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Examining Iranian EFL students' attitudes and learning environment perceptions regarding reality pedagogy

Seyyed Mohammad Reza Adel[1] · **Maryam Atai-Tabār**[2]

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Abstract
This study explored EFL students' attitudes and perceptions toward their learning environment in the framework of reality pedagogy as reported by Emdin (Reality pedagogy: Hip hop culture and the urban science classroom. Science education from people for people, Routledge, New York, 2009) across three English language learning contexts in Iran (public high schools, private language schools, and universities) and gender. To this end, a sample of 224 EFL students were selected based on convenience sampling. Learning Environment and Students Attitudes Questionnaire (QuALESA, Sirrakos and Fraser (Learn Environ Res 20:153–174, 2017)) was adopted to identify differences (if any) across the contexts. The collected data were analyzed using ANOVA and correlations. The results of ANOVA demonstrated significant cross-contextual differences. EFL students had positive perceptions of their learning environment in private language schools and universities that became less positive in public high schools. Furthermore, positive and statistically significant ($p < .01$) associations emerged between learning environment factors important to reality pedagogy and students' attitudes. These findings provide important information about how reality pedagogy might improve students' attitudes toward English language classes and whether reality pedagogy environments are related to their attitudes.

Keywords Constructivism · Critical reflection · EFL learners' attitudes · EFL learning environment · Perceptions of EFL learners · Reality pedagogy

1 Introduction

Most researchers and teachers are aware of the fact that the quality of the classroom environment is a significant determinant of students' learning and growth (Fraser, 2012; Fraser, 1991). In this way, much attention of the post-modern theories and ideologies

✉ Maryam Atai-Tabār
maria.ataii2018@gmail.com

Seyyed Mohammad Reza Adel
m.adel@um.ac.ir

[1] AssociateProfessor of Applied Linguistics, Department of English, Ferdowsi University of Mashhad, Mashhad, Iran

[2] Department of English Language and Literature, Hakim Sabzevari University, Sabzevar, Iran

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such as constructivists, critical pedagogy, culturally relevant teaching has focused on creating a richer learning environment that paves the way for meaningful learning experiences (Fraser, 1998; Ebrahimi, 2015; Rowe, 2021). More recently, some practical principles of the above-mentioned approaches have been the focus of reality pedagogy that is assumed to increase the possibility of learners' satisfaction with their classroom environments (Emdin, 2009).

Reality pedagogy is an approach to teaching and learning that focuses on teachers' recognition and understanding of student realities and then using this information as the starting point for instruction making sure that their lives and backgrounds are reflected in the curriculum and in classroom conversations (Ramirez, 2018). Sirrakos (2012) also has pointed to reality pedagogy as an educational innovation and a new curriculum that has the potential value in terms of its impact on transforming the class learning environment (across disciplines); it involves a merging of multiple approaches to effective teaching and learning into a cohesive and implementable approach. Since Emdin's reality pedagogy model (2009), a number of studies have focused on researching the extent to which reality pedagogy can be translated into a supportive, reflective, and challenging learning environment having some significant relation with the students ' attitudes or performance (Morrison, Brown Thompson, & Glazier, 2022; Valtonen, Leppänen, Hyypiä, et al., 2021; Ramirez, 2018; Sirrakos & Fraser, 2017; Sirrakos, 2012; Taher, 2012).

As mentioned earlier, recent arguments in favor of reality pedagogy have been arisen for the problem of students' achievement gap in science. One approach to solve this gap involves empowering and engaging students by a more constructivist classroom environment using reality pedagogy principles. This has been proposed to surmount the same problem of EFL students caused by their learning environment. It was assumed that the learning environment offered by reality pedagogy certainly shapes students' perceptions more positively. Furthermore, when students perceive their experience as enjoyable, satisfying, and personally fulfilling, they intend to interact more, which results in enhanced learning (Esani, 2010). If a learning environment is perceived as positive, then students' outcomes are more favorable as well (Fraser, 2002). One can infer that reality pedagogy is not a nascent approach of learning regarding notions that are central to post-modern theories including constructivism in general, but can be considered as an outgrowth of constructivism and then can serve as a useful and relevant teaching tool to facilitate shared and inquiry-based learning (Long, Sinclair, Fraser, Larson, & Harrell, 2021). Ebrahimi (2015, p.70) stated that "because of the positive impacts of constructivism on English language pedagogy, it is necessary to provide researchers and educators with some instruments to assess the degree to which a particular English classroom is consistent with constructivist education ideas." Considering that reality pedagogy seems to not differ in any great way from constructivist teaching and learning, again, this study tends to move in the same direction to use and represent such instrument, to measure the level of constructivism in terms of reality pedagogy norms in the EFL classrooms. It is of interest to determine the perceptions and attitudes of EFL students toward reality pedagogy across different contexts. The work is distinctive because there is no previous research using reality pedagogy as a framework to study EFL learning environment in Iran. Therefore, the research on EFL learning environment could be enhanced by including an empirical study that addresses the following questions to compare the state of EFL contexts in terms of students' perceptions regarding reality pedagogy' s salient features:

