential learning in the ESP class by project-solving. Findings support the idea that projects divided into communicative tasks that align with students' interests can foster their motivation and commitment in project accomplishment. The significance of our contribution lies in the value that projects add to the ESP courses curriculum although their design is time consuming and these may not always fit learners' expectations at some learning stages, which can be frustrating for both instructors and ESP learners. Some of the implications derived from our findings point towards the implementation of projects as a complement to ESP course books since these may well tally with students' needs, course expectations and learning goals.

Acknowledgement

This study is part of the Educational Innovation project "Hacia el TFG y más allá: Ilusión y coordinación docente en el Grado de Publicidad Y RRPP" (USE, código 3797), Universitat Jaume I.

References

- Aleissa, D. (2017). *The effect of technology on Saudi students learning English as a foreign/second language*. (Doctoral dissertation). Fairfax (VA): George Mason University. Retrieved from <https://hdl.handle.net/1920/11220>
- Ambrosio, R. & Hernández, J. S. (2018). Aprendizaje por proyectos, una experiencia socioformativa [Learning through projects, a socioformative experience]. *Voces de la educación*, 3(5), 3-19. Retrieved from <https://www.revista.vocesdelaeducacion.com.mx/index.php/voces/article/download/88/72/>
- Anthem Branding. (2019). *What are brand core values?* Retrieved from https://medium.com/@anthembranding_boulder/what-are-brand-core-values-513efc84f989
- Anwar, K., & Wardhono, A. (2019). Students' perception of learning experience and achievement motivation: prototyping English for academic purposes (EAP). *International Journal of Instruction*, 12(3), 271-288. <https://doi.org/10.29333/iji.2019.12317a>
- Aprianto, D. (2020). To what extent does YouTube contents-based language learning promote an English proficiency? *Journal of English Language Teaching and Literature (JELTL)*, 3(2), 108-126. doi: [10.47080/jeltl.v3i2.994](https://doi.org/10.47080/jeltl.v3i2.994)
- Baştürkmen, H., & Bocanegra-Valle, A. (2018). Materials design processes, beliefs and practices of experienced ESP teachers in university settings in Spain. In Y. Kırkgöz, & K. Dikilitaş (Eds.), *Key issues in ESP in higher education* (pp. 13-27). Cham, Switzerland: Springer.
- Bekteshi, E. (2019). The effects of YouTube in ESP classes. *Knowledge International Journal*, 34(2), 511-516. Retrieved from <https://ikm.mk/ojs/index.php/KIJ/article/view/2147>

- Camiciottoli, B. C. (2010). Meeting the challenges of European student mobility: Preparing Italian Erasmus students for business lectures in English. *English for Specific Purposes*, 29(4), 268-280. <https://doi.org/10.1016/j.esp.2010.01.001>
- Camiciottoli, B. C. & Campoy-Cubillo, M. (2018). Introduction: The nexus of multimodality, multimodal literacy, and English language teaching in research and practice in higher education settings. *System*, 77, 1-9. doi: [10.1016/j.system.2018.03.005](https://doi.org/10.1016/j.system.2018.03.005)
- Constantinou, E. K., & Papadima-Sophocleous, S. (2020). The use of digital technology in ESP: Current practices and suggestions for ESP teacher education. *Journal of Teaching English for Specific and Academic Purposes*, 8(1), 17-29. doi: [10.22190/JTESAP2001017K](https://doi.org/10.22190/JTESAP2001017K)
- Cordeiro, M. C., Coria, M. K., & Medina, M. C. (2020). Aprendizaje basado en proyectos en la enseñanza de la Bibliotecología: innovaciones pedagógicas en y fuera de las aulas [Project-based learning in the teaching of Library Science: pedagogical innovations in and outside the classroom]. *CPUE, Revista de Investigación Educativa*, (30), 129-143. doi: [10.25009/cpue.v0i30.2685](https://doi.org/10.25009/cpue.v0i30.2685)
- Council of Europe (2018). *Common European framework of reference for languages: Learning, teaching, assessment. Companion volume with new descriptors*. Cambridge, UK: Cambridge University Press.
- Deci, E. L., & Ryan, R. M. (2010). *Intrinsic motivation inventory (IMI): Scale description*. Retrieved from <https://tinyurl.com/y4rdnfn7>
- Dessart, L. (2018). Do ads that tell a story always perform better? The role of character identification and character type in storytelling ads. *International Journal of Research in Marketing*, 35(2), 289-304. <https://doi.org/10.1016/j.ijresmar.2017.12.009>
- Dodd, A. R., Camacho, G. K., Morocho, E. L., Paredes, F. M., Zúñiga, A., Pinza, E. I., Toro, L. V., Vargas, A. B., Benítez, C. D., & Rogers, S. (2015). The use of supplementary materials in English foreign language classes in Ecuadorian secondary schools. *English Language Teaching*, 8(9), 187-195. doi: [10.5539/elt.v8n9p187](https://doi.org/10.5539/elt.v8n9p187)
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge, UK: Cambridge University Press.
- Douglas, S. R., & Kim, M. (2014). Task-based language teaching and English for academic purposes: An investigation into instructor perceptions and practice in the Canadian context. *TESL Canada Journal*, 1(1), 1-22. doi: <https://doi.org/10.18806/tesl.v31i0.1184>
- Duffy, P. (2008). Engaging the YouTube Google-eyed generation: Strategies for using Web 2.0 in teaching and learning. *The Electronic Journal of e-Learning*, 6(2), 119-130. Retrieved <https://academic-publishing.org/index.php/ejel/article/view/1535/1498>
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford, UK: Oxford University Press.
- Ellis, R. (2009). Task-based language teaching: Sorting out the misunderstandings. *International Journal of Applied Linguistics*, 19(3), 221-246. <https://doi.org/10.1111/j.1473-4192.2009.00231.x>

- Estruch, V., & Silva, J. (2006). Aprendizaje basado en proyectos en la carrera de Ingeniería Informática [Project-based learning in IT engineering]. *Actas de las XII Jornadas de la Enseñanza Universitaria de la Informática (JENUI, 2006)*. Deusto, Bilbao, 12, 339-346.
- Euroexam International (n.d.). Level B1 threshold: Speaking marking scheme. Retrieved from http://www.euroexam.com/sites/network/files/file/download/Marking_Criteria/mc_level_b1_speaking.pdf
- Francis, J. (2017). *The effects of technology on student motivation and engagement in classroom-based learning*. (Doctoral Dissertation). Biddeford, ME: University of New England. Retrieved from <https://dune.une.edu/theses/121/>
- Gardner, R., & Lambert, W. (1972). *Attitudes and motivation in second-language learning*. Rowley, MA: Newbury House.
- González-Lloret, M. (2017). Technology for task-based language teaching. In C. A. Chapelle, & S. Sauro (Eds.), *The handbook of technology and second language teaching and learning* (pp. 234–247). Hoboken, NJ: Wiley Blackwell
- González-Lloret, M., & Ortega, L. (Eds.). (2014). *Technology-mediated TBLT: Researching technology and tasks* (Vol. 6). Philadelphia/Amsterdam: John Benjamins.
- Hebron, C. L., & Morris, D. J. (2012). 'Spurring you on and rooting for each other' – the potential value of group research projects. *Journal of Peer Learning*, 5, 63-77. Retrieved from <https://ro.uow.edu.au/ajpl/vol5/iss1/8/>
- Hoff, G. [FutureLearn]. (2015, Nov 5). *What do we mean when we talk about storytelling in advertising* [Video]. YouTube. <https://www.youtube.com/watch?v=BBHash4H0Gc>
- Işık-Taş, E. E., & Kenny, N. (2020). Current practices, challenges, and innovations in ESP instruction and research. In N. Kenny, E. E. Işık-Taş, & H. Jian (Eds.). *English for Specific Purposes instruction and research* (pp. 1–8). Cham, Switzerland: Palgrave Macmillan. doi [10.1007/978-3-030-32914-3_1](https://doi.org/10.1007/978-3-030-32914-3_1)
- Jackson, D. O., & Burch, A. R. (2017). Complementary theoretical perspectives on task-based classroom realities. *TESOL Quarterly*, 51(3), 493-506. <https://doi.org/10.1002/tesq.393>
- Jafari, S. M., & Shokrpour, N. (2012). The beliefs of Iranian ESP students about language learning. *Journal of Educational and Social Research*, 2(3), 157. Retrieved from <http://www.richtmann.org/journal/index.php/jesr/article/view/11877>
- June, S., Yaacob, A., & Kheng, Y. K. (2014). Assessing the use of YouTube videos and interactive activities as a critical thinking simulation for tertiary students: An action research. *International Education Studies*, 7(8), 56-67. doi [10.5539/ies.v7n8p56](https://doi.org/10.5539/ies.v7n8p56)
- Kelsen, B. (2009). Teaching EFL to the iGeneration: A survey of using YouTube as supplementary material with college EFL students in Taiwan. CALL-EJ: Conference Presentation on 2nd Conference on College English, National Chengchi University, Taipei, Taiwan. 1-20
- Kennedy, C. (2012). ESP projects, English as a global language, and the challenge of change. *Ibérica, Revista de la Asociación Europea de Lenguas para Fines Específicos*, 24, 43-54.

