The Impact of Offline Rosetta Stone on Iranian EFL Teachers' Autonomy, Creativity, and Work Engagement

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ABSTRACT

Purpose: This study aimed to examine the impact of using Rosetta Stone on Iranian EFL teachers' autonomy, creativity, and work engagement in the light of teaching experience and gender.

Methods and Materials: A quasi-experimental research design was used, involving 60 Iranian EFL teachers from five language institutes in Ahvaz, Iran. The participants were evenly distributed across gender (male and female) and teaching experience (novice and experienced). Three standardized instruments were used to measure the dependent variables: the Teacher Classroom Autonomy Rating Scale, the Teacher Creativity Scale, and the Utrecht Work Engagement Scale (UWES-9). Teachers completed pretests and posttests before and after using the offline Rosetta Stone software. Data were analyzed using paired-samples t-tests and two-way ANCOVA to examine the effects of gender and teaching experience on the outcomes.

Findings: The results showed a significant increase in teachers' autonomy, creativity, and work engagement after using the offline Rosetta Stone software. Paired-samples t-tests indicated substantial improvements in all three variables (p < 0.05). However, two-way ANCOVA analyses revealed that neither gender nor teaching experience significantly influenced these improvements, suggesting that the software was equally beneficial across different demographic groups.

Conclusion: The findings highlight the positive impact of technology-based instructional tools on teachers' autonomy, creativity, and work engagement, irrespective of their gender or teaching experience. The study underscores the need for integrating technological resources into teacher education and professional development programs to enhance teaching effectiveness and job satisfaction.

Keywords: Rosetta Stone, teachers' autonomy, creativity, work engagement

1. Introduction

The application of technology in pedagogy has become increasingly important in the present era and the instructors are rigidly required to keep up with the technological knowledge advancement of their learners (Richards & Reppen, 2014) in order to meet the requirements of digital literacy. Many of the learners, today, are quite competent and literate in using up-to-date electronic materials and instruments (Prensky, 2001). There is an enormous amount of research advocating the positive effects of technology-based instruction including the use of software programs on language learners' academic development and achievement in schools and language centers, but few on other leading factors such as teachers' autonomy, creativity, and work engagement. In fact, the majority of previous studies focused on learners rather than teachers in relation to the application of technological tools. Only in the past several years has the importance of teacher psychology started to attract the attention that it deserves. Teacher education itself is an enormous field and has been the focus of numerous publications over the years that attempt to provide teachers with some foundation to prepare them for teaching from a range of different perspectives, including historical, practical, and social viewpoints (Horowitz, 2013; Larsen-Freeman & Anderson, 2013). Training for using technology in language teaching and learning has, however, been somewhat less prevalent. There have been a number of publications targeted toward teacher education with technology (Son, 2018; Son & Windeatt, 2017), but technology has remained an area that has been somewhat neglected in courses in terms of having clear objectives in promoting autonomy, creativity and work engagement of the teachers (Son, 2018).

One neglected factor in language pedagogy is teachers' autonomy. Together with the recent view of autonomy, there has been an emphasis on teacher autonomy; it is only natural to think that autonomous behaviors promoted in students have to be present in teachers as well (Guay, 2021; Martha, 2021; Peng & Guo, 2022; Wang et al., 2023). Teachers also need to be lifelong learners and to face an ever-changing society. Benson (2001) discussed a view of autonomy which may be one of the most popular: the right to freedom from control by others; it is, nevertheless, one of the most difficult to attain. It emphasizes choice as an important element in our lives. It is highly desirable for many teachers to think of themselves as autonomous professionals, free from control exerted by colleagues, administrators, the institution or the educational system and able to decide and take action on their own (Benson, 2001). Reality shows a different picture: teachers are restricted by contracts, administrators, school regulations, curricula and students' desires and expectations. Thus, it struck the mind of the researcher that being familiar with technological tools such as software programs night help language teachers gain the required autonomy in their instruction (Benson, 2011; Bereczki & Kárpáti, 2021).