1. Are there any significant differences between EFL students' perceptions of the learning environment regarding reality pedagogy across contexts of public high schools, private language schools and universities?
2. Is there any significant relationship between EFL students' perceptions of the learning environment across contexts and their overall attitudes toward English courses?
3. Is there any significant relationship between EFL learners' perceptions of learning environment and their demographic factors including age and gender?

2 Literature review

Increased attention in recent years to create a supporting learning environment has brought about the inclusion of various principles of post-modern theories and ideologies which are all constructivist in nature in the field of learning environment research such as critical pedagogy, culturally relevant teaching, multicultural education, and more recently reality pedagogy (Heil, 2020). Inspired by research like Vygotsky's (1962) social interactive environment, Appatova and Prats's (2007) effective learning environment, and by personal and professional experiences, Emdin (2009) developed what he has called "reality pedagogy." He put forward a framework of five C's including co-generative dialogue (cogens), co-teaching, cosmopolitanism, context, and content that provide teachers with tangible and practical tools to change teaching practices that support teachers in becoming transformative pedagogues. In this sense, reality pedagogy focuses on the meaningful students' involvement, development of dialogic teaching, inclusive learning environment and transformability to plan rich learning opportunities.

2.1 Implementation of reality pedagogy in educational learning contexts

A comprehensive analysis of the implementation of reality pedagogy in diverse learning contexts was provided enriching our finding with valuable insights from Emdin's studies (2007, 2009, 2011a, 2011b, 2016, 2019). The five C's subsumed under the term of reality pedagogy tools have been discussed briefly.

Co-generative dialogue (Cogens), the first C of reality pedagogy, helps teachers engage students in conversations about their teaching practices and allows them opportunities to critique and provide feedback on the instruction on what works and on what can be improved upon in the classroom. Scantlebury (2014) explains that the structure of cogens is intended to reduce power hierarchies between students and teachers and provide a forum where students can give voice to their needs and concerns. Co-teaching, the second of the five Cs, helps teachers engage students as co-teachers to design a lesson plan and allows them to teach the lesson they create. Sirrakos (2012) says that it is parallel to sharing of control and experience to create more relevant lessons, assessment, and activities. Cosmopolitanism, the third dimension of reality pedagogy, aims to create an inclusive classroom atmosphere where the individual differences of students are valued, they share a responsibility for each other's learning (Appiah, 2006). In a communal atmosphere, students care for their peers. Teacher can define roles and responsibilities for all students to see that they are needed to run the classroom. Context, the fourth C of reality pedagogy, focuses on immediate communities that students are from and presumes the environment in which their function has value. It provides students with the opportunity to use what they already have a familiarity with to internally

construct an understanding of functions. Content, the final dimension of reality pedagogy, reflects the realities of classroom and knowledge limitations. Teachers encourage students to pose questions about academic content and challenge it. They are not merely being expected to memorize materials from an accepted body of information so that they can behave differently in this new learning environment that fosters in-depth knowledge and deeper learning.

The following studies focused on the implementation of various dimensions of reality pedagogy in different learning environment. In a teacher education program, Roth, Lawless, and Tobin (2000) suggested co-teaching as a strategy which bridged the gap between teaching theories and teaching techniques. Seiler (2001) reported how students enacted as curriculum designer to develop student emergent curriculum using co-teaching dimension. Tobin, Roth, and Zimmermen (2001) reported the use of cogens and co-teaching to formulate a curriculum that was culturally relevant to African-American students. Beers and Lavan (2005) focused on cogens and investigated how the transformation of the structure of classroom related to overall change in students' attitudes toward learning science. Martin's (2005) study showed that cogens improved science curriculum in urban school for high achieving youth. Taher (2012) studied the positive effect of cogens, co-teaching, and cosmopolitanism dimensions of reality pedagogy on students' self-efficacy, social capital and cognitive distribution. Bayne, Scantlbury (2013) explored the manifestation of cogens as instructional theory in science. Scantlbury (2014) implemented cogens in feminist pedagogy to promote girls' voices.