- Kırkgöz, Y., & Dikilitaş, K. (Eds.). (2018). *Key issues in ESP in higher education* (Vol. 11). Springer. <https://doi.org/10.1007/978-3-319-70214-8>
- Larsen-Freeman, D. & Anderson, M. (2011). *Techniques and principles in language teaching*. Oxford, UK: Oxford University Press.
- Li, L. (2018). Integrating technology in ESP: Pedagogical principles and practice. In R. Muñoz-Luna & L. Taillefer (Eds.), *Integrating information and communication technologies in ESP* (pp. 7–25). Cham, Switzerland: Springer.
- Livingstone, D., & Lynch, K. (2000). Group project work and student-centred active learning: Two different experiences. *Studies in Higher Education*, 25(3), 325-345. <https://doi.org/10.1080/713696161>
- Lundqvist, A., Liljander, V., Gummerus, J., & Van Riel, A. (2013). The impact of storytelling on the consumer brand experience: The case of a firm-originated story. *Journal of Brand Management*, 20(4), 283-297. doi [10.1057/bm.2012.15](https://doi.org/10.1057/bm.2012.15)
- MacDonald, M., Badger, R., & White, G. (2001). Changing values: What use are theories of language teaching and learning? *Teaching and Teacher Education*, 17, 949-963. [https://doi.org/10.1016/S0742-051X\(01\)00042-7](https://doi.org/10.1016/S0742-051X(01)00042-7)
- Mamakou, I. (2009). Project-based instruction for ESP in higher education. In R. de Cássia Veiga Marriott & P. Lupion Torres (Eds.), *Handbook of Research on E-Learning Methodologies for Language Acquisition* (pp. 456-479). Hershey, Pennsylvania: IGI Global.
- Mettas, A. C. & Constantinou, C. C. (2007). The technology fair: A project-based learning approach for enhancing problem solving skills and interest in design and technology education. *International Journal of Technology and Design Education* 18, 79-100. <https://doi.org/10.007/s10798-006-9011-3>
- Muñoz-Luna, R., & Taillefer, L. (2018). *Integrating information and communication technology in ESP*. Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-319-68926-5_1
- Oskoz, A., & Elola, I. (2014). Promoting foreign language collaborative writing through the use of Web 2.0 tools and tasks. In M. González-Lloret & L. Ortega (Eds.), *Technology-mediated TBLT* (pp. 115-148). Amsterdam: John Benjamins.
- Payne, N. J., Campbell, C., Bal, A. S., & Piercy, N. (2011). Placing a hand in the fire: Assessing the impact of a YouTube experiential learning project on viral marketing knowledge acquisition. *Journal of Marketing Education*, 33(2), 204-216. <https://doi.org/10.1177/0273475311410853>
- Pellicer-Sánchez, A., Tragant, E., Conklin, K., Rodgers, M., Serrano, R., & Llanes, Á. (2020). Young learners' processing of multimodal input and its impact on reading comprehension: An eye-tracking study. *Studies in Second Language Acquisition*, 42(3), 577-598. <https://doi.org/10.1017/S0272263120000091>
- Peñarroja, M. R. (2020a) *Analysing the pragmatics of speech acts in sitcom and drama audiovisual genres*. Newcastle, UK: Cambridge Scholars Publishing.
- Peñarroja, M. R. (2020b) La motivación y el uso de las TIC: Integrando el diseño web corporativo en la clase de inglés para fines específicos [Motivation and the use of TICs: Integrating corporative web design in the English for specific purposes class]. In Sánchez-Rivas, E., Colomo-Magaña, E., Ruiz-Palmero, J., Sánchez-

- Rodríguez, J (Eds.), *Tecnologías educativas y estrategias didácticas* (pp. 713-722). Malaga: Universidad de Málaga: uma editorial.
- Peñarroja, M. R. (2020c). Pragmatics: Why use audiovisual input in second and foreign language learning contexts? *Revista Docência e Cibercultura*, 4(3), 161-178. <https://doi.org/10.12957/redoc.2020.53890>
- Peñarroja, M. R. (2021). Corpus pragmatics and multimodality: Compiling an ad-hoc multimodal corpus for EFL pragmatics teaching. *International Journal of Instruction*, 14(1), 927-946. <https://doi.org/10.29333/iji.2021.14155a>
- Peñarroja, M. R. (in press) Academic writing through TBLT and AWE tools: A study on ESP students' intrinsic motivation. In *La docencia tiene TIC: un guiño al nuevo discente*. Valencia, Spain: Tirant lo Blanch.
- Rugen, B. (2019). Strengthening project-based learning with genre checkpoints. *The English Teacher*, 48(3), 115-127.
- Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Samuda, V. & Bygate, M. (2008). *Tasks in second language learning*. Houndmills, UK: Palgrave Macmillan.
- Stoller, F. (2006). Establishing a theoretical foundation for project-based learning in second and foreign language contexts. In G. H. Beckett, & P. C. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (pp. 19-40). Greenwich, CT: Information Age.
- Stoller, F. L., & Robinson, M. S. (2018). Innovative ESP teaching practices and materials development. In *Key issues in ESP in higher education* (pp. 29-49). Cham, Switzerland: Springer. doi [10.1007/978-3-319-70214-8_3](https://doi.org/10.1007/978-3-319-70214-8_3)
- Tavakoli, H., Lotfi, A. R., & Biria, R. (2019). Effects of CALL-mediated TBLT on motivation for L2 reading. *Cogent Education*, 6(1), 1-21. <https://doi.org/10.1080/2331186X.2019.1580916>
- Thomas, M. (2013). Task-based language teaching and CALL. In M. Thomas, H. Reinders, & M. Warshauer (Eds.), *Contemporary computer-assisted language learning* (pp. 341-358). London: Continuum.
- University of Cambridge Local Examinations Syndicate (UCLES) (2001). Quick placement test. Oxford: Oxford University Press.
- Vora, R. (2020) Integrating authentic materials and language skills in teaching English for specific purposes (ESP). In Scientific Collection "InterConf", (38): Proceedings of the 1st International Scientific and Practical Conference "Science, Education, Innovation: Topical Issues and Modern Aspects" (December 16-18, 2020) in Tallinn, Estonia; pp. 546-553. Retrieved from <https://www.interconf.top/documents/2020.12.16-18.pdf>
- Wozniak, S. (2010). Language needs analysis from a perspective of international professional mobility: The case of French mountain guides. *ESP*, 29, 243-252. <https://doi.org/10.1016/j.esp.2010.06.001>
- Zambrano, R. E. (2018). Digital advertising storytelling: consumer educommunication. *IROCAMM-International Review of Communication And Marketing Mix*, 1, 32-44. Retrieved from <https://revistascientificas.us.es/index.php/IROCAMM/article/view/5462>

EFL LEARNERS' ENGAGEMENT AND LEARNING MOTIVATION IN TEAM-BASED MOBILE LANGUAGE LEARNING THROUGH WHATSAPP

by **David Imamyartha, Eka Wahjuningsih, Alifiyah A'yunin, Asih Santihastuti, Mitasari,
Dinda Laura Trisna Ayu Fauzie and Ervin Candra Hari Andika**

University of Jember, Indonesia

corresponding author: david.fkip @ unej.ac.id

Abstract

The study aims at portraying EFL learners' interactivity and motivational dynamics when engaged in team-based mobile learning (TBML) through WhatsApp within the environment of English for Academic Purposes. Data were collected through survey on online learning engagement and learning motivation and analyzed using descriptive statistics coupled with correlation analysis. Thematic analysis was operative to analyze students' reflection for more fine-grained insights on the nature of collaborative mobile learning, supported with directed content analysis geared to Activity Theory (AT) on the archives of group's online discussion. Albeit technical challenges and negative affectivity therefrom, the findings emphasize the potency of WhatsApp as a social-network (SN) learning platform which engages language learners in supportive micro and macro learning environment as the pre-cursor to elevated motivation, self-regulation, and pedagogical rethinking. The implication highlights teacher's necessity to scaffold group dynamics and condition student's mentality to live the target language in the mobile learning.

