



A comparative study of the effect of knowledge sharing via Adobe Connect and Google Meet on EFL teachers' creativity

Un estudio comparativo del efecto del intercambio de conocimientos a través de Adobe Connect y Google Meet en la creatividad de los profesores de inglés como lengua extranjera

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ABSTRACT

Information exchange takes place in every community and the advancement of computers and the use of the Internet has made it simpler for people of all communities to communicate information. Teachers also may share personal experiences, information, and communication with their peers in the profession. They can also improve their expertise and skills. As such, the purpose of the present study was to compare the effect of knowledge sharing via Adobe Connect and Google Meet on English as Foreign Language (EFL) teachers' creativity. To do so, 60 EFL teachers from 15 high schools were asked to fill the creativity questionnaire. Then, to find the role of the social platforms on EFL teachers' creativity in their teaching, a week after the treatment, the questionnaire as the posttest was given to the EFL teachers. Next, a semi-structured interview with 20 volunteers sought the Iranian EFL teachers' attitude toward the role of social platforms in their creativity. Overall, the finding indicated that knowledge sharing through Google Meet has more significant effect on EFL teachers' creativity compared to Adobe Connect. In addition, it was found that the teachers agreed with the positive effect of both social platforms on their creativity. The findings have implications for pedagogy as well as further research.

KEYWORDS Adobe Connect; creativity; Google Meet; knowledge sharing.

RESUMEN

El intercambio de información tiene lugar en todas las comunidades y el avance de las computadoras y el uso de Internet ha simplificado la comunicación de información para las personas de todas las comunidades. Los docentes también pueden compartir experiencias personales, información y comunicación con sus pares en la profesión. También pueden mejorar sus conocimientos y habilidades. Como tal, el propósito del presente estudio fue comparar el efecto del intercambio de conocimientos a través de Adobe Connect y Google Meet en la creatividad de los profesores de inglés como lengua extranjera (EFL). Para ello, se pidió a 60 profesores de inglés como lengua extranjera de 15 escuelas secundarias que rellenaran el cuestionario de creatividad. Luego, para encontrar el papel de las plataformas sociales en la creatividad

de los profesores de inglés como lengua extranjera en su enseñanza, dos semanas después del tratamiento, se entregó a los profesores de inglés como prueba posterior el cuestionario. A continuación, una entrevista semiestructurada con 20 voluntarios buscó la actitud de los profesores iraníes de inglés como lengua extranjera hacia el papel de las plataformas sociales en su creatividad. En general, el hallazgo indicó que compartir conocimientos a través de Google Meet tiene un efecto más significativo en la creatividad de los profesores de inglés como lengua extranjera en comparación con Adobe Connect. Además, se encontró que los profesores estaban de acuerdo con el efecto positivo de las plataformas sociales en su creatividad. Los hallazgos tienen implicaciones para la pedagogía y para futuras investigaciones.

PALABRAS CLAVE Adobe Connect; creatividad; Google Meet; intercambio de conocimientos.

1. INTRODUCTION

Every community engages in the process of sharing information. The exchange of information among members of all communities has recently become easier due to the development of computers and the use of the Internet. Teachers can also easily communicate with their professional colleagues, exchange knowledge, and share personal experiences. They can enhance their teaching knowledge and abilities. Teachers are increasingly using social networks as they offer opportunities to gather information, seek feedback, and receive support (Van Den Beemt et al., 2019, p. 8). Employing social networks in academic communications could enhance transparency in academic institutions, accelerate the exchange of information, and foster trust and efficacy within the scholarly community (Bigdeli & Ghanadi Nezhad, 2019).

Teachers' intellectual ability, teaching methods, components, class management, and evaluation knowledge, as suggested by Shih and Lou (2011), are the major topics of such knowledge sharing, with in-service training meetings, school meetings, phone calls, leisure time, and the Internet serving as the mechanisms for sharing of knowledge among teachers. In this sense, the use of communities of practice enhances the sharing of information among instructors by providing chances for members to engage and share best practices (Tseng et al., 2014). As a result, it can be anticipated that teachers' knowledge sharing will have a beneficial impact on their participation in professional practices (Alimirzaee & Ashraf, 2016).

As education in today's schools requires teachers to be high-level knowledge practitioners who constantly advance their professional knowledge, as well as that of their profession, knowledge sharing is linked to relationships among teachers that promote information exchange and teaching (Holste & Fields, 2010). In the current study, knowledge sharing is considered as the provision of knowledge, experiences, skills, and teaching practices to help teachers, collaborate, solve problems, develop new ideas, or implement policies or procedures given the importance of social relationships, interaction, and communication between teachers. For this type of collaboration, it is expected that knowledge sharing among teachers can consequently help them solve a variety of problems related to their teaching practice.