Diaz et al., (2014) stated that reality pedagogy speaks the language of Dewey (1986) who emphasized the importance of individual and social experience in the process of knowledge creation and argued that school is a place for teachers to design, carry out, and reflect on a learner-centered curriculum and practice. A recent study by Ramirez (2018) has shown the benefits of implementing reality pedagogy on the academic performance and motivation of students to learn physics. And finally, Sirrakos and Fraser (2017) investigated overall changes in students' perceptions of the learning environment and attitudes toward science in response to reality pedagogy. Assuming reality pedagogy as a new and revolutionized one to empower, motivate, and engage students, they also developed a valid questionnaire in the field of learning environments (QuALESA).

2.2 The intersection of reality pedagogy and empowering learning environment

By drawing on the concept of reality pedagogy and five C's tools, Sirrakos (2012) and Sirrakos & Fraser (2017) have developed a valid questionnaire in the field of learning environments. Assuming reality pedagogy as a new and revolutionized one to empower, motivate, and engage students, they introduced seven key variables of learners' perceptions regarding effective learning environment; personal relevance; shared control; critical voice; involvement; cooperation; attitudes and enjoyment. A description of scales aligned with the five C's is provided to clarify the conceptualization of reality pedagogy norms for learning environment.

1. *The Involvement scale* with eight items: One of the overarching goals of reality pedagogy is to get students to be more deeply involved in the classroom and in their own learning. Involvement describes the extent to which students have attentive interest, participate in discussions, do additional work, and enjoy the class. It describes changes in class-

room practices with regard to how students perceived Involvement in their learning environment. It is related to all aspects of reality pedagogy: co-generative dialogues, cosmopolitanism, co-teaching, context learning, and content understanding.
2. *The Cooperation scale* with eight items: It describes the extent to which students cooperate rather than compete with one another on learning tasks. It aligns closely with co-teaching and cosmopolitanism dimensions of reality pedagogy.
3. *The Personal Relevance* scale with six items: Regarding the personal relevance scale, context studies and content understanding appear to be the most prevalent aspects of reality pedagogy present.
4. *The Critical Voice* scale with six items: It refers to students' perceptions of their being able to express their critical voice in their learning environment and describes the extent to which students are able to express a critical opinion about the learning environment, typically by questioning the actions of the teacher. Two aspects of reality pedagogy are prevalent. Cosmopolitanism is directly related to the Critical Voice scale, while context is relevant because the teachers' actions were based on the critical opinions of students.
5. *The Shared Control* scale with six items: It describes the extent to which students were invited to make mutual decisions with the teacher. With regard to this scale, two strands of reality pedagogy emerged: cosmopolitanism and co-teaching.
6. *The Attitude to Scientific Inquiry* scale with six items: It describes a student's preference for or attitude to using scientific experimentation and inquiry as methods to obtain information about the natural world. Teachers enacted scientific inquiry in the classroom through co-generative dialogue.
7. *Enjoyment scale* with six items: One of the overarching goals of reality pedagogy is to transform teaching practices so that students experience an increase in their enjoyment of lessons. This scale describes the extent to which students express satisfaction with their learning experiences at school.

In a review, Lim & Fraser (2018) draw our attention to general patterns in a total of 20 past studies of English classroom environment instruments. They outlined the following well-known learning environment instruments developed and used in other subject areas, especially science and mathematics which were cross-validated in English classrooms: What Is Happening In this Class? (WIHIC, Fraser et al. 1996); Questionnaire on Teacher Interaction (QTI, Wubbels & Brekelmans, 2005); Constructivist Learning Environment Survey (CLES, Taylor et al. 1997); Classroom Environment Scale (CES, Moos & Trickett, 1974); College and University Classroom Environment Inventory (CUCEI, Fraser et al., 1981); My Class Inventory (MCI, Sink & Spencer 2005); Constructivist-Oriented Learning Environment Survey (COLES, Aldridge et al. 2012). It was reported in their study that the specific context of the education reform required the development of learning environment instruments to assess its unique context.