Keywords: Activity Theory; engagement; motivation; team-based mobile learning; WhatsApp

1. Introduction

Vast advancement in mobile technology, including fast connection, powerful operating system, and massive data storage, has afforded effective mobile language learning (Viswanathan, 2012). Today's English learners prefer learning through mobile technology with unlimited opportunities for virtual collaboration and communication (Annamalai, 2019).

Recent studies have corroborated the impacts of mobile technology on increased learning motivation (Zou & Yan, 2014), positive attitude to language learning (Kukulskahulme & Lee, 2020), learning satisfaction (Wang, 2017), and more effective instruction (Sung et al., 2015). Fundamentally, mobile devices can no longer be viewed as toy of pastime intertwined with time wastage. Clear objective and interactive activities integrated into mobile

learning can help to motivate learning and develop academic skills, such as critical thinking, analyzing problem and solution, and creating a learning strategy (Ankeny, 2019; Grigoryan, 2020; Zhu & Wang, 2019).

In response to the upheaval of mobile technology, WhatsApp, despite its infancy as learning platform, has been acknowledged to generate positive attitudes to learning (Annamalai, 2019) and pose influential impact on vocabulary learning (Lai, 2016; Man, 2014), writing performance (Awada, 2016), and academic achievement (Alkhalaf et al., 2018). When investigating the online immersion environment mediated by WhatsApp, Lai (2016) reveals strong correlation between chat frequency and vocabulary gain. He contends that students' mentality to plunge into virtual language environment determines the magnitude of their learning outcome. Research by Awada (2016) unraveled the potential of WhatsApp-mediated critique writing instruction on university students. WhatsApp enhanced group discussion by providing comfortable environment where everyone can share their thoughts easily using multitudes of media. Albeit the existing studies reporting on the pedagogical potency of WhatsApp, this study holds the view that there is paucity on studies linking theory and practice regarding the use of WhatsApp in language learning, and thus further investigation needs to be underway to shed light on its pedagogical impact and make explicit how it can be integrated into online learning environments.

There are three voids the present study attempts to fill. First, in congruence with Kukulska-Hulme & Viberg (2017), this study also holds the view that meaningful collaborative learning affords substantial impact in fostering language learning outcome, yet previous works lack the nature of communicative and collaborative language learning mediated by WhatsApp (Andujar & Salaberri-Ramiro, 2019; Ankeny, 2019; Çetinkaya & Sütçü, 2018; Khan, 2020; and Lai, 2016). This study delved into TBML in formal courses anchored to different areas of English instruction (see Zhu & Wang, 2019 for an overview of TBML) as a pedagogical framework for designing mobile collaborative learning. Also, albeit the potential of Activity Theory (AT) to shed lights on students' mental process in collaborative learning (Awada, 2016), the majority of current discussions on the pedagogical use of WhatsApp has yet to embrace this framework for investigating students' engagement in MALL setting (AT-MALL) (see Lai, 2016; Man, 2014; Mistar & Embi, 2016 for example). Following Grigoryan (2020), this study is geared to AT-MALL for scrutinizing the interactivity of learning tool (WhatsApp), community of learning, and labor division in online English class. Another gap is that the

abovementioned studies overlooked the actual online language learning engagement mediated by the platform and language learning motivation occurring therefrom.

This study strived to unravel EFL learners' interactivity and motivational dynamics stemming from TBML mediated by WhatsApp. This objective was guided by the following research questions:

1. What are the profiles of students' online learning engagement mediated by WhatsApp in team-based mobile language learning?
2. What are the profiles of language learning motivation stemming from the engagement mediated by WhatsApp in team-based mobile language learning? Does higher rate of engagement lead to increased language learning motivation?
3. What are the students' voices on their engagement in team-based mobile language learning mediated by WhatsApp?

2. Theoretical framework

2.1. Activity Theory in MALL

Activity Theory (AT) denotes a concept aimed at interpreting human practices, particularly concerning human's interaction behavior and tool (Bakhurst, 2009). Grounded within dialectical psychology, it transcends the traditional concept of micro and macro, intervention and observation, thought and action, and qualitative and quantitative by encompassing three elements of the objective, the ecological, and the sociocultural (Engestrom, 1999). AT denotes a cross-disciplinary framework which views human interaction as physically, psychologically, and culturally situated in specific context and materially as well as socially mediated (Grigoryan, 2020). As Grigoryan contends, human activity takes place in harmony with the available instrument, the community, and the labor division among community members.

MALL is subordinate of m-learning which allows language learners to access and process learning resources at anytime and anywhere (Elaish et al., 2017). AT has been integrated into MALL, known as AT-MALL, due to the emergence of studies investigating the AT components in mobile learning environment (Sung et al., 2015). AT-MALL also involves six components: subject, object, regulation/control, tool, context, and communication (Sharples et al., 2007). This model offers a more complete and relevant framework for analyzing the mobile language learning experience under investigation as it relates to both AT and MALL. What follows is the AT-MALL framework in our study.

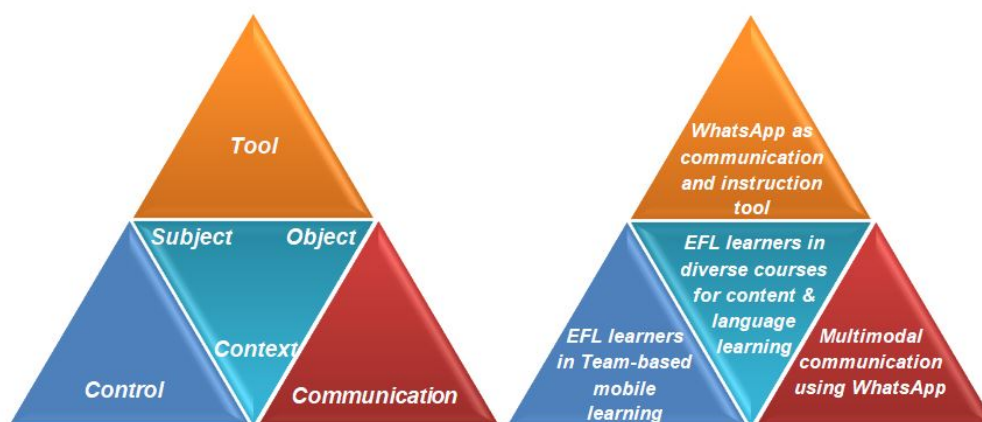


Figure 1. AT-MALL model in WhatsApp-mediated TBML (adapted from Sharples et al., 2007)

Figure 1 portrays the initial model of Activity Theory and the adapted model in team-based mobile learning mediated by WhatsApp. The subject in the study is the EFL learners at tertiary education wherein they are required to learn both discipline-related content and language. They partake in team-based mobile learning for the whole term, representing the regulation over the learning activity. Geared to community of learning within academic culture, the activity is mediated by interactive multimodal communication enabled by WhatsApp.

2.2. Team-based mobile language learning via WhatsApp

Language learning collaboration is congruent with labor division in AT in that both emphasize the essentials of learner autonomy and sociocultural nature of human activities as the precursor to learning outcomes (Bakhurst, 2009; Gibbes & Carson, 2013). One study by Resnik & Schallmoser (2019) delves into pedagogical structure oriented to online collaboration, e-Tandem, which underscores two focal components for language learning, encompassing reciprocity and autonomy. The former is germane to learners' commitment to their own and their partners' learning, while autonomy dictates learner's ability to design, monitor, and assess their progress.

The current discussions on collaboration mediated by mobile technology have marked multiple gains in cognitive, affective, and motivational dimension. Resnik & Schallmoser (2019) report that engaging learners of different cultural references through mobile technology

helps to scaffold their intercultural communication. In addition, collaboration through peer feedback has been proven effective to elevate communicative language proficiency (Bruen & Sudhershnan, 2016). Mobile technology also plays a crucial role in elevating achievement motivation (Alshaibani & Qusti, 2020) and learning satisfaction (Choi & Im, 2015).

TBML framework designed by Zhu and Wang (2019) encompasses four elements: a) permanent team division, b) readiness empowerment, c) application activity, and d) peer assessment. This design is actualized in conjunction with the socioconstructivist nature of language learning mediated by mobile technology. What is more, the framework is inherently congruent with the nature of abovementioned mobile collaborative learning in that TBML follows the idea that enacting holistic students-centered learning supported with well-developed learning materials and relevant e-resources, technology-aided instruction, and the shifting of teacher role will result in increased learning engagement and outcomes.