Creativity is another topic that is emphasized in the present study. The idea of creativity is widely recognized as difficult to define and complex and there is no agreement on a precise definition in the literature (Ismayilova & Bolander Laksov, 2022). Boden (2001, p.95) defines creativity as "the ability to come up with new ideas that are surprising yet intelligible, and also valuable in some way". Beghetto and Kaufman

(2007, p.1) expands this definition of creativity and notes that it is “the ability to offer new perspectives, generate novel and meaningful ideas, raise new questions, and generate solutions to ill-defined problems”. However, it should be noted that teaching for creativity and teaching creatively are two different concepts and the latter which is manifested by features such as nonconformity, flexibility, critical thinking, risk taking and the like (Pashazadeh & Alavinia, 2019) should be more emphasized in educational contexts.

Understanding the creative processes in the classroom relies heavily on teachers’ perceptions and attitudes about creativity. Teachers plan their teaching approaches and how they incorporate creativity into the learning process based on their personal ideas. In recent years, there has been an emergence in interest in creativity in the school setting. Creativity is becoming more widely recognized as a necessary component of education (Grigorenko, 2017; Wenjuan, 2023). In this regard, Lin (2011, p.151) state that “the goal of encouraging creativity through education is to promote the development of creative traits in individuals to address everyday problems, to support their urge for self-actualization, and to strengthen their capacity for future success.” In the same line, the researcher argues that the goal of encouraging creativity through education is to “promote the development of creative traits in individuals to address everyday problems, to support their urge for self-actualization, and to strengthen their capacity for future success”. Also the creative teaching improves pupils’ achievement at the basic level (Schacter et al., 2006). Overall, according to Richards (2013, p.42), “creative teaching benefits teachers, institutions, and students since it provides a source of continual professional renewal and satisfaction for instructors while also improving the school’s quality, efficacy, and reputation”.

1.1. Knowledge sharing

The classical economic theory of the organization postulates that people tend to adopt defensive mechanisms when it comes to their personal interests such as power and wealth (Bilginoğlu, 2019; Kim & Mauborgne, 1998). Individuals seem to be reluctant to share their properties, of which knowledge and information are no exceptions, with others in that they view them as materialized assets (Cai & Ma, 2022; Senge, 1997;). As Davenport and Prusak (1998) contended, sharing knowledge willingly with others apparently does not suit human nature. However, when it comes to common interests and goals where people have to interact closely, they sound more willing to share their assets since such joint interactions which accompany the transaction of knowledge and information provide them with intrinsic and extrinsic motives to reinforce their ties. The philosophy behind knowledge sharing has its roots in Vygotsky’s (1978) sociocultural theory where learning occurs as a result of the interaction between/among individuals with varying levels of knowledge. From this perspective, knowledge sharing is viewed as an interactional, person-to-person learning activity (Ahmad, 2017; Ahmad et al., 2023).

In EFL education, the dissemination of knowledge and information is also taken for granted. Not only do the foreign language teachers share their knowledge with their learners, but they also need to share their knowledge and expertise with their colleagues. In fact, there are certain degrees of variation among EFL teachers in terms of the knowledge they hold, the teaching methods they employ as well as the degree to which they integrate new knowledge sharing tools into their practice. Once they engage in the dissemination of knowledge, they become familiar with various teaching methods applied in EFL contexts (Alimirzaii & Ashraf, 2016). Another benefit gleaned from the development of sharing of knowledge among EFL teachers

is that based on the literature “higher education does not operate in isolation... higher education institutions are instituted, managed and run by human beings who themselves have been and are beneficiaries of knowledge sharing” (Adamseged & Hong, 2018, p. 1). In this regard, the role of collaboration and dissemination of knowledge among teachers is highlighted in the literature. For example, based on Runhaar and Sanders (2015) “knowledge sharing is a learning activity with which teachers not only professionalize themselves, but contribute to the professional development of their colleagues as well” (p. 1).

Teachers have an array of platforms at their disposal to share their knowledge and experience including teacher professional development courses, meetings, social media, and conferences. Taking real, face to face knowledge sharing for granted, EFL teachers can also build potentially on virtual platforms such as learning management systems and social media to share their knowledge (Ahmad, 2017). The efficient sharing of knowledge is greatly facilitated by technologies, allowing for quick distribution of news, updates, and changes. Digital content’s ability to accommodate different forms of learning makes education more accessible and inclusive due to its multimodal nature. Furthermore, technologies like digital platforms promote resource efficiency, aligning with sustainability goals and supporting environmentally conscious educational practices (Zamiri & Esmaeili, 2024).