In today's technology-driven world, teachers may no longer be the sole keepers of knowledge in the classroom. The introduction of one-to-one initiatives, online classrooms, blended-learning models, and the overall rise of technology in the classrooms allow students to have more access to information than past generations (Bicer et al., 2024; Damanik, 2024). Technological change is driven by human creativity, and in turn provides new contexts and tools for creative output (Henriksen, Hoelting, et al., 2016; Henriksen, Mishra, et al., 2016). According to Chappell (2016), creativity has a function to explore learners' life experience. The richer the classroom is in developing and supporting this experience for the learners, the greater potential for creativity to occur. The language classroom is, therefore, a site with great potential to draw out all learners' experiences and to use the new language (Chappell, 2016).

Rosetta Stone is a well-known computer-assisted language learning program founded by Allen Stoltzfus in 1992. It pioneered a naturalistic approach to language acquisition by integrating sounds and images, aiming to replicate first-language learning experiences. The software has evolved from CD-based versions to cloud-based applications, supporting reading, writing, speaking, and listening skills. Utilizing the dynamic immersion method, it engages learners in four progressive stages: associating words with images, intuitive recognition, interactive application in conversations, and guided instruction from simple to complex (www.Rosettastone.com). The fourth version of Rosetta Stone is available both online and offline, with online platforms such as Rosetta Studio, where learners participate in live classes, and Rosetta World, where they engage in activities with other learners or native speakers. Research indicates that the software enhances vocabulary retention and provides learners with control over their learning process, thereby increasing motivation. Additionally, its immediate feedback mechanism reduces anxiety and facilitates a low affective filter, which supports language learning (Krashen, 1982). The program also fosters a positive attitude toward learning by offering continuous review and individualized instruction, which aids in

developing a natural American accent and acquiring meaning through images rather than translation (Griffin et al., 2014).

Teacher autonomy is another crucial topic in educational research, encompassing self-defined professional action, professional development, and freedom from external control (McGrath, 2000). While some scholars argue for a broader definition of autonomy, others, such as Smith (2000), emphasize self-directed professional development as the most vital aspect (Smith, 2000). Teachers who possess autonomy in their pedagogical practices enhance students' critical and creative thinking skills, enabling learners to engage in logical reasoning and independent decision-making (Tort-Moloney, 1997). Effective educators use autonomy to create engaging, multidisciplinary projects, facilitate out-of-class learning experiences, and tailor assessments to students' needs, drawing upon constructivist learning theories such as Piaget's approach (Bhushan, 2018). Creativity, closely linked to learning, is defined as the ability to generate innovative ideas and solve problems (Rybakowski et al., 2008; Sternberg & Lubart, 1995). Early research by Guilford (1950) and Torrance (1962) established the psychometric foundations of creativity measurement. Teachers influence students' creativity by fostering collaborative and interactive classroom environments, which facilitate knowledge exchange and enhance social learning (Hart, 2004). Studies show that cooperative learning significantly improves creativity and motivation among EFL learners, supporting the use of collaborative methods in language education (Marashi & Khatami, 2017). Lastly, work engagement is defined as teachers' interest, enthusiasm, and dedication to their profession, which directly impacts student learning (Huang, 2024; Li, 2024). Engaged teachers demonstrate high levels of vigor, dedication, and absorption in their work. Research highlights that teacher engagement fosters student academic participation and enhances instructional effectiveness (Cinches et al., 2017). This aligns with the principles of positive psychology, which emphasize human vitality and peak performance (Rybakowski et al., 2008). The components of engagement—vigor, dedication, and absorption—contribute to greater professional satisfaction and instructional commitment (Bakker et al., 2008; Hakanen et al., 2006). Ultimately, these interconnected themes emphasize the importance of technology, autonomy, creativity, and engagement in shaping effective teaching and learning experiences.

Given this view of the relationship between creativity and technology, it implies that teaching and learning should emphasize their connection. Teachers, however, are more important than ever in preparing students with infinite access to all types of information. Teachers can be the guides that shape educational experiences for their students, helping them engage with learning tools that will enrich and support deeper learning, including different types of technology. Work engagement is defined as a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption. It is considered to be the antipode of burnout. In language teaching and learning, teachers' guidance is very important as they are able to combine language acquisition with primary socialization and enculturation (Gee et al., 2009). Moreover, work engagement helps teachers to be away from job burnout and boredom. Teachers who are involved in following a monotonous routine program of instruction may gradually lose motivation and get trapped in less work engagement and job indifference. Technology-based instruction can provide teachers with variety of interesting digital techniques which may resolve such a problem.