Deployed to power TBML, WhatsApp can serve as social, cultural, and collaborative tool to provide language learners with robust cognitive engagement, authentic communication, and entertainment (Awada, 2016; Ma, 2017; Resnik & Schallmoser, 2019). The present study contends that collaborative learning, active learning, sharing community, and learning community enhance learning experience and outcome. To this end, WhatsApp functions as the catalyst for learning as it amplifies learner collaboration in online course (Lai, 2016), and it therefore leads to the co-construction and dissemination of knowledge mediated by enhanced motivation (Annamalai, 2019), learner engagement (Rambe & Mkono, 2019), and meaningful language learning (Çetinkaya & Sütçü, 2018). Following abovementioned lines of thoughts, the present study proposes WhatsApp-aided TBML, the framework of which is shown below:

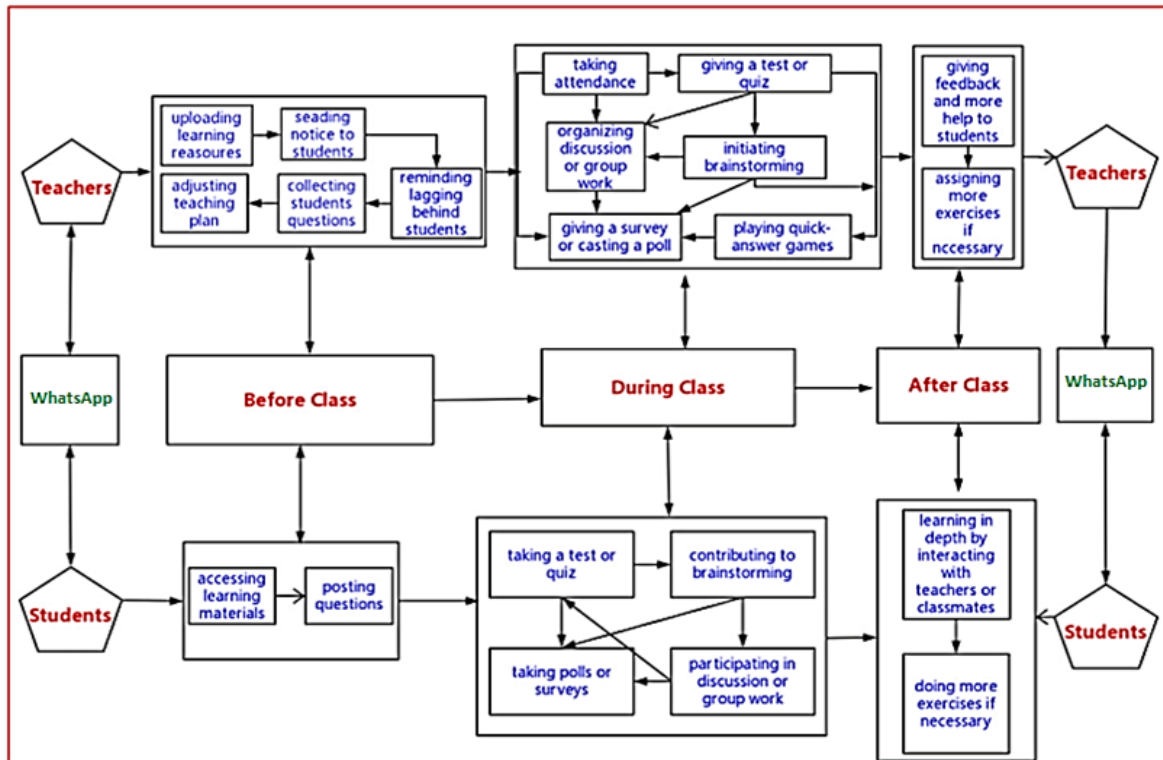


Figure 2. Typical learning activities in WhatsApp-aided TBML (adapted from Zhu & Wang, 2019)

3. The study

The current research delved into both quantitative and qualitative phenomena for informative, balanced, complete, and fruitful research results (Johnson & Onwuegbuzie, 2007). The approach allows focused investigation on *a priori* research questions without restricting the analysis on emerging findings.

3.1. Settings and participants

The study was conducted at an Indonesian university. Due to the pandemic, all courses were run online mediated by both computers and mobile phones, during ten meetings within a three-month timespan. The study involved 62 males and 313 females of different majors, with age ranging from 18 to 22 years old. The majority of the students were at the B1 level of CEFR, as necessitated by pre-requisite to the course enrollment. The study involved students majoring in English for Academic Purposes, Extensive Reading, Advanced Paragraph Writing, Teaching English as Foreign Language, and Critical Discourse Analysis. The courses on EAP constituted half of the entire samples. Hereunder was one sample lesson in one EAP class for Management students.

Topic: Environmental Economics

Learning objectives:

- a. Identifying stated details in a short video of explanatory genre
- b. Composing complex sentences to explain a series of environmental economic issues and relevant solutions

Table 1. Sample of instructional activities in TBML

Phase	Teacher activity	Student activity
Before class	<ol style="list-style-type: none"> 1. Informing the lesson plan 2. Sending the material 3. Preparing online quiz on e-learning 	<ol style="list-style-type: none"> 1. Learning the material
During class	<ol style="list-style-type: none"> 1. Showing a video on “Trash Village” 2. Distributing role-based listening task on the video 3. Assigning roles to each group: group leader, environmental analyst, economics analyst, & solution seekers, as shown by guided task 4. Monitoring group discussion 5. Giving feedback on discussion results 	<ol style="list-style-type: none"> 1. Analyzing the issues shown in the video 2. Completing the task based on the video 3. Sharing the roles with group members 4. Analyzing the videos and describing environmental issues, economic issues, and solutions as guided by the writing task 5. Sharing the discussion results with the whole class
After class	<ol style="list-style-type: none"> 1. Assigning the groups to collaborate on text composition of explanatory genre 	<ol style="list-style-type: none"> 1. Taking part in joint text composition by sharing different text parts

The research objective and procedure were explained to the participants, and they granted the written consent to partake in the study.

3.2. Data collection

The study employed a questionnaire on students’ learning engagement adapted from Dixon (2010). The other instrument measuring students’ language learning motivation was adapted from Xuejun (2020). Due to the relevance to mobile learning under investigation, original items were sorted, and selected items were translated into Indonesian language to ensure accurate understanding. The initial instrument was trialled with one class of 40 students for a reliability test. Out of 40 initial items, 1 item was removed due to unsatisfactory internal validity (p 0.492), resulting in a 39-item survey with α 0.921. For the third inquiry, two reflection questions were formulated and distributed to the students at the end of the term. These pertained to the following reflection points:

- a. How did the engagement in WhatsApp-aided TBML assist you in studying the course material and completing your assignments?

- b. What were your positive and negative experiences when engaged in WhatsApp-assisted TBML?

The students responded to these questions in Indonesian language to ensure flexibility and accuracy. For in-depth investigation and triangulation of the initial findings from the survey, archives of group chats were also put under analysis.

3.3. Data analyses

Descriptive statistics were operationalized to answer the first and second research question, with correlational analysis integrated to further probe into the latter. Following Braun and Clarke (2006), thematic analysis was at play upon analyzing the data for the third question, the data of which pertained to students' responses to the questionnaire and excerpts of WhatsApp chats. The triangulation on students' responses and WhatsApp chats was coupled with multiple coders and audit trail (Rambe & Mkono, 2019) for rigorous data analysis, especially on checking the accuracy of translated responses from the open-ended questionnaire.

3.4. Findings and discussion

3.4.1. RQ 1 – finding: high rate of online learning engagement

Our first analysis unraveled substantial learning engagement propelled by WhatsApp. The students reported an average of 4.1455 for the overall online learning engagement. This intense engagement was also evident in multifaceted areas of online learning engagement as students shouldered the responsibility of monitoring their learning, took part in discussion and individual assignment, supported their peers, and discovered personalized link with the language learning. With regard to learning skills, the students reported extensive monitoring and engagement in the online discussion both during and after the lesson ($M= 4.2147$, $SE= .03073$, $SD= .059514$). Such joint knowledge construction led to comprehensive organization of learning, by which students acquired important points of the lesson. In addition, they managed to learn from the discussion and posted comments to teacher and peer's responses. Students' participation in the online learning was found to be high ($M= 4.1622$, $SE=.03329$, $SD=.064468$). With students involved in discussion and group work, individual and group performance were maintained at fairly high intensity manifested in the discussion, collaboration, and perceived language ability ($M= 4.0809$, $SE= .03296$, $SD= .063819$). Since WhatsApp was easy to operate and offered interactive learning environment, students

confirmed strong emotional engagement ($M= 3.9749$, $SE= .03271$, $SD= .063339$) upon collaborating to reach learning goals.