1.2. The role of technology in EFL education

Due to the introduction of information and communication technologies (ICT) to the educational context on the one hand and the unprecedented opportunity the Covid-19 pandemic, despite its adverse impacts on the economy and health of people, the long-established person to person pedagogical practices were superseded by an increasing tendency towards more student-centered and digitalized modes of learning (Chen, 2022; Deng & Tavares, 2013). Platforms launched on Web 2.0 protocol such as wikis, e-mails, conferences, LMSs (learning management systems), and social networks like Google Meet cater for virtual learning contexts. Additionally, mobile communication technologies and Internet have already paved the way to the use of social media for educational purposes (Bui et al., 2023; Zhang et al., 2015).

Moreover, such digitalized hi-tech applications have already normalized into the lifestyles of individuals and as the corollary of such normalization they enjoy high levels of acceptance and utilization among people (Nugroho et al., 2021). The integration of technology into the mainstream EFL education can also potentially lead to the students’ collaboration as well as autonomy. The synchronous nature of virtual classes, from a constructivist vantage point, entails the interaction among the students, teacher, and the content elements which in itself enhances the opportunities to learn collaboratively. Their asynchronous nature, on the contrary, maximizes the chances of independent, autonomous learning to occur.

As Huang et al. (2023) argued, e-learning technology can be applied to the creation of Digital Knowledge sharing communities which in turn trigger collaboration among teachers and students and expedite personalized learning. Learning and video conferencing applications such as Adobe Connect and Google Meet are among the digital tools that can be used to create digital communities. As Alqahtani and Rajkhan (2020) pointed out, such an approach to online education offers a number of advantages including easy access, flexible and interactive nature, and easy customization. Digital technology such as Adobe Connect and Google

Meet offers a number of practical benefits in advancing and accelerating the dissemination of knowledge, making education more available, and furthering global connectivity (Huang et al., 2023).

Adobe Connect is a software tool designed for distant learning, online meetings, delivering presentations, and sharing desktop. Within Adobe Connect, meeting spaces are divided into ‘pods,’ each serving a distinct function such as chatting, whiteboarding, or note-taking. Originally a component of the Adobe Acrobat line, Adobe Connect has undergone multiple name changes over time. The web-based nature of the platform is significant as it provides a single web address or URL for accessing and participating in virtual webinars or classroom sessions. Moreover, it includes various integrated features enabling users to deliver PowerPoints, browse websites, or engage in pop quizzes during sessions.

As another online platform, Google Meet, an integrated videoconferencing application with Google Classroom, serves as a tool for synchronous classes. It stands out as one of the most widely utilized videoconferencing applications globally. There’s a consistent acknowledgment of Google Meet’s role as a digital platform for language learning, facilitating academic interactions between teachers and students (Chandra, 2020; David, 2018). Recent studies highlight the benefits of synchronous learning, allowing learners to actively participate in the learning process (Chandra, 2020). Language instructors find it essential to utilize Google Meet for organizing, delivering, and archiving lectures on the platform.

The dissemination of knowledge in virtual digitalized education is not devoid of challenges. For one thing, the sudden and hasty transition from real, face to face classes to the online classes resulted in a number of concerns to the language teachers especially for those who were not used to applying digital technology into their teaching practices. In reality, this impromptu condition posed serious threats to the creativity of such teachers. In particular, they had to adapt rapidly to the challenges created by the new teaching situation. In fact, many teachers felt they were losing their confidence to teach virtual classes mainly because they were not what the teachers had been educated for. This spoiled their confidence and sense of creativity.

Since emerging technologies may have a positive impact on students’ creativity (Li et al., 2022) the successful dissemination of knowledge through Google Meet and Adobe Connect may have such an effect. This is substantiated by the discussion that the most important effect of knowledge sharing, among the other benefits, is related to innovation and creativity “because knowledge sharing does not only mean effective transfer of knowledge, skills, and information, but it also indicates the creation of new knowledge and innovative ideas” (Lee, 2018, p. 3). Similarly, it has been argued that those who actively take part in sharing knowledge, “are more likely to generate, promote, and/or implement innovative ideas in the future” (Wang, 2023, p. 3). Besides, previous investigations have failed to consider the effect of knowledge sharing via Adobe Connect and Google Meet on EFL teachers’ creativity. Therefore, it sounds incumbent to examine the impact of EFL teachers’ knowledge sharing via Adobe Connect and Google Meet on their creativity. As such, the following research questions were proposed:

1. Compared to Adobe Connect, does GM have a significant effect on EFL teachers’ creativity?
2. What is the Iranian EFL teachers’ attitude towards the effect of social platforms on their creativity?