In line with the objectives of the study, the following research questions were conceived:

RQ1: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' autonomy?

RQ2: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' creativity?

RQ3: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' work engagement?

2. Methods and Materials

2.1. Study Design and Participants

The participants of this quasi-experimental study consisted of 60 Iranian EFL teachers working at five reputable language institutes in Ahvaz, Iran. Since for the purposes of the study, male and female teachers were required, an attempt was made to select equal number of the participants from both gender groups (male and female). The objectives of the study also entailed that the participants had to be novice and experienced, thus, consulting the relevant previous research, it was decided to include equal number of teachers based on their years of teaching experience, in a

sense that those who have been engaged in teaching English for less than five years were considered as novice and those being involved in EFL teaching for more than five years were regarded as experienced. Therefore, out of 60 EFL teachers who agreed to participate in the study, 30 were male (15 novice and 15 experienced) and 30 female (15 novice and 15 experienced). The sampling technique was purposive in that only EFL teachers who were novice and experienced were selected. In addition, it was also convenience in that the participants needed to be accessible and agreed to participate in the research.

The first step to conduct the study was to select male and female and also novice and experienced EFL teachers. Since the research method was a quasi-experimental one, sufficient number of EFL teachers were required to take part in the study, and because enough number of teachers with such features do not work in one institute, the researcher decided to select them from five language institutes in Ahvaz. Appointments were made with the institutes' owners to receive the required permission and the teachers needed to be selected based on their ease of accessibility and also willingness to participate in the research. It seemed that selecting 60 EFL teachers of both gender groups who were novice and experienced would serve the purposes of the study. Therefore, 60 EFL teachers, 30 male and 30 female were selected non-randomly. Out of each gender group, 15 teachers were novice having less than 5 years of teaching experience and 15 had more than 5 years of teaching experience. Two briefing sessions were held with them to make them familiar with the Rosetta stone and how to use it in their classes. Prior to the implementation of the treatment, all the teachers needed to respond to the three scales of autonomy, creativity, and work engagement. After the implementation of the treatment, they were asked again to respond to the mentioned scales to unveil the impact of the software program on the dependent variables of the study. Ultimately, the obtained data were analyzed to answer the research questions.

2.2. Measures

2.2.1. Teacher Classroom Autonomy Rating Scale

The scale was designed and validated by Diyan and Adediwura (2016). The scale covers aspects of teacher classroom autonomy such as teacher satisfaction, teaching information, selecting textbooks and other instructional materials, selecting content, topics and skills to be taught, teaching technique, evaluating and grading students,

disciplining students, determining the amount of homework to be assigned, teacher responsibility, opportunity to participate in decision which affect the teacher, opportunity for independent and creative thought and action. These items were moderated and reviewed by experts in the fields of Tests and Measurement and Psychology to determine the appropriateness, relevance and adequacy of the items (content validity). The response pattern adopted was Likert format five options ranging from SA= strongly Agree, A = Agree, Undecided D = Disagree and SD = Strongly Disagree.

2.2.2. Teacher Creativity Scale

In order to measure the degree of EFL teachers' creativity, the scale designed by Pishghadam, Baghaei and Shayesteh (2012) was employed. The scale comprised 60 multiple choice items ranging from "always" to "never", requiring 20 minutes to complete. It was multidimensional and included seven dimensions namely Originality and Elaboration, Fluency and Flexibility, Person (Teacher), Press (Environment) and Materials, Motivation, Independent Learning, Autonomy, and Brainstorming. To fit the purposes of the study, the structure and wording of some of the items were changed and therefore, the reliability and validity needed to be reaffirmed. To estimate the reliability, a pilot study was performed on a smaller sample of EFL teachers (No. 15) with the same characteristics as the major participants of the study. To estimate the internal consistency, Cronbach alpha was used and the result turned out to be 0.78. To ascertain the validity of the scale, the opinion of three TEFL experts with much experience in similar research publications was sought. They confirmed the content relevance and content coverage of the items included in the scale.