WhatsApp catered for students' needs to collaborate with their peers and accomplish learning tasks, therefore creating a positive learning atmosphere (Annamalai, 2019; Çetinkaya & Sütçü, 2018). The semi-asynchronous communication in WhatsApp encouraged students' learning autonomy and self-efficacy as they organized their learning both within and beyond the class (Zou et al., 2018). The learning environment empowered the students to keep up with the course materials and tasks particularly since they used the app extensively. Similar to what previous works unveiled (Awada, 2016 and Lai et al., 2018), this study highlights that, with easy access to the course at their disposal, the students gain the impetus to hone their language skills directly within authentic setting in collaboration with their peers, albeit their language barriers.

TBML came to its element as students played active role in collaborative learning. Collaboration within the MALL environment links the internal cognitive process to the social interaction (Lai, 2016; Lin et al., 2019). What is more, they became a real member of learning community where they were able to engage in joint knowledge construction and language acquisition through authentic communication. This notion of learning community denoted the catalyst for the learning process and outcome as students devoted their efforts to learning when they realized their learning goals by taking part in not only instructional but also sociocultural practices. This finding resonates with the research by Lai et al. (2018), which points out that mobile technology affords information-, social-, and instruction-oriented experiences.

With the social and instructional affordances of WhatsApp, students perceived that they were able to leverage their language competence by taking part in online discussion and group work. Textual, pictorial, and aural language input encouraged students to better take part in communication and think critically as they were exposed to numerous hybrid resources. As they collaborated with their peers to achieve learning tasks and, concomitantly, used the language as both medium and end of learning, they eventually perceived control and values of the mobile learning experience in linkage to their major (Ma, 2017). When they discovered the learning enjoyment in authentic communication, they became even more engaged with learning process where they obtained feedbacks from their peers (Resnik & Schallmoser, 2019). The learning enjoyment in meaningful collaborative learning resulted in perceived language improvement.

The finding is in harmony with previous works which highlight the importance of supportive learning environment for encouraging students to use target language meaningfully and ensuring the positivity throughout the course (Alshaibani & Qusti, 2020; Mistar & Embi, 2016). The present study resonates with previous works by Çetinkaya & Sütçü (2018) and Mistar & Embi (2016) in that it acknowledges technological affordances of WhatsApp to support mobile language learning, particularly pertinent to instant messaging in foreign language, and therefore gives rise to positive attitudes and emotion to mobile learning. Being conditioned in TBML through role distribution, peer feedback and teacher assessment (Lai, 2016), students gain the learning ownership upon determining the strategies toward the learning objectives in technologically enabling learning community, laden with abundant authentic language inputs and diverse linguistic repertoires as fundamental assets for their meaningful language output.

3.4.2. RQ 2 – finding: intrinsic motivation as dominant predictor to online learning engagement

The statistics in Table 2 reports a high rate of motivation to language learning within the context of TBML, with a low level of demotivation at the same time. The students' motivational profile mirrored their intense online learning engagement, as portrayed by both extrinsic and intrinsic motivation.

Table 2. Students' responses on EFL learning motivation

Aspects	Mean	Std. Error	Std. Deviation
Demotivation	1.4773	.04037	.78174
Extrinsic motivation	3.8489	.03295	.63814
Intrinsic motivation	4.2476	.03205	.62074

Probing further into the motivational profile, one-sample test confirmed significant difference between the extrinsic and intrinsic motivation ($p = 0.000$). We continued with Pearson's product moment at the 0.01 level (2-tailed), and the result acknowledged moderate correlation between the overall learning engagement and the aggregate of intrinsic and extrinsic motivation ($r = 0.449$ and $p = 0.000$). As we noticed a higher rate of intrinsic motivation, we conducted two bivariate correlation analyses at the 0.01 level (2-tailed) on the overall engagement, delving into its separate correlation with each of extrinsic motivation ($r = 0.298$ and $p = 0.000$) and intrinsic motivation ($r = 0.507$ and $p = 0.000$).

The study has revealed a strong correlation between TBML and language learning motivation. The psycho-social properties of TBML mediated by WhatsApp created an empowering environment in which students were encouraged to support one another without fearing their language barrier. Creating a holistic student-centred learning environment triggers more inherent motivation for language learning and learning outcome, particularly when technologically-enabling device and resources are afforded by the teacher serving the role of facilitator (Resnik & Schallmoser, 2019; Zhu & Wang, 2019). This is in congruence with previous works which contend that when students are immersed in authentic and empowering learning environment they will develop the motivation to learn and use target language (Çetinkaya & Sütçü, 2018; Lai, 2016).

Language learning motivation, from the perspectives of AT, is inherently associated with MALL activities (Lin et al., 2019). To that end, the findings corroborate the claim that learners develop stronger learning motivation and self-regulated learning when they become members of a learning community aided with appropriate mobile technology affordances. WhatsApp offers diverse resources and multiple mediations for both language learning and language uses in meaningful contexts, which makes it an attractive and interactive platform to better serve students' needs and sustain their self-regulated learning (Ma, 2017). In harmony with previous studies on language learning mediated by WhatsApp (Alshaibani & Qusti, 2020; Lai, 2016; Annamalai, 2015), this study expounds that WhatsApp provides interactive and multimodal attributes supportive to TBML and, in effect, it boosts learners' intrinsic motivation and self-regulated learning as students are engaged not only in instruction-oriented technological experiences, but also in entertainment- and information-oriented ones.

3.4.3. RQ 3 - finding: learning engagement and empowerment despite technical challenges in mobile learning

Authentic language learning community

The technological affordances created resource-rich micro and macro settings, which empowered the students to take part in hybrid discourse involving textual, aural, and pictorial messages. Such affordances were pivotal in amplifying their attention and language performativity in meaningful communication within learning community. The following responses acknowledged the abovementioned line of thought.

EFN-A_7 As the teacher explained and informed details in English to the students, they were motivated to think and respond to the discussion in English, too. This allowed them to learn structuring sentences right away.

CDA_14 It was helpful to learn how to take part in discussion in English properly. Also, the PowerPoint presentation in English helped me to learn English.

The above vignettes demonstrate how the communicative approach to mobile language learning is at play when the students showcase their language performativity in English-mediated instruction, regardless of different majors: the former was a student majoring in nursing, while the latter majored in English education. As emphasized by Andujar & Salaberri-Ramiro (2019), the semi-synchronous communication makes the learning input more comprehensive and permanent, which therefore better caters for students' sub-optimal proficiency. The following chat archive portrays how students jointly sustained English-mediated discussion focusing on co-construction of knowledge and language production despite limited linguistic repertoires.

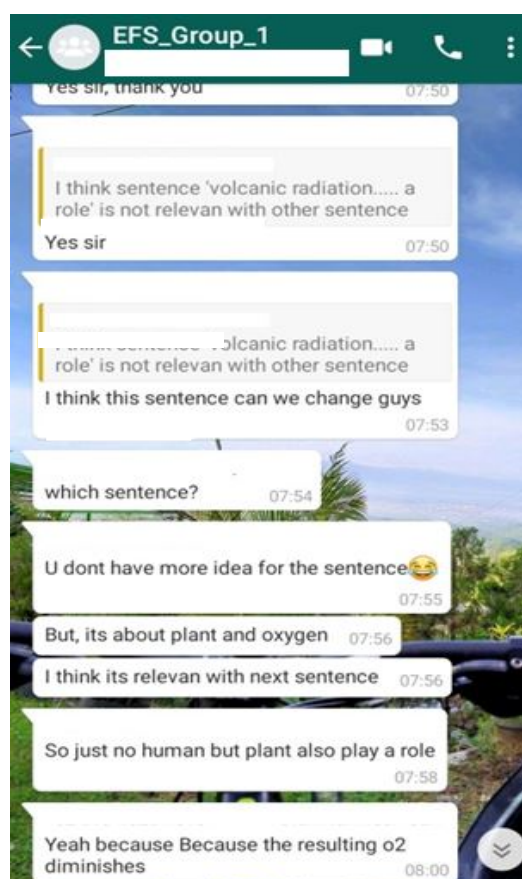


Figure 3. English-mediated discussion regardless of collective language gaps

Following Lai et al. (2018) and Lai (2016), the findings demonstrate students' learning resilience to use the target language for meaningful purposes as they attempt to understand and accomplish group tasks, despite their suboptimal linguistic proficiency. To this direction, Çetinkaya & Sütçü (2018) explicate that ambient atmosphere and a sense of belonging enacted

by group chats propel the students to attempt their best to initiate, adjust, and sustain the discussion in English through which they jointly adjust their performativity to be understood and compensate for each other's language gaps.

The language experiment mediated by WhatsApp tapped upon integrated language skills as students confirmed the involvement of both spoken and written discourse. The following excerpts on integrated language learning are in line with previous works highlighting the usefulness of WhatsApp for enhanced language learning (Kukulka-Hulme & Viberg, 2017; Mistar & Embi, 2016; Rambe & Bere, 2013).