2. MATERIAL AND METHOD

2.1. Participants

The participants of this study were selected from Iranian EFL teachers. To conduct the study, 60 EFL teachers from 15 high schools in Kermanshah city, a city in West of Iran, majoring in Teaching English as Foreign Language (TEFL) were recruited. They were selected through available sampling. The teachers' experience ranged from three to 15 years, and their ages ranged between 27 and 52 years. They graduated from different Iranian state and Islamic Azad Universities, with educational levels of B.A., M.A. in TEFL, and English Literature.

The participants were randomly assigned to one Control group (n=18) and two experimental groups including Adobe connect group (n=20) and Google Meet group (n=21). Regarding the years of experience, all the teachers had more than four years of experience. Participants included 24 (53%) female and 36 (47%) male. The statistical population of the study showed that a total of 60 participants 25 (41.6%) hold bachelor's degrees, and 35 (58.4%) hold master's degrees.

2.2. Design

The aim of this study is to compare the effect of knowledge sharing via Adobe Connect and GM on EFL teachers' creativity. Accordingly, the suitable design is quasi experimental design. To do this study three groups were needed:

Control group: Control group that shares knowledge in face to face interactions.

Experimental group 1: Adobe Connect group that uses the platform to share knowledge.

Experimental group 2: Google Meet group that uses the platform to share knowledge.

2.3. Instruments

In total, two instruments were utilized in the study, namely, the EFL creativity questionnaire and a semi-structured interview.

The EFL creativity questionnaire: To assess the EFL teachers' creativity, the scale developed by Khany and Boghayeri (2014) was employed in the present study. There were 43 items with three subscales and a two-point Likert scale. The subscales included seventeen individual difference items, twenty expertise items, and six management items. As reported by the authors, Cronbach's alpha coefficient was used to evaluate the reliability of the questionnaires. The results showed that Cronbach's alpha of the EFL teachers' creativity questionnaire (43 questions) was 0.768 which indicated the appropriate reliability of research tools. The report of the validity of the scale is also presented by the authors.

A semi-structured interview: To find the effect of social platforms on EFL teachers' creativity in their daily practice, a week after the treatment, a semi-structured interview (Appendix) with 15 volunteer EFL teachers from the experimental groups was carried out. There were 5 questions in the interview.

To ensure the content validity of the questions, two TEFL experts reviewed them and provided their comments. The interviews were conducted in Farsi to let the teachers express themselves freely in their first language. Each interview lasted for 15 minutes. The interviewees were asked if they share ideas regarding the latest theories of language teaching in EFL context and if the answer is positive, how they do it and what hurdles they may encounter. The interviewees' responses were recorded, transcribed, and translated to English.

2.4. Procedure

First, the available participants were divided into three groups. The first group as the control group included 18 EFL teachers who did not receive the treatment. The second group was the first experimental group and included 20 EFL teachers who shared their ideas via Adobe Connect. The third group was the second experimental group, it included 21 EFL teachers who shared their opinion via Google Meet. The participants were informed that the data only be used for research and would be kept entirely confidential. Prior to gathering the data, the first researcher explained briefly to the teachers the purpose of the study and then obtained each individual's consent. They were also told in detail what they were required to do. The participants were also reminded that there were no right or wrong answers to the items of the questionnaire. They were also told that the accuracy of the results depended on how honest they could be. Next, during their break time, the creativity questionnaire was given to the participants as the pre-test. They had 20 minutes time to fill in the questionnaire.

As the third step, the important recent theories in TEFL were shared via the Telegram group for all three groups and each teacher was required to choose two theories in English language teaching, read and analyze them critically. The theories in TEFL were employed as part of the treatment since it was thought that classroom discussions offer an excellent platform for nurturing creative thinking abilities. More specifically, it was assumed that by promoting and acknowledging their innovative ideas and distinct viewpoints the participants' creative thinking was fostered (Sternberg & Grigorenko, 2004). The first researcher/the teacher asked each participant of the three groups to select a particular incident that caught their attention and talk about it in the discussion group. The condition in both online discussion and face to face sessions was the same. Each session took around 1.30 hours and lasted two weeks. When there was no volunteer to begin the discussion, the first researcher chose the teacher and asked her about her experience. As the fourth step, the researcher presented a topic and asked a thought provoking question. Teachers were free to express their ideas. It should be noted that all participants were free to voice their concerns or offer their opinions regarding the event. A week after the treatment, all the participants were given the EFL creativity questionnaire again. As the last step, four days after the treatment, a semi-structured interview with 15 volunteer EFL teachers from the experimental groups was carried out. The interviews were conducted in Farsi to let the teachers express themselves freely in their first language. Each interview lasted for 15 minutes. The comments of the respondents were taped, written down, and then translated into English. A summary of the procedure is presented in Table 1.