2.2.3. Work Engagement Scale

The shortened form of Utrecht Work Engagement Scale (UWES), designed and validated by Schaufeli, Bakker, and Salanova (2006) was used. It is a short questionnaire to measure work Engagement, a positive work-related state of fulfillment that is characterized by vigor, dedication, and absorption. To validate the original scale, the researchers collected the data in 10 different countries (N = 14,521), and results indicated that the original 17-item Utrecht Work Engagement Scale (UWES) can be shortened to 9 items (UWES-9). The factorial validity of the UWES-9 was demonstrated using confirmatory factor analyses, and the

three scale scores had good internal consistency and test-retest reliability. Furthermore, a two-factor model with a reduced Burnout factor (including exhaustion and cynicism) and an expanded Engagement factor (including vigor, dedication, absorption, and professional efficacy) fit best to the data. These results confirmed that work engagement may be conceived as the positive antipode of burnout. It was concluded that the UWES-9 scores had acceptable psychometric properties and that the instrument could be used in studies on positive organizational behavior.

2.3. Data Analysis

The data analysis method employed in this study involved both descriptive and inferential statistical analyses. Initially, descriptive statistics, including mean, standard deviation, and standard error, were used to summarize the pretest and posttest scores for autonomy, creativity, and work engagement. To determine whether the offline Rosetta Stone software had a significant effect on these variables, paired-samples t-tests were conducted, comparing the pretest and posttest scores for the entire sample. Additionally, to examine the potential moderating effects of gender and teaching experience, two-way ANCOVA was utilized, controlling for pretest scores as covariates. This approach allowed for the assessment of whether improvements in autonomy, creativity, and work engagement varied based on demographic factors. The analyses were conducted using statistical software, ensuring the validity and reliability of the findings by adhering to standard assumptions of normality and homogeneity of variance.

3. Findings and Results

The first research question of the study was: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' autonomy? To answer this research question, the autonomy pretest and posttests of the Rosetta Stone condition had to be compared. The descriptive statistics of the tests are represented in the following table:

Table 1

Descriptive Statistics for the Autonomy Pretest and Posttest of the Rosetta Stone Condition

	Mean	N	Std. Deviation	Std. Error Mean
Autonomy Pretest	42.3833	60	7.67141	.99038
Autonomy Posttest	76.9167	60	7.10763	.91759

The table above shows that the autonomy mean score of the teachers who experienced Rosetta Stone went up from 42.38 on the pretest to 76.91 on the posttest. To see if this was a significant rise or not, the results of paired-samples t test in Table 2 had to be checked:

Table 2

Paired-sample t Test Results Comparing the autonomy Pretest and Posttest Scores in the Rosetta Condition

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Autonomy Pretest – Autonomy Posttest	-34.53333	3.49075	.45065	-35.43509	-33.63158	-76.629	59	.000

It could be found in Table 2 that there was a significant difference between the autonomy pretest and posttest scores of the teachers in the Rosetta Stone condition, $t(59) = -76.62$, $p = .000 < .05$. Now, to see if the teachers' experience and gender also had an effect on this improvement in the sphere of autonomy, the results of two-way ANCOVA should be checked:

Table 3

Descriptive Statistics for Gender and Teaching Experience: Autonomy Posttest Scores of the Rosetta Condition

Gender	Experience	Mean	Std. Deviation	N
Male	Novice	74.4667	5.84156	15
	Experienced	79.8000	8.29974	15
	Total	77.1333	7.55547	30
Female	Novice	74.8667	5.13902	15
	Experienced	78.5333	7.79988	15
	Total	76.7000	6.75252	30
Total	Novice	74.6667	5.40966	30
	Experienced	79.1667	7.93979	30
	Total	76.9167	7.10763	60

The total mean score for male teachers on the autonomy posttest in the Rosetta Stone condition was 77.13, and the total mean score for female teachers equalled 76.70. In addition, novice teachers obtained a mean score of 74.66, while experienced teachers' mean score was 79.16. To see if these differences between male and female teachers on the one hand and between novice and experienced teachers on the other hand could be large enough to reach statistical significance or not, the results of the two-way ANVOVA in Table 4 should be examined:

Table 4

Results of Two-way ANCOVA for the Effects of Gender and Teaching Experience on Autonomy Posttest Scores of the Teachers in the Rosetta Stone Condition

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2390.709	4	597.677	55.728	.000	.802
Intercept	2744.734	1	2744.734	255.920	.000	.823
Autonomy Pretest	2073.726	1	2073.726	193.355	.000	.779
Gender	13.909	1	13.909	1.297	.260	.023
Experience	.151	1	.151	.014	.906	.000
Gender * Experience	9.756	1	9.756	.910	.344	.016
Error	589.874	55	10.725			
Total	357951.000	60				
Corrected Total	2980.583	59				

The results presented above reveal that gender did not have a significant role in the autonomy posttest scores of the teachers in the Rosetta Stone condition ($p = .260$); likewise, teaching experience failed to affect the autonomy of the teachers in this condition ($p = .906$). Moreover, the interaction between these two variables (i.e., gender and teaching experience) also did not leave a significant impact on the autonomy of the teachers ($p = .344$).

The second research question of the study was: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' creativity? To answer this research question, the creativity pretest and posttests of the Rosetta Stone condition had to be compared. The descriptive statistics of the tests are represented in the following table:

Table 5

Descriptive Statistics for the Creativity Pretest and Posttest of the Rosetta Stone Condition

	Mean	N	Std. Deviation	Std. Error Mean
Creativity Pretest	64.4333	60	8.74568	1.12906
Creativity Posttest	114.8167	60	10.57097	1.36471

The table above shows that the creativity mean score of the teachers who experienced Rosetta Stone went up from 64.43 on the pretest to 114.81 on the posttest. To see if this was a significant rise or not, the results of paired-samples t test in Table 6 had to be checked:

Table 6

Paired-sample t Test Results Comparing the Creativity Pretest and Posttest Scores in the Rosetta Stone Condition

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Creativity Pretest – Creativity Posttest	-50.38333	5.38388	.69506	-51.77414	-48.99253	-72.488	59	.000

It could be found in Table 6 that there was a significant difference between the creativity pretest and posttest scores of the teachers in the Rosetta Stone condition, t (59) = -72.48, p = .000 < .05. Now, to see if the teachers' experience and gender also had an effect on this improvement in the sphere of creativity, the results of two-way ANCOVA should be checked:

Table 7

Descriptive Statistics for Gender and Teaching Experience: Creativity Posttest Scores of the Rosetta Stone Condition

Gender	Experience	Mean	Std. Deviation	N
Male	Novice	121.3333	10.66146	15
	Experienced	107.3333	6.69399	15
	Total	114.3333	11.27809	30
Female	Novice	121.2000	8.14336	15
	Experienced	109.4000	8.09585	15
	Total	115.3000	9.98326	30
Total	Novice	121.2667	9.32159	30
	Experienced	108.3667	7.37415	30
	Total	114.8167	10.57097	60

The total mean score for male teachers on the creativity posttest in the Rosetta Stone condition was 114.33, and the total mean score for female teachers equalled 115.30. In addition, novice teachers obtained a mean score of 121.26, while experienced teachers' mean score was 108.36. To see if these differences between male and female teachers on the one hand and between novice and experienced teachers on the other hand could be large enough to reach statistical significance or not, the results of the two-way ANVOVA in Table 8 should be examined:

Table 8

Results of Two-way ANCOVA for the Effects of Gender and Teaching Experience on Creativity Posttest Scores of the Teachers in the Rosetta Stone Condition

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5634.492	4	1408.623	80.829	.000	.855
Intercept	3096.526	1	3096.526	177.684	.000	.764
Creativity Pretest	3106.175	1	3106.175	178.238	.000	.764
Gender	.092	1	.092	.005	.942	.000
Experience	742.321	1	742.321	42.596	.000	.436
Gender * Experience	3.013	1	3.013	.173	.679	.003
Error	958.492	55	17.427			
Total	797565.000	60				
Corrected Total	6592.983	59				

The results presented above reveal that gender did not have a significant role in the creativity posttest scores of the teachers in the Rosetta Stone condition (*p* = .942); likewise, teaching experience failed to affect the creativity of the teachers in this condition (*p* = .000). Moreover, the interaction between these two variables (i.e., gender and teaching experience) also did not leave a significant impact on the creativity of the teachers (*p* = .679).