- EFN-A_14 The positive side of the class was the opportunity to learn materials from the discussions and practice listening and speaking directly
- EFN-B_5 The English class via WhatsApp was effective to practice reading, writing, listening and speaking, because we could share any files instantly.

The interactionist-oriented activities in TBML exposed the students to comprehensive input from their peers as well as teachers and encouraged them to produce meaningful and perceivable output as the cruxes to the noticing of new language and negotiation of meaning.

Learning engagement and ownership

Group-based chats, coupled with vernaculars, banter, and humor, were extensively engaging and gave students full learning ownership, amplifying their self-regulated learning within both micro and macro settings (Ma, 2017). The following responses delineate the opportunity to run discussion in which everyone takes part to share their ideas and to give comments on each other's contribution. This resulted in the aggregates of chats and learning artifacts, which basically was as much vital as teacher's explanation.

- EFS-B_12 There were class' WhatsApp group and team's WhatsApp group. Team's group encouraged the students to be more active in accomplishing group work because everyone had to work in tandem to complete group work.
- CDA_21 In every meeting, there were direct guidance from the teacher and group discussion to help understand the materials. I could ask questions and received feedbacks directly in the group, which became resource for the group discussion. My team members were enabled to voice our opinions and comments on each other's ideas, and that helped us to accomplish group work.

The other voices also depict how diverse levels of individual performance became vital resources for group learning. WhatsApp not only connected the students to accomplish tasks, but also brought them into authentic learning community and intense shared reflection among members.

- EFS-B_24 Learning through WhatsApp allowed me to manage discussion with my friends, and I was able to gain new knowledge from them.
- EFM_28 When I did not understand the material, I simply asked for help from my partners in the team or the teacher.

Following Kukulska-Hulme & Viberg (2017), the exchange and sharing of ideas related to task accomplishment empower students to develop stronger metacognition, cognition, and self-regulation, enriching the vitality and dynamics of learning community. The findings echo recent studies corroborating the power of mobile technologies harnessed in collaborative learning for enhanced cognitive processes (Ma, 2017), perceived self-growth and intrinsic motivation (Li et al., 2019), and increased engagement and enjoyment coupled with waned nervousness (Kukulska-Hulme & Lee, 2020). The integration of WhatsApp into the socio-cultural and instructional practices manifests perfect juxtaposition to the use of mobile technology in learners' daily routines beyond the class (Çetinkaya & Sütçü, 2018; Krouska et al., 2018). It results in stronger motivation to achieve not only learning goals but also joint problem solving to address learning obstacles and ambiguities.

Augmented knowledge concretization and consolidation of learning

With fast internet access and multimedia affordances, WhatsApp allowed the opportunity to receive and organize learning materials in bite size rather than in chunky bundles. Students' familiarity with how the app operates made it a boundary-crossing platform for escalated reflection and learning transformation (Rambe & Mkono, 2019).

One of the students acknowledged the familiarity with the platform which helped to accrue seamless learning by which students shared learning materials within resource-rich digital context. Language learners commonly exploit mobile devices to cater for their diverse learning needs, including accessing dictionary, search engine, audio, and video (Kukulska-Hulme & Lee, 2020). The following response delineates how WhatsApp satisfies the needs for instant access to diverse resources and activities.

- APW_21 Almost everyone had the app, so we easily communicated with each other. It also afforded diverse features, particularly for transferring files, such as document, link, pictures, videos, and audio. The app was easy to use even by layman.

The other finding was germane to the permanence of stored messages in WhatsApp. One of the students reported the benefit of unlimited opportunities to review stored learning artifacts in their device. Such permanence allowed them to consolidate and assimilate their learning in sizeable bits in a non-restricted environment. This finding resonates with previous works highlighting how WhatsApp empowers the students, beyond the classroom, to organize

their learning in bite size rather than in bulky notes prevalent in face-to-face learning (Annamalai, 2019; Awada, 2016; Lai, 2019).

APW_8 The explanation from teacher and discussion among students remained intact since these were stored in the form of text or voice messages, allowing us to review them later on.

WhatsApp affordances satisfied students' cogent preference for fast and manageable access to course and learning as the fuel to maintain their serendipitous learning, particularly for under-prepared learners. The opportunity to concretize knowledge through access to learning artifacts was intertwined with collaborative learning, resulting in more intense engagement, mutual support, and eventually more robust L2 agency (Ma, 2017; Man, 2014; Mistar & Embi, 2016). Mobile instant messaging (MIM) came to its elements as students took part in discussion via group chats, as elaborated in the following response.

CDA_18 The lecturer sent PDF and PowerPoint files with recorded explanation. It was helpful to learn the materials. In addition, we had question-answer sessions which helped me to understand the materials as well since I was able to raise questions in the WhatsApp group, with instant feedback delivered afterwards. Another point important to help me learn the materials was the written feedbacks shared in the group. This allowed me to learn from my friends as well.

Collaborative activities via WhatsApp also led to serendipitous learning. The crossing between social- and instruction-oriented technological experiences was emphasized in the present study. The following recount depicted how student consolidated his learning by reviewing stored materials and the other learning artifacts at ease. Not only did the app afford augmented opportunity to concretize students' learning through multimedia affordances, but it also empowered learning consolidation and performativity through opportunistic learning.

BP_28 I starred important materials, so I could access them anytime at my disposal. Also, all discussions and feedbacks were stored in the team's WhatsApp group, making them easily accessible, unlike searching files in laptop. Also, I did not have to write notes on the material or feedbacks since I was able to read and review each material or feedback stored. This afforded more time to do my chores, so I simply continued reading the material afterwards.

Ambient learning environment

Following Rambe & Mkono (2019), the reconfiguration of teacher-students relationship was an influential element to embrace the students into the supportive environment that even introvert students were willing to be open and subsequently voice their ideas about team's learning progress and product. Also, the social nature of mobile chat lends itself to extending and enforcing learning in a friendlier and more candid fashion, resulting in the willingness to

experiment with the target language for meaningful purposes (Andujar & Salaberri-Ramiro, 2019).

EFS-B_9 Students were able to understand learning material since the teacher's explanation seemed like casual chats among peers. This made everyone in the group active. Also, it was beneficial to introvert students who hesitated to raise questions in face-to-face discussion.

Mobile learning catered for language learners' needs due to multitude technological affordances. The vignette below expounded how WhatsApp provided the student with ample learning resources and fostered his self-regulation, which was important to address the limited linguistic repertoires. Such autonomy over challenging tasks accrued self-esteem as he discovered self-perceived improvement (Ma, 2017). To that end, motivation mediated learner's self-regulated learning and strategic knowledge and skills to cope with learning tasks and opt for personalized mobile learning.

EFN-A_23 The class via WhatsApp group was helpful since I was able to replay the videos from the teacher and re-read the chats in the group. Sometimes, I was not able to understand teacher's explanation, but that motivated me to translate the explanations and find new words. I also learnt pronunciation by replaying the voice notes from my teacher to understand what he said. What I liked the most was when my teacher sent a video of his talk. From the video, I learnt lips movement and how it produced different sounds in English.

The constellation of motivation, personalization, and self-regulatedness grounded within both macro and micro habitat of learning clearly manifests the emergence of L2 learner's agency (Lai, 2019). WhatsApp-aided TBML created common macro socio-cultural learning context where individual learners collaborate to set strategies and direct their efforts towards learning goals. Concomitantly, each student orchestrates a personalized micro setting in which they developed strategies relevant to their learning beliefs and styles.

Another contextual factor triggering students' engagement was the diluted power asymmetry between teacher and students. Compared to class-based chat, team's WhatsApp group created a more ambient environment in which students experienced joyous learning coupled with deep personal meaning due to living in harmony with one's true self. This finding attends to previous studies on WhatsApp (Gachago et al., 2015; Kukulska-Hulme & Viberg, 2017; Raiman et al., 2017) which explicate that WhatsApp has the power to flatten the hierarchy of communication due to familiarity between teacher and students and the frankness of interaction. The excerpt below emphasizes the interlacing of jokes and vernacular with academic talks as the adhesives which keep authentic conversation going.

EFN-A_26 Positive communication between students and teacher was there throughout the course,

and the teacher did not hesitate to crack jokes so everyone was engaged in the discussion.

The previous excerpt regarding group chats portrays how the social architecture of WhatsApp structures the social molding to teacher-students interaction characterized by the mashing-up of informal learning into formal one. The following chat archive delineates similar findings on the use of banter and humor as the social molding in academic discourse in Rambe & Mkono's study (2019). As shown in Figure 4, one student sparked joke to mitigate the confusion upon task accomplishment and further mentioned *aoleng cetakkuu*, which is a vernacular meaning “my head is dizzy”.