TABLE 1. The summary of the procedure

STEP	DESCRIPTION
Step 1	The creativity questionnaire was given to the participants.
Step 2	Recent theories in TEFL were shared via the Telegram group for all three groups.
Step 3	Each participant of the three groups was asked to select a particular and talk about it in the discussion group.
Step 4	The participants were presented a topic and were required to ask a thought provoking question.
Step 5	The participants were given the EFL creativity questionnaire again.
Step 6	The interviews were conducted.

3. RESULTS

Calculating the normality of data is essential for many statistical tests because normal data is an underlying assumption in parametric testing. Hence, the Kolmogorov-Smirnov test was used to see if the data in this study was normal. Table 2 examines the distribution of data by the normality test (Kolmogorov-Smirnov test) for three “Control” and “Experimental1” & “Experimental2” groups.

Assumption of Normality Test
H_0 : Sig. ≥ 0.5 ; Data distribution is normal.
H_1 : Sig. < 0.5 ; Data distribution is <u>not</u> normal.

TABLE 2. Results of normality test for the creativity

Groups	Groups	Kolmogorov-Smirnov ^a		N	Items
		Statistic	Sig.		
Pre-test	Ctrl	.176	.146	18	43
	Exp1	.070	.120	20	
	Exp2	.087	.090	21	
	Total	.076	.200	59	
Post-test	Ctrl	.130	.200	18	43
	Exp1	.059	.113	20	
	Exp2	.098	.080	21	
	Total	.052	.200	59	

As shown in Table 2, the results of the Kolmogorov-Smirnov test proved that all significance values in the three “Control” and “Experimental1” & “Experimental2” groups for research variable are more than 0.05 (Sig. > .05). Due to the fact that the significance values for the normality test were significantly more than the predetermined 0.05, it can be claimed that the data collected from the test had normal distributions.

The first research question inquired which group (control, Adobe Connect or Google Meet) has a significant effect on EFL teachers’ creativity a pretest in terms of creativity was given to EFL teachers in three “Control” and “Experimental1” & “Experimental2” groups. A One-Way ANOVA was used to confirm the homogeneity of three groups (Ctrl, Exp1, & Exp2) at the beginning of the research. The descriptive results of the pretest scores are shown in Table 3.

Assumption of One-Way ANOVA Test
$H_0: \text{Sig.} \geq 0.5 ; \mu_1 = \mu_2 = \mu_3$
$H_1: \text{Sig.} < 0.5 ; \mu_1 \neq \mu_2 \neq \mu_3$

TABLE 3. Descriptive statistics of creativity in control and experimental groups in terms of homogeneity in pretest

		Sum of Squares	df	Mean Square	F	Sig.
Pretest	Between Groups	.000	2	.000	.122	.886
	Within Groups	.094	56	.002		
	Total	.094	58			

According to the obtained results in Table 3, the significant value of the analysis of the variance test for the creativity variable is greater than 0.05, so the H0 hypothesis cannot be rejected, and the result suggests that the three groups were homogeneous in terms of creativity. This means that no significant difference was observed between groups in the pretest. In the following, the research questions will be examined.

Next, in the post-test in three “Control” and “Experimental1” & “Experimental2” groups the creativity of the three groups was compared by a One-Way ANOVA test. The descriptive results of the posttest scores are shown in Table 4.

TABLE 4. Descriptive statistics of creativity in control and experimental groups in posttest

		Sum of Squares	df	Mean Square	F	Sig.
Posttest	Between Groups	.718	2	.359	112.942	.000
	Within Groups	.178	56	.003		
	Total	.896	58			

According to the obtained results in Table 4, the significant value of the analysis of the variance test is lower than 0.05, so the H1 hypothesis cannot be rejected, and the result suggests that the three groups were different in terms of creativity. It means that a significant difference was observed between groups in the posttest. In the following, in order to examine this question in more detail, MANOVA was used.

Before carrying out covariance analysis, the condition of non-interaction between the independent variable (group) and covariate (pre-test) with the dependent variable (post-test) should be checked. In fact, this was done to check the same slope of the regression line. Also, in this type of analysis, the assumptions of Levin’s test for the homogeneity of the variance of the two groups should be observed in the post-test stage, so that the results can be confirmed and the covariance analysis can be performed. The results are shown in Tables 5 to 7.