The third research question of the study was: Does using offline Rossetta Stone software program have any significant effect on Iranian male and female experienced and novice EFL teachers' work engagement? To answer this research question, the engagement pretest and posttests of the Rosetta Stone condition had to be compared. The descriptive statistics of the tests are represented in the following table:

Table 9

Descriptive Statistics for the Engagement Pretest and Posttest of the Rosetta Stone Condition

	Mean	*N*	Std. Deviation	Std. Error Mean
Engagement Pretest	20.2333	60	4.45073	.57459
Engagement Posttest	36.0667	60	3.89640	.50302

The table above shows that the engagement mean score of the teachers who experienced Rosetta Stone went up from 20.23 on the pretest to 36.07 on the posttest. To see if this

was a significant rise or not, the results of paired-samples t test in Table 10 had to be checked:

Table 10

Paired-sample t Test Results Comparing the Engagement Pretest and Posttest Scores in the Rosetta Stone Condition

	Paired Differences					*t*	*df*	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Engagement Pretest – Engagement Posttest	-15.83333	2.72569	.35188	-16.53745	-15.12921	-44.996	59	.000

It could be found in Table 10 that there was a significant difference between the engagement pretest and posttest scores of the teachers in the Rosetta Stone condition, *t* (59) = -44.99, *p* = .000 < .05. Now, to see if the teachers'

experience and gender also had an effect on this improvement in the sphere of engagement, the results of two-way ANCOVA should be checked:

Table 11

Descriptive Statistics for Gender and Teaching Experience: Engagement Posttest Scores of the Rosetta Stone Condition

Gender	Experience	Mean	Std. Deviation	*N*
Male	Novice	34.7333	3.23964	15
	Experienced	38.6000	3.62137	15
	Total	36.6667	3.90696	30
Female	Novice	34.0000	3.22933	15
	Experienced	36.9333	3.97252	15
	Total	35.4667	3.85722	30
Total	Novice	34.3667	3.20004	30
	Experienced	37.7667	3.82986	30
	Total	36.0667	3.89640	60

The total mean score for male teachers on the engagement posttest in the Rosetta Stone condition was 36.66, and the total mean score for female teachers equalled 35.46. In addition, novice teachers obtained a mean score of 34.36,

while experienced teachers' mean score was 37.76. To see if these differences between male and female teachers on the one hand and between novice and experienced teachers on the other hand could be large enough to reach statistical

significance or not, the results of the two-way ANVOVA in Table 12 should be examined:

Table 12

Results of Two-way ANCOVA for the Effects of Gender and Teaching Experience on Engagement Posttest Scores of the Teachers in the Rosetta Stone Condition

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	599.357	4	149.839	27.806	.000	.669
Intercept	1282.099	1	1282.099	237.925	.000	.812
Engagement Pretest	401.090	1	401.090	74.432	.000	.575
Gender	6.325	1	6.325	1.174	.283	.021
Experience	28.214	1	28.214	5.236	.026	.087
Gender * Experience	.022	1	.022	.004	.950	.000
Error	296.376	55	5.389			
Total	78944.000	60				
Corrected Total	895.733	59				

The results presented above reveal that gender did not have a significant role in the engagement posttest scores of the teachers in the Rosetta Stone condition (p = .283); likewise, teaching experience failed to affect the engagement of the teachers in this condition (p = .026). Moreover, the interaction between these two variables (i.e., gender and teaching experience) also did not leave a significant impact on the engagement of the teachers (p = .950).