The relationship between students' perceptions of the learning environment and the cognitive and affective components has been the major focus of research in the field of learning environment. This has been discussed by a great number of authors in this field that the context in which learning takes place is indeed related to student outcomes (e.g., Elhawwa, 2022; Galos & Aldridge, 2021; Arigusman, 2017; Peng, 2016). Ghaedsharafi, Yamini, and Dehghan (2019) were found in their study the variable of learning environment as one of the sources of negative attitudes toward learning English from L2 learners' points of view. Despite this large body of research, the field is relatively new in Iran with only a handful of studies having been carried out at the tertiary (Drood, Zoghi,

& Davatghari Asl, 2020; Ebrahimi, 2015; Jannati, & Marzban, 2015). To our knowledge, however, no studies in EFL context have focused on the learning environment features important to reality pedagogy principles.

Jannati and Marzban (2015) investigated Iranian EFL learners' perception of the learning environment in English language institutes and its relationship with learner's language achievement. The results indicated a large difference between the learners' actual learning environment and the environment in which learners were enthusiastic to learn the language. There was also a significant relationship between students' satisfaction with the classroom environment and their language achievement. The study of Drood, Zoghi, and Davatghari Asl (2020) was an attempt to find out about the Iranian EFL learners' experiences of an effective English language classroom at the tertiary level. They reported the elements of personal experiences and personal beliefs constitute effective English language classroom from the Iranian EFL learners' perspectives. Ebrahimi (2015) is intended to compare English language student teachers' perceptions of actual and preferred classroom environment using a modified version of Constructivist Learning Environment Survey (CLES, Taylor et al. 1997). This study showed that the Iranian English language student teachers were not satisfied with their current classroom environments and preferred more constructivist classroom environments. A recent review of the literature on learning environments research in English classrooms (Lim & Fraser, 2018) found that "there is considerable potential for English education researchers to replicate the lines of learning environment research that have been successfully carried out in other school subject areas (particularly science)" (p. 14). Accordingly, this study is a clear improvement on English learning environment research using a current instrument, QuALESA (Sirrakos & Fraser, 2017) to measure the level of constructivism in terms of reality pedagogy norms across different EFL contexts. It was created by combining learning environment scales from the Constructivist Learning Environment Survey (CLES) and the What Is Happening In this Class? (WIHIC) questionnaire with attitude scales from the Test of Science-Related Attitudes (TOSRA, Fraser, 1978, 1981) (ibid). Although the focus of reality pedagogy is primarily in urbane science classrooms, its discourse patterns have the potential to be applied in any learning contexts such as EFL classrooms where language and cultural differences make learners more passive and disconnected from classroom interactions. It offers a platform for teachers to create a more learner-centered learning environment reflecting students 'relevant and local needs that support their engagement in classroom discourse and acknowledge their interaction that could result in better language proficiency (Simon, 2021). In other words, a sense of belonging to a classroom provided by reality pedagogy tools can create richer environments for communication. In this regard, this work is distinctive because it is the first learning environment study in an EFL context in Iran which is concerned with reality pedagogy outcomes across public high schools, private language schools and universities.

3 Methodology

To collect data on students' perceptions of the EFL learning environment and their attitudes across three contexts of learning in Iran, the researchers used a survey research design with a convenience sampling. A slightly modified version of the QuALESA (Sirrakos & Fraser, 2017) was adapted to collect data in three different contexts of public high schools, private language schools and universities in Iran. The participants were given time to complete the distributed questionnaire. They were asked to complete it anonymously. We then started

the analysis of quantitative data to identify statistically significant differences across learning contexts with regard to specific learning environment and student attitude scales in the framework of reality pedagogy.

3.1 Participants

Three different samples from three distinctive contexts were selected to respond to the QuALESA questionnaire. The first group of the participants comprised of 59 EFL learners studying at their third level of high school. They were 38 females and 21 males whose age varied from 16 to 19. The second group of the participants comprised of 99 EFL learners from private language schools. They were 63 females and 36 males whose age varied from 17 to 32. The third group of the participants comprised of 66 EFL learners from universities. They were 50 females and 16 males whose age varied from 19 to 43.

3.2 Variables

The questionnaire utilized in this study assessed several key variables, each of which plays a critical role in understanding Iranians EFL students' attitudes toward and perceptions of their language learning environment in the framework of reality pedagogy. Questions examined the extent to which the specific strategies and principles of this pedagogical approach were perceived in the three educational contexts (public high schools, private language schools, and universities) employed. Perception refers to EFL students' awareness and interpretation of the learning environment in terms of reality pedagogy principles. Attitude, on the other hand, represents an EFL students' emotional toward the learning environment. It reflects the learner's feelings, preferences, and disposition toward the language learning experience, encompassing factors like motivation and satisfaction. Examining the correlation between perception and attitude is crucial for several reasons: *Understanding Learning Outcomes*: the relationship between students' perceptions of their learning environment and their attitudes impacting learning outcomes is a well-established concept in educational psychology. Research in this area often explores how a positive learning environment, where students feel engaged and supported, can lead to better learning outcomes. *Tailoring Interventions*: the idea of tailoring interventions to enhance both perception and attitude aligns with the principles of learner-centered teaching.