Presuppositions of analysis of covariance test

1. Examining homogeneity of Variance

Assumption of Levene’s Test
$H_0: \text{Sig.} \geq 0.5 ; \text{The error variances of the groups are equal}$
$H_1: \text{Sig.} < 0.5 ; \text{The error variances of the groups are not equal}$

TABLE 5. The Results of Levene’s Test in examining the assumption of equality of variances for the creativity

F	df1	df2	Sig.
.569	2	56	.569

According to the results of Table 5, since sig. was more than 0.05, the null hypothesis is accepted and this means that the variances of the errors in all variables are equal.

2. Examining the homogeneity condition of the slope of the regression line

Assumption of Interaction Test
H_0 : Sig. ≥ 0.5 ; The slopes of the regression line are homogeneous
H_1 : Sig. < 0.5 ; The slopes of the regression line are not homogeneous

TABLE 6. Interaction test between the independent variable (Group) and covariate (Pre-Test) with the dependent variable (Post-Test) of creativity

Dependent Variable	Source of changes	Type III Sum of Squares	df	Mean Square	F	Sig.
Groups * Q.Pre	The interaction effect of pre-test and group	.001	2	.000	.125	.883

According to the results of Table 6, it can be seen that for the creativity variable, the value of the interaction test statistic between the pre-test and post-test groups is not statistically significant, because the significance level is greater than 0.05 standard error. Therefore, the condition of balance of regression slopes for covariance analysis is established.

3. Examining the question

Assumption of Multivariate Test
H_0 : Sig. ≥ 0.5 ; Multivariate covariance is not statistically significant
H_1 : Sig. < 0.5 ; Multivariate covariance is statistically significant

TABLE 7. The results of the analysis of covariance comparing groups in terms of creativity in the Post-Test by controlling the effect of the pre-test

Dependent Variable	Source of changes	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Creativity	Pre-test effect	.035	1	.035	12.686	.001	.187
	Independent variable effect (Group)	.699	2	.350	125.039	.000	.820

As can be seen in Table 7, the value of the test statistic for creativity in the post-test stage has become significant at the 5% error level, because its significance level is less than 0.05 standard error. Therefore, after the training in the three control and experimental groups, in the post-test stage, after removing the effect of the pre-test, there is a significant difference in this variable. The amount of this effect according to the eta squared column was (82) percent. These are the general results of covariance analysis on the data set. In order to check the trend in each of the groups, pay attention to the results in Table 8.

TABLE 8. The Results of the analysis of covariance comparing groups in terms of creativity in the post-test by controlling the effect of the pre-test separately for each group

Dependent Variable	Source of changes	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Creativity	Ctrl	.004	1	.004	2.371	.143	.129
	Exp1	.025	1	.025	4.621	.050	.204
	Exp2	.010	1	.010	6.941	.016	.268

As can be seen in Table 8, the progress of creativity has become statistically significant only in the experimental group, while in the experimental1 group, progress has also been seen, but it is not statistically significant. The amount of this improvement is also expressed according to the eta square column was 27 percent.

The second research question inquired Iranian EFL teachers' attitude toward the role of social platforms on their creativity. To answer the question a semi-structured interview was employed. To do this, three questions were designed by the researchers. To enable the teachers to speak freely in their own tongues, the interviews were conducted in Persian 15 minutes were allotted for each interview. The interviewees' remarks were recorded, transcribed, and then translated into English.

When asked about the effect of social media on teachers' creativity, one of the interviewees noted that:

“Like all other teaching methods, media should be used sparingly during the educational process. Media can be used to connect ideas or encourage conversation. Social media use in education appears to improve teacher performance as evidenced by the strong effects that knowledge sharing, creativity, cooperation, and engagement have on teachers' performance».

Another teacher also stated that:

“Social media improves cooperation, interaction, learning outcomes, and other course-related qualities that boost teachers' performance both formally and informally. Their comprehension and communication abilities in relation to their job and work profile will grow as a result. All these can result in the teacher's creativity.”

In answer to the question that probed the advantages of using social media as a learning tool, a teacher explained that:

“Using media to teach people engages them, helps them retain knowledge, inspires interest in the material, and shows the applicability of numerous ideas. But that is not the case. Social media appears to have impacted how children are taught and learn if we consider the fact that a significant portion of internet users are both students and teachers. Bridges are built between students' prior knowledge and the course's learning objectives through effective instruction.”