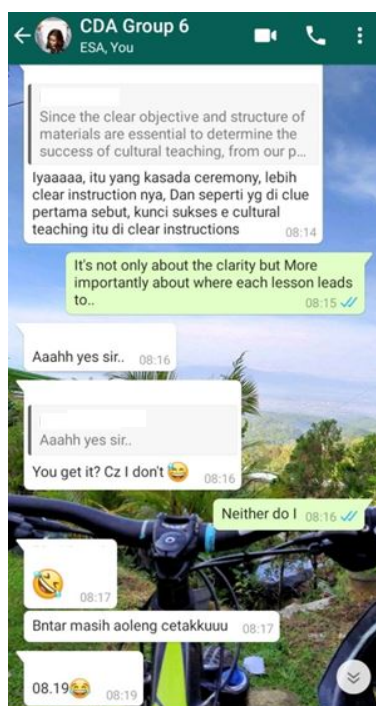


Figure 4. Students using banter and vernaculars to joyously vent their frustration



Figure 5. Teacher-students interaction using banter to initiate a discussion

As shown in Figure 5, our findings also revealed how banter instigated teacher-students interaction in a more friendly fashion. Teacher-initiated humor paved the way for friendly communication as a means to engage students' true self and further sustained their learning engagement. Using emoticons, repetitive letterings, and ellipsis denoted social objects of self-actualization within natural interaction (Cremades et al., 2019). These objects invited the peeling of masks and instigated the students to co-create a joint ecstatic learning experience.

Monotonous interactivity in asynchronous communication

The students marked the nature of asynchronous text-based communication as the primary challenge to TBML. Despite consistent engagement in different course episodes, students had to grapple with sorting important instruction-related information among social-bound, assumedly, irrelevant chats. As a corollary, they felt exhausted as they had to read the constantly emerging chats on their mobile phone screen and occasionally made them left behind their peers. This was presumably what led to some students being free riders throughout the group work. These findings are in line with Annamalai (2015) and Kaliisa et al. (2017) who contend that technical issue denotes primary challenge in mobile learning.

Technical challenge prevailed throughout the course especially among the students in remote areas. One of the students reported that connection and power issue were significant obstacles to their learning engagement. In congruence, the extensive work on mobile phone screen reduced their attention span. This finding echoes Zou, Li, & Li's (2018) finding which unravels students' negative affectivity resulting from the inconvenience in working on mobiles.

APW-A_19 The drawback of learning via WhatsApp was, mainly, the connection because my house was in remote area, so during the course I was oftentimes late to respond to the discussion and submit my work. This was even more so when I was not able to open learning material due to extremely slow connection.

EFS-C_6 The downside was the exhaustion due to extensive work on the gadget

The asynchronous communication through chats was deemed ineffective as students spent much time on texting, sorting chats, and interpreting bundles of texts. One student voiced the dearth of intense discussion because of text-dominant communication. This was also coupled with the cumbersome and lengthy chats. This resonates with the previous study on WhatsApp by Çetinkaya & Sütçü (2018), reporting the distraction of unnecessary messages within group.

ER_15 The material was not clearly delivered, and the class was boring as well as complicated due to rigorous concern with texting. Written communication easily led to misinterpretation, which was why it took more time.

APW-A_18 Oftentimes, the material or teacher's explanation were swamped by series of chats which simply contained "Yes, Sir" reply. This made me scroll up all the previous chats several times or just clear all chats.

The other issue was germane to the students' absence during the discussion. Synchronous communication posed the leeway to disengage from learning process.

EFN-B_5 Another shortcoming was that only few team members made responses, while others simply opt for just reading and remaining passive. This made the discussion lengthy and

ineffective.

5. Conclusions and implications for the future

This study, in large part, resonates with the literature review on the state of the art in mobile collaborative learning by Kukulska-Hulme & Viberg (2017) as the findings have acknowledged that WhatsApp helps to establish the linking between the global and local, between the periodic and the extended, and between the personal and the social. Grounded within AT-MALL framework, the integration of WhatsApp into TBML has provided the students with the autonomy as co-designers of meaningful language learning in which they are engaged in collaborative activities geared to authentic language learning laden with hybrid discourse elements. However, teachers need to be aware of the negative affectivity due to the fatigue and inconvenience of working on mobile devices as these may trigger students' disengagement. Mobile collaborative learning indeed creates ambient and supportive environment for students of diverse language proficiencies to commence and sustain integrated language learning, leading to the development of intrinsic motivation, metacognitive skills, cognitive skills, and stronger learning agency. To this end, the more learners acknowledge perceived usefulness of WhatsApp, the more effort expectancy increases as students engage with learning community. If sustainable language learning is at the core of English instruction, teachers need to grant adult language learners with more autonomy to embark on their learning trajectory within resource-rich micro and macro terrains, while continuously monitoring and providing feedbacks on their language experiment aided by social-network (SN) platform (Krouska et al., 2018).

Notwithstanding, the study has several downsides. First, it only involves students of basic and intermediate language proficiency. More fine-tuned understanding of affective, cognitive, and behavioral traits toward WhatsApp-aided TBML will be obtained by including advanced language learners for more comprehensive sample. Second, the notion of language improvement in the study is solely perceptive in nature. Employing a standardized test within the experimental setting is believed to garner more accurate and valid measures of language proficiency resulting from mobile collaborative learning experiences.

Acknowledgement

The authors would like to thank the two anonymous reviewers for their constructive comments on the paper. This research was sponsored by the research grant from Indonesia Endowment Fund for Education (LPDP).

References

- Ahad, A. D., & Lim, S. M. A. (2014). Convenience or nuisance?: The 'WhatsApp' Dilemma. *Procedia - Social and Behavioral Sciences*, 155(2014), 189-196. <https://doi.org/10.1016/j.sbspro.2014.10.278>
- Alkhalaf, A. M., Tekian, A., & Park, Y. S. (2018). The impact of WhatsApp use on academic achievement among Saudi medical students. *Medical Teacher*, 40(1), 1-5. <https://doi.org/10.1080/0142159X.2018.1464652>
- Alshaibani, M. H., & Qusti, E. S. (2020). The role of smartphone app "WhatsApp" on achievement motivation and social intelligence among female undergraduate students. *Perspectives in Psychiatric Care*, 57(2), 597-603. <https://doi.org/10.1111/ppc.12582>
- Andujar, A., & Salaberri-Ramiro, M. S. (2019). Exploring chat-based communication in the EFL class: computer and mobile environments. *Computer Assisted Language Learning*, 34(1), 1-28. <https://doi.org/10.1080/09588221.2019.1614632>
- Ankeny, R. (2019). Interweaving technology and language goals to promote academic vocabulary: The role of WhatsApp in an intensive English classroom. *TESOL Journal*, 10(3), 8-10. <https://doi.org/10.1002/tesj.457>
- Annamalai, N. (2019). Using Whatsapp to extend learning in a blended classroom environment. *Teaching English with Technology*, 19(1), 3-20.
- Awada, G. (2016). Effect of WhatsApp on critique writing proficiency and perceptions toward learning. *Cogent Education*, 3(1), 1-25. <https://doi.org/10.1080/2331186X.2016.1264173>
- Bakhurst, D. (2009). Reflections on activity theory. *Educational Review*, 61(2), 197-210. <https://doi.org/10.1080/00131910902846916>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Bruen, J., & Sudhershnan, A. (2016). "So They're Actually Real?" Integrating e-tandem learning into the study of language for international business e-tandem learning into the study of language for international business. *Journal of Teaching in International Business* 26(1), 81-93. <https://doi.org/10.1080/08975930.2014.993009>
- Çetinkaya, L., & Sütçü, S. S. (2018). The effects of Facebook and WhatsApp on success in English vocabulary instruction. *Journal of Computer Assisted Learning*, 34(5), 504-514. <https://doi.org/10.1111/jcal.12255>
- Choi, K. S., & Im, I. (2015). Comparative analysis of the use of mobile microblogging and nonmobile online message board for group collaboration. *International Journal of Electronic Commerce*, 19(4), 112-135. <https://doi.org/10.1080/10864415.2015.1029360>
- Cremades, R., Onieva-lópez, J. L., Maqueda-cuenca, E., & J, Ramírez-Leiton, J. (2019). The influence of mobile instant messaging in language education : perceptions of current and future teachers. *Interactive Learning Environments*, 29(5), 1-10. <https://doi.org/10.1080/10494820.2019.1612451>
- Dixson, M. D. (2010). Creating effective student engagement in online courses: What do students find engaging? *Journal of the Scholarship of Teaching & Learning*, 10(2), 1-13. <http://ezproxy.deakin.edu.au/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cue&AN=52225431&site=eds-live&scope=site>
- Elaish, M. M., Shuib, L., & Ghani, N. A. (2017). Mobile English Language Learning (MELL): A literature review. *Educational Review*, 71(2), 1-20. <https://doi.org/10.1080/00131911.2017.1382445>