4. Discussion and Conclusion

This study aimed at investigating the effect of using Offline Rossetta on Iranian male and female experienced and novice EFL teachers' autonomy, teachers' creativity, and work engagement. The results indicated that using Offline Rossetta software program had significant effects on improving EFL teachers' autonomy, creativity, and work engagement. However, gender and teaching experience did not have a significant role in contributing to teacher' autonomy creativity, and work engagement in the Rossetta condition. Moreover, the interaction between gender and teaching experience also did not leave a significant impact on teachers' autonomy, creativity, and work engagement.

As it was well-defined by Holec (1981), autonomy is the individuals' ability to take control over their own learning and is regarded as a significant aim in language instruction (Holec, 1981). Increased autonomy has the potential to make educators more engaged in the pedagogical process, to assist them to more effectively handle their own affairs both inside and outside the educational centers, and to prepare them for lifelong progress (Benson, 2001, 2011). Furthermore, the political view on autonomy in language education puts emphasis on its critical and empowering nature, offering the individuals the essential freedom to control their own destinies (Winch, 2004).

Durak and Seferoğlu (2016) argued that technological changes have influenced the qualifications and knowledge required for the individuals in the information community to take advantage of technology properly and make acceptable progress in the technological conditions (Durak & Seferoğlu, 2016). In the same vein, teachers in general and EFL instructors in particular are required to cope with technological challenges and try to become more independent in their methodological practices. Besides technological advancements, the innovative alterations in the education systems, especially in Iranian schools and educational centers also caused alterations in the pedagogical practices. This has made the use of technology for teachers mandatory (Ülker & Yılmaz, 2016).

However, some discrepancies could be found between the results of this study and some of the previous ones dealing with gender. The reason could be related to differences in the context and conditions in which the studies were carried out. Referring to a study conducted by Dargut and Çelik (2014) with prospective teachers, female teachers were found to hold more positive attitudes concerning technology use compared to males (Dargut & Çelik, 2014). On the other hand, the study conducted by Şimşek and Yıldırım (2016) with teacher candidates found that there was no gender difference in technology use in education (Şimşek & Yıldırım, 2016). Upon examining the studies conducted with teachers, it is seen that the results obtained are congruous with the findings of the current study and attitudes towards

the use of technology in education do not change according to gender (Çelik & Bindak, 2005). This shows that in the technology age we are in, teachers whether male or female have similar attitudes concerning technology use in the educational process. The results of the last-mentioned study were in line with those of the current one.

Anastasiades (2017) considered creativity as very significant in education and added that the collaborative creativity with the use of ICT tools by the reflective teacher would help to respond critically to the demands of modern times (Anastasiades, 2017). Similar to other scholars, he also referred to characteristics of creativity such as the imagination, originality, and innovation, as well as on the development of divergent thinking, the development of new relationships, the pedagogical use of making an error/mistake, and the emotional climate. Important prerequisites for cultivating creativity in school education are the different ways of expression, in combination with the active participation of students in the construction of knowledge (e.g., formulating a problem is a more important process than problem-solving). All these features can be enhanced using ICT tools. In fact, they equip teachers with supplementary tools to make the class and also their activities more creative leading to better achievement of the students. Anastasiades (2017) further asserted that, ICT, under appropriate pedagogical conditions, may be one of the most important tools for teachers and students to develop cognitive, social, and technological skills (Anastasiades, 2017).

All these characteristics create conditions for both students and teachers to decide when and how to apply them. One of the key advantages of digital technologies is that content or knowledge can be created, shared, and discovered much more quickly and easily (Henriksen, Hoelting, et al., 2016; Henriksen, Mishra, et al., 2016). New technologies have much to offer to the world of creative sharing: for example, new applications for content development/creation, sharing videos/audio/images across global contexts, and websites that allow diverse creators to share content (such as YouTube). Taking into account the relevant literature (Cropley, 2001; Loveless, 2002, 2007; Mishra et al., 2013), it has been indicated that a single ICT characteristic may correspond to two or more elements of creative processes. Different scholars proposed that EFL teachers must be creative in employing innovative modes of applying technology, especially for teaching specific content. What Ertmer et al. (2012) proposed was establishing teaching trends that benefit from the merits of new ICT tools

for learning and thinking creatively, which is impossible without new technologies (Ertmer et al., 2012). Hence, the influential role of teachers in the learning environments of the 21st century has been emphasized.