Another interviewee said that:

“Users can learn a lot online through social media. The analysis of social media has changed everyone's life. Social media use in the education sector will benefit students by enabling them to learn and access information globally. Social media also assists in improving teachers' academic performance and expanding their knowledge through data and information gathering. It provides more options for sharing knowledge and expertise in a fun and interesting way. The best thing about social media is how quickly you can identify the subject and field experts. In order to gain more knowledge and beneficial information from them. It's a great chance for us to seek advice from professionals on the subjects where we might need it.”

The interviewees were asked about the best social media for teachers. Eight Interviewees said that they preferred Google Meet. One of them argued that:

“Google Meet is superior to other social media for learning for a number of reasons. One reason is that the Standard Google Meet is always free as such more preferable compared to other learning management systems (LMSs), which are expensive to buy. Google Meet is also equipped with useful remote teaching functions, allowing you and to learn online easily”.

Four other interviewees from this group noted that with the recent change from Google Hangouts to Google Meet, it is thought that Google Meet competes better with Skype and Zoom and is one of the best tools for group videoconferencing. In addition, as they reported, after years of using Google they think that they are more familiar with tools created by Google.

Overall, the results demonstrate that teachers considered Google Meet to be user-friendly, easy to use, and adaptive for interaction. The study confirmed that language instructors perceived it as an effective tool for creativity in language teaching. This is in accordance with the concrete theory which maintains that social interaction is crucial in learning to stimulate and enhance learner development and creativity (Li et al., 2022).

4. DISCUSSION

The present study aimed to compare the effectiveness of knowledge sharing via Adobe connect and Google Meet on EFL teachers' creativity. It was found that the Google Meet group outperformed the Adobe Connect group and that knowledge sharing improved the creativity of the EFL teachers. The result is consistent with research by Parhamnia and Farahian (2021) who found that there was a significant relationship between knowledge sharing and EFL teachers' creativity. Mazhar and Akhtar (2018) investigated the connection between university professors' creativity and knowledge management. As reported, technology, creativity, and knowledge management have significant relationships. Another study came to the conclusion that creativity may be influenced by the combination of new and old knowledge (Kogut & Zander, 1992). It is conceivable that the mutual learning that could result in the generation of new information enhances people's capacity to devise original responses to problems (Kogut & Zander, 1992; Tsai & Ghoshal, 1998). In another study, Ipe (2004) found that developing informal connections with team members' aids in a person's knowledge construction. The results also suggest that social media boosts participants' motivation, which has an impact on their capacity for interactive learning.

As to the comparison of the performance of the Google Meet and Adobe Connect, it has been reported that Adobe Connect and Google Meet softwares have some similar qualities such as customer support, Google Meet has some advantages over Adobe Connect including its functionality, and ease of use, (Software Advise, n.d.) In addition, as reported by the interviewees, the better performance of Google Meet can be explained by its affordability, its useful remote teaching functions, and most importantly higher familiarity of the teachers with Google Meet compared to Adobe Connect.

According to the interviewees' reports in response to the second study question, it was discovered that most respondents had a favorable opinion on the use of social media in education. To advance their professional development, EFL teachers appear to need to work together more. In this case, social media can

be a significant tool for teachers to use in order to share ideas, benefit from one another's knowledge, and ultimately learn more about education.

According to (Al-Fadda & Al-Yahya, 2010), it may be inferred from the study's discussion of social media's role in teacher education that Google Meet might help EFL teachers share knowledge and foster their creativity. According to the research findings, EFL teachers have favorable opinions about using social media (Al-Fadda & Al-Yahya, 2010). Teachers believe that social networking can aid individuals in expanding their knowledge (Bani-Hani et al., 2014). Additionally, teachers think that social media enhances their academic performance and boosts their linguistic self-assurance. They concur that social media can increase their motivation to study (Jethro et al., 2012; Ziegler, 2007). Last but not least, teachers believe that learning through social media is more collaborative than traditional learning and that doing so can help them integrate more successfully into the classroom (Ferdig, 2007).

The findings corroborate Lewandoski's (2015) assertion that the use of Google Meet makes learning more organized and understandable. In the same vein, Lander (2014) explains that the use of Google Meet accomplishes predetermined lesson objectives when utilized cooperatively. The outcomes in terms of collaborative learning were comparable and concur with Ramli et al. (2022) findings who showed that the use of Google Meet promotes collaborative learning and offers language learners a sense of belonging by immersing them in the language community. This demonstrated how useful Google Meet was as a language learning aid in an online distance learning setting. The findings mentioned above concur with that of Lee (2018) which contends that Google Meet is user-friendly and simple to use in the classroom (Lewandoski, 2015), though it is important to note that this may change depending on the context. In line to the conclusions and findings of the study, the comparable studies by Lander (2014) and Isaacson (2013) asserted that Google Meet was adaptable and effective for carrying out learning. Other studies (Lander, 2014; Lewandoski, 2015; Martinez-Nunez et al., 2016) support the findings above, and indicate that Google Meet is efficient for online classroom assignments.