These variables include:

1. EFL students' Perception of Language Learning Environment: This variable aimed to gauge how learners perceive the overall environment in which they are acquiring a new language from the perspective of reality pedagogy.
2. EFL students' Attitude Toward Language Learning: This variable focused on learners' attitudes, emotions, and motivations regarding the language learning process within the framework of reality pedagogy.
3. Demographic Variables: Demographic information was collected to account for potential confounding factors. These included age and gender.

3.3 Instrument

The researchers applied the questionnaire of Assessing the Learning Environment and Students Attitudes (QuALESA, Sirrakos & Fraser, 2017) as the instrument to measure students' perceptions of their classroom environment. The QuALESA is a 46-item questionnaire with seven scales: involvement, cooperation, personal relevance, critical voice, shared control, attitudes and enjoyment. Each item can be responded to on a five-point frequency scale (never, seldom, sometimes, often, always). Some items in the QuALESA were reworded to reflect English classroom environments. The word 'science' was altered to 'English courses'. Respectively, it was translated into Persian and then back-translated to ensure the accuracy of the translation. Then, it was double-checked and edited by a university lecturer specializing in translation. To check the internal consistency reliability of each QuALESA scale, the alpha coefficient (Cronbach, 1951) was estimated. Alpha coefficients for our sample ranged from .79 to .92 for different QuALESA scales, which are similar to those found by Sirrakos and Fraser (2017). The estimated Cronbach's alpha of the QuALESA scales for this study was 0.86, 0.79, 0.83, 0.81, 0.87, 0.79, and 0.92 for involvement, cooperation, personal relevance, critical voice, shared control, attitude, and enjoyment scales, respectively.

3.4 Data analysis

Statistical data analyses were performed using SPSS Statistics (version 16). First, the reliability of the instrument was evaluated by running Cronbach's alpha. Then, preliminary analyses were performed to confirm that no violation of the assumption of normality happened. The normality of the data was assessed by running the skewness and kurtosis analyses. In the next step, to identify the cross-contextual analysis of EFL learners' perceptions of learning environment regarding reality pedagogy, an ANOVA test was used (research question 1).

Associations between students' perceptions of their learning environment and their attitudes toward EFL lessons were investigated using simple correlation (research question 2). To answer the last research question aiming at examining whether students' perceptions differ significantly between genders, an independent-samples *t*-test was used. The relationship between EFL students' perceptions and their age, the Pearson product–moment correlation was run (research question 3).

Table 1 Test table for normality of variables

	INV	COP	PR	CV	SHC	ATTI	ENJ
N	224	224	224	224	224	224	224
Kolmogorov–Smirnov Z	2.070	1.548	1.769	1.182	1.080	1.326	1.231
Asymp. Sig. (2-tailed)	.067	.117	.054	.122	.194	.089	0.074

Table 2 Descriptive statistics of EFL students across public high schools, private language schools and universities

Scales	Setting	N	Mean	Std. Deviation	Range
INV	PS	59	22.4356	5.84412	4–7
	PLS	99	26.9394	4.99350	4–7
	UNI	66	26.8452	5.01923	3–7
COR	PS	59	21.1356	6.75803	4–7
	PLS	99	25.7576	4.96332	3–7
	UNI	66	25.9643	4.96845	3–7
PR	PS	59	17.6271	5.79208	4–7
	PLS	99	22.7576	5.87817	4–7
	UNI	66	22.6190	5.82455	3–7
CV	PS	59	19.3559	5.68956	3–6
	PLS	99	22.5253	5.69702	3–6
	UNI	66	21.9286	5.50965	3–6
SHC	PS	59	12.9153	4.48479	3–6
	PLS	99	15.5758	4.86363	3–6
	UNI	66	15.2857	4.88561	3–6
ATTI	PS	59	16.2203	6.23413	5–7
	PLS	99	20.0808	3.92188	4–7
	UNI	66	20.2738	3.82872	4–7
ENJ	PS	59	13.0339	5.19604	2–5
	PLS	99	16.5859	3.24198	2–5
	UNI	66	16.6747	3.21623	2–5

INV stands for involvement, COP for cooperation, PR for personal relevance, CV for critical voice, SHC for shared control, ATT for attitudes, and ENJ for enjoyment. PS stands for Public School Students, PLS for Private Language School Students and US for University Students

4 Results

In the first step, one-sample Kolmogorov–Smirnov statistic was assessed to check the normality of the data. To satisfy the normality assumption, P values for five dependent variables are greater than 0.05 level of significance and indicate the normality of distribution across the samples. Table 1 shows the normality test results ($p \geq 0.05$) and the data in this study benefits from normal distribution.