Henriksen et al. (2016) asserted that teacher education and professional development are a step toward incorporating creativity within educational systems and offered three important suggestions: (a) develop teacher education curriculum that integrates technology and creativity across the program, (b) specific courses/programs focusing on creativity and technology, and (c) identify or use a framework that connects creativity and technology to curriculum guidelines (Henriksen, Hoelting, et al., 2016; Henriksen, Mishra, et al., 2016). The results of this study are endorsed by research conducted by Bereczki and Kárpáti (2021). They explored educational technology-integration expert teachers' beliefs about and experiences with nurturing creativity in technology-enhanced learning environments. Data was collected through qualitative methods (interviews, classroom observations, document analysis) from 12 purposefully sampled technology-integration expert secondary school teachers of six curricular areas, and their students. Analysis revealed that expert teachers' epistemic beliefs about creativity influenced their technology-based creativity fostering practices, with beliefs about assessment constituting a considerable barrier. Participants valued and implemented six overarching technology-based creativity-fostering approaches across the curriculum: igniting students' creativity; supporting idea development; creating digital products; scaffolding students' creative processes; augmenting creative collaboration among students; and facilitating the evaluation of creative student outcomes (Bereczki & Kárpáti, 2021).

The findings with regard to the effect of offline Rosetta stone on work engagement support the basic assumption of the job demands-resources theory: a combination of job resources (e.g., technology) and personal resources (e.g., autonomy and creativity) that predict work engagement (Nielsen et al., 2017). Further, the findings are in line with prior studies indicating that technology is an important job resource and is associated with higher work engagement (Nielsen et al., 2017; Skaalvik & Skaalvik, 2014; Xanthopoulou et al., 2009). Interestingly, technology-related collegial (i.e., social) support was associated with work engagement. This may be due to the high correlation between technology-related autonomy, competency support and collegial support. This finding could also be explained by the fact that teachers still work very independently and

autonomously or that those who are highly engaged in technology-related work feel the need for support. The role of technology-related collegial support in teacher well-being needs more attention in future studies, as the development of technology-related competence support requires shared collaboration (i.e., collegial activities).

The findings of the study indicated that technology in general and the use of appropriate software programs in particular in EFL context can lead to the enhancement of autonomy, creativity, and work engagement of EFL teachers. However, it was revealed that gender and teaching experience do not have a significant effect and all teachers with different genders and teaching experience can benefit from the use of ICT tools in pedagogical context. In can be concluded that technology-related autonomy and competence support were relevant to the promotion of teachers' proper use of ICT tools. The findings direct our attention to some important designing principles that need to be taken into consideration during the development and use of ICT materials. In this regard, the pedagogical implications can be clarified through three perspectives: teaching, learning, and material presentation as discussed above. To develop and use ICT tools, the importance of applying technology in language teaching should be taken into account. In this way, information is easy to conceptualize, and the cooperative learning environment captures the learners' attention. Thus, the study of ICT potentials should, at least, partially provide curriculum designers, program developers, and teachers with a better understanding of what accounts for success in pedagogical context. Syllabus designers and material developers should bear in mind to include interesting and relevant technological tools in their instruction to increase autonomy, creativity, and work engagement to allocate the required effort to better teach different skills. Moreover, the program should be developed in more interactive and flexible modes to enhance communication and it should give more options to the user to work with.

Technology is an important and frequently studied concept, but much remains unclear especially in Iran. Further research is needed to uncover the role of utilizing different ICT tools not only for teachers but also for learners of different ages with different levels of English language proficiency. It is recommended that this study be replicated with a larger number of participants from the same background. These suggested avenues of research might shed more light on foreign language learning. The findings revealed that teachers are aware of the importance of technology in boosting creativity and autonomy. However, there is no clear evidence about how these teachers use technology in their actual classrooms. Thus, future research needs to investigate the creative, autonomous, and engaging pedagogy of technology use in the classroom by doing classroom observations, and identify how the teachers integrate technology into creative, autonomous, and engaging classroom activities.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

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Declaration of Interest

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All procedures performed in studies involving human participants were under the ethical standards of the institutional and, or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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