5. CONCLUSIONS

According to the study's findings, teachers' information sharing is becoming increasingly important due to the fast-paced change in knowledge in the age of changing knowledge and the encouragement of teachers' professional development. Through ongoing learning, teachers must adapt to the shifting social norms and educational regulations. Despite this, teachers frequently feel helpless and eager to learn new technology, new teaching methods, and new challenges outside the usual teaching chores and supporting schools in administrative tasks due to a lack of time and space.

Teachers must work together to enhance their daily practice. A school can set up systems for information sharing, allow for more time for professional conversation and discussion, motivate and direct teachers working with various fields of study or grade levels to share their own teaching methods and evaluations and provide knowledge delivery through virtual and actual expertise communities. Knowledge should be shared and expanded so that it does not become less valuable over time. Individually created lesson plans and learning worksheets can be placed on a platform and shared with others to spread knowledge. In order

to develop new teaching models that are appropriate for school pupils and progress teaching techniques in lessons to promote teacher efficacy, teachers could create fresh inspiration and new knowledge through unique knowledge sharing.

This study clarifies how social media may be used to spark teachers' creativity, therefore we propose that Google Meet can encourage information exchange and potentially even advance teachers' professional development. The study also confirmed that teachers evaluated the use of Google Meet as a language learning tool that stimulated collaborative learning, increased creativity in language instruction, and improved understanding of lessons. Our findings clearly show that teachers thought using Google Meet was user-friendly, simple to use, and adaptable for interaction. According to the concrete theory, which maintains that social interaction is crucial in learning to stimulate and enhance learner development during the lesson, the use of Google Meet made lessons clear and understandable, and the study confirmed that language instructors perceived it as an effective tool for language teaching and learning as it bridges the distance created by online distant learning.

Future research can examine if Google Meet usage enhances other facets of teachers' professional development. The results of the present study may also prompt a reevaluation of social media's potential to foster motivation, transparency, and feedback in communication while simultaneously serving as a catalyst for reforming the teacher education system. Such claims can be investigated in the future studies.

The results of the present study might have some implications. Firstly, the education policies and programs should attach more significance to knowledge sharing practice, present proper opportunities for them to increase their knowledge and creativity, and raise teachers' awareness about the significant role of knowledge sharing in EFL education. Secondly, the EFL policymakers could investigate the effectiveness of social media in knowledge sharing among instructors. Thirdly, it is important to investigate the EFL teachers' issues to identify the barriers to creative practices of EFL instructors. Finally, schools as educational institutes should provide a more friendly environment and atmosphere for their teachers to reflect their creative practices in the classroom. The present study had also some implications for academics. The managers should support their EFL instructors financially and consider rewards for them to devote more time to their profession and do their teaching more creatively. Besides, curriculum and syllabus designers, and material developers, should attempt to design lessons, tasks, and practices that encourage creativity in educational system among teachers and students.

5.1. Limitations and future lines of research

The present study has some limitations like any other study. As the first limitation, the sample was not large enough and thus, no generalizable conclusion could be drawn from the results. The second limitation was that available EFL teachers were recruited and this may have affected the outcomes since the chosen samples might have contained talented teachers who were not drawn at random from Iranian EFL teachers. Second, the sampling for this research consisted solely of high schools.

There are some suggestions for future researchers regarding the barriers to sharing knowledge. In further studies, researchers could use larger samples for furthering the understanding of the barriers of sharing

knowledge among EFL instructors. It is also possible for future researchers to consider creative teaching in EFL courses for developing language knowledge and skills and study the instructors' ideas regarding the barriers to creative teaching in EFL courses. Conducting a qualitative research using interviews is another suggestion for future researchers. They could conduct interviews with EFL instructors and EFL learners to find out their perspectives regarding creativity in the classroom and its barriers. It is also needed to conduct some studies to recognize the factors that encourage or hinder EFL instructors from creative teaching.

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Appendix

The interview questions

1	Do online platforms have effect on teachers' creativity?
2	What are the advantages of using online platforms as learning tools?
3	What are the disadvantages of using online platforms as learning tools?
4	What are the characteristics of a good online platform as a learning tool?