- Engestrom, Y. (1999). *Perspectives on activity theory*. Cambridge: Cambridge University Press.
- Gachago, D., Strydom, S., Hanekom, P. W., & Simons, S. (2015). Crossing boundaries: Lecturers' perspectives on the use of Whatsapp to support teaching and learning in higher education. *Progressio*, 37(1), 172-187.
- Gibbes, M., & Carson, L. (2014). Project-based language learning: An activity theory analysis. *Innovation in Language Learning and Teaching*, 8(2), 171-189. DOI:10.1080/17501229.2013.793689
- Grigoryan, T. (2020). Investigating the effectiveness of iPad based language learning in the UAE context. *Open Learning: The Journal of Open, Distance and e-Learning*, 16(2), 1-23. <https://doi.org/10.1080/02680513.2020.1718488>
- Johnson, R. B., & Onwuegbuzie, A. J. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112-133. <https://doi.org/10.1177/1558689806298224>
- Kaliisa, R., Palmer, E., & Miller, J. (2017). Mobile learning in higher education : A comparative analysis of developed and developing country contexts. *British Journal of Educational Technology*, 50(2), 1-16. <https://doi.org/10.1111/bjet.12583>
- Khan, T. M. (2020). Use of social media and WhatsApp to conduct teaching activities during the COVID-19 lockdown in Pakistan. *International Journal of Pharmacy Practice*, 1. <https://doi.org/10.1111/ijpp.12659>
- Krouska, A., Troussas, C., & Virvou, M. (2018). SN - Learning: An exploratory study beyond e - learning and evaluation of its applications using EV - SNL framework. *Journal of Computer Assisted Learning*, 35(6), 1-10. <https://doi.org/10.1111/jcal.12330>
- Kukulka-Hulme, A., & Lee, H. (2020). 11 mobile collaboration for language learning and cultural learning. In M. Dressman & R. W. Sadler (Eds.), *The Handbook of Informal Language Learning* (pp. 169-180). Chichester: Wiley-Blackwell.
- Kukulka-Hulme, A., & Viberg, O. (2017). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, 49(2), 1-12. <https://doi.org/10.1111/bjet.12580>
- Lai, A. (2016). Mobile immersion: An experiment using mobile instant messenger to support second-language learning. *Interactive Learning Environments*, 24(2), 277-290. <https://doi.org/10.1080/10494820.2015.1113706>
- Lai, C. (2019). Learning beliefs and autonomous language learning with technology beyond the classroom. *Language Awareness*, 28(4), 291-309. <https://doi.org/10.1080/09658416.2019.1675679>
- Lai, C., Hu, X., & Lyu, B. (2018). Understanding the nature of learners' out-of-class language learning experience with technology. *Computer Assisted Language Learning*, 31(1), 114-143. <https://doi.org/10.1080/09588221.2017.1391293>
- Li, L., Gao, F., & Guo, S. (2019). The effects of social messaging on students' learning and intrinsic motivation in peer assessment. *Journal of Computer Assisted Learning*, 36(2), 1-10. <https://doi.org/10.1111/jcal.12409>
- Lin, C., Lin, V., Liu, G., Kou, X., Kulikova, A., & Lin, W. (2019). Mobile-assisted reading development: A review from the Activity Theory perspective. *Computer Assisted Language Learning*, 33(8), 1-32. <https://doi.org/10.1080/09588221.2019.1594919>
- Little, D. (2007). Language learner autonomy: Some fundamental considerations revisited. *Innovation in Language Learning and Teaching*, 1(1), 14-29. <https://doi.org/10.2167/illt040.0>
- Ma, Q. (2017). A multi-case study of university students' language-learning experience mediated by mobile technologies: a socio-cultural perspective. *Computer Assisted Language Learning*, 30(3), 183-203.

- <https://doi.org/10.1080/09588221.2017.1301957>
- Man, C. K. (2014). Word's up with WhatsApp: The use of instant messaging in consciousness-raising of academic vocabulary. *23rd MELTA and 12th Asia TEFL International Conference, August 2014*, 1-6. <https://doi.org/10.13140/2.1.4847.1841>
- Mistar, I., & Embi, M. A. (2016). Students' perception on the use of Whatsapp as a learning tool in ESL classroom. *Journal of Education and Social Sciences*, 4(2), 96-104. <http://jesoc.com/wp-content/uploads/2016/08/Edu-76.pdf>
- Raiman, L., Antbring, R., & Mahmood, A. (2017). WhatsApp messenger as a tool to supplement medical education for medical students on clinical attachment. *BMC Medical Education*, 17(7), 1-9. <https://doi.org/10.1186/s12909-017-0855-x>
- Rambe, P., & Bere, A. (2013). Using mobile instant messaging to leverage learner participation and transform pedagogy at a South African University of Technology. *British Journal of Educational Technology*, 44(4), 544-561. <https://doi.org/10.1111/bjet.12057>
- Rambe, P., & Mkono, M. (2019). Appropriating WhatsApp-mediated postgraduate supervision to negotiate "relational authenticity" in resource-constrained environments. *British Journal of Educational Technology*, 50(2), 702-734. <https://doi.org/10.1111/bjet.12688>
- Resnik, P., & Schallmoser, C. (2019). Enjoyment as a key to success? Links between e-tandem language learning and tertiary students' foreign language enjoyment. *Studies in Second Language Learning and Teaching*, 9(3), 541-564.
- Sharples, M., Taylor, J., & Vavoula, G. (2007). A theory of learning for the mobile age. In: R. Andrews and C. Haythornthwaite (eds.), *The Sage Handbook of E-learning Research* (pp. 221-247). London: Sage.
- Sung, Y. T., Chang, K. E., & Yang, J. M. (2015). How effective are mobile devices for language learning? A meta-analysis. *Educational Research Review*, 16(1), 68-84. <https://doi.org/10.1016/j.edurev.2015.09.001>
- Viswanathan, R. (2012). Augmenting the use of mobile devices in language classrooms. *International Journal of Computer-Assisted Language Learning and Teaching*, 2(2), 45-60. <https://doi.org/10.4018/ijcallt.2012040104>
- Wang, Y. H. (2017). Integrating self-paced mobile learning into language instruction: impact on reading comprehension and learner satisfaction. *Interactive Learning Environments*, 25(3), 397-411. <https://doi.org/10.1080/10494820.2015.1131170>
- Xuejun, Y. E. (2020). EFL learning motivation differences of Chinese junior secondary school students: A mixed-methods study. *Education 3-13*, 49(2), 1-14. <https://doi.org/10.1080/03004279.2019.1711143>
- Zhu, Q., & Wang, M. (2019). Team-based mobile learning supported by an intelligent system: Case study of STEM students. *Interactive Learning Environments*, 28(5), 543-559. <https://doi.org/10.1080/10494820.2019.1696838>
- Zou, B., Li, H., & Li, J. (2018). Exploring a curriculum app and a social communication app for EFL learning. *Computer Assisted Language Learning*, 31(7), 694-713. <https://doi.org/10.1080/09588221.2018.1438474>
- Zou, B., & Yan, X. (2014). Chinese students' perceptions of using mobile devices for English learning. *International Journal of Computer-Assisted Language Learning and Teaching*, 4(3), 20-33. <https://doi.org/10.4018/ijcallt.2014070102>

From the Editors

Chris Alexander and Jarosław Krajka

Analyzing social media use in TEFL via the Technology Acceptance Model in Indonesian higher education during the COVID-19 pandemic

Amirul Mukminin, Muhaimin Muhaimin, Lantip Diat Prasajo, Khaeruddin Khaeruddin, Akhmad Habibi, Lenny Marzulina and Kasinyo Harto

The use of vlogging to enhance speaking performance of ESL students in a Malaysian secondary school

Shoba Andiappan, Goh Hock Seng and Soo Ruey Shing

Mobile-mediated interactional feedback (MMIF) effect on Iranian learners' acquisition of English articles

Thana Hmidani and Narges Zareian

Integrating project-based learning, task-based language teaching approach and YouTube in the ESP class: A study on students' motivation

Manuel Rodríguez-Peñarroja

EFL learners' engagement and learning motivation in team-based mobile language learning through WhatsApp

David Imamyartha, Eka Wahjuningsih, Alifiyah A'yunin, Asih Santihastuti, Mitasari, Dinda Laura Trisna Ayu Fauzie and Ervin Candra Hari Andika



UNIVERSITY *of*
NICOSIA

UMCS
MARIA CURIE-SKŁODOWSKA UNIVERSITY