Table 2 provides the descriptive statistics for participants' learning environment perceptions toward reality pedagogy across three contexts.

As table 2 indicates, among the values of students' perceptions of public schools (setting 1), involvement received the highest mean (M= 22.43, SD= 5.84). Enjoyment (M= 12.91, SD= 4.48) and shared control (M= 13.O3, SD= 5.19) obtained the lowest means and the mean score of attitudes was (M= 16.22, SD= 6.23). Among the values of students' perceptions of private language schools (setting 2), involvement received the highest mean (M= 26.93, SD= 4.99). Shared control (M= 15.57, SD= 4.86) and enjoyment (M= 16.58, SD= 3.24) obtained the lowest means and the mean score of attitudes was (M= 20.08, SD= 3.92). Based on this table, among the values of students' perceptions of universities (setting 3), cooperation receives the highest mean (M= 25.07, SD= 4.58). Shared control and

Table 3 The results of ANOVA for determining differences among three contexts

		df	Mean square	F	η^2	Sig.
INV	Between groups	2	628.429	23.988	0.100	.000
	Within groups	221	26.197			
	Total	223				
COP	Between groups	2	420.248	13.364	0.057	.000
	Within Groups	221	31.447			
	Total	223				
PR	Between groups	2	542.612	18.639	0.079	.000
	Within groups	221	29.112			
	Total	223				
CV	Between groups	2	192.047	6.508	0.027	.002
	Within groups	221	29.511			
	Total	223				
SHC	Between groups	2	155.961	7.598	0.031	.001
	Within groups	221	20.526			
	Total	223				
ATTI	Between groups	2	397.007	19.098	0.081	.000
	Within groups	221	20.788			
	Total	223				
ENJ	Between groups	2	234.386	16.165	0.058	.000
	Within groups	221	14.500			
	Total	223				

INV stands for involvement, COP for cooperation, PR for personal relevance, CV for critical voice, SHC for shared control, ATT for attitudes, and ENJ for enjoyment.

enjoyment obtained the lowest means: shared control (M= 15.28, SD= 4.88) and enjoyment (M= 16.67, SD= 3.21), and the mean score of attitudes was (M= 20.27, SD= 3.82).

To verify the cross-contextual analysis of EFL students' learning environment perceptions regarding reality pedagogy with its seven scales, an ANOVA test was used to see whether these differences were statistically significant (research question 1). Table 3 displays the results of the ANOVA test for three contexts.

The analysis of variance (ANOVA) results presented in Table 3 indicated significant differences among the three learning contexts (public high schools, private language schools, and universities) in terms of various scales related to reality pedagogy. To provide a clearer understanding of the practical significance of these findings, we have included effect size measures, specifically eta square values. Involvement (INV), as measured by the questionnaire, demonstrated a significant difference among the learning contexts (F= 23.98, p<0.05, η^2=0.100). Eta square, which measures the proportion of variance attributable to the independent variable (context), suggests that 10% of the variance in students' perceptions of involvement can be attributed to the type of learning context. This indicates a moderate practical significance.

Similarly, cooperation (COP) also exhibited significant differences across contexts (F= 13.36, p<0.05, η^2=0.057). Eta square suggests that 5.7% of the variance in students' perceptions of cooperation is explained by the learning context, indicating a moderate practical significance. Personal relevance (PR) showed significant differences (F= 18.63, p<0.05,

η^2=0.079) among the three contexts. Eta square indicates that 7.9% of the variance in personal relevance is associated with the learning context, again suggesting a moderate practical significance. Critical voice (CV) and shared control (SHC) also revealed significant differences (F= 6.50, p<0.05, η^2=0.027, and F= 7.59, p<0.05, η^2=0.031, respectively) among the contexts. Eta square values of 2.7% and 3.1% indicate small-to-moderate practical significance, emphasizing that a portion of the variance in these scales is explained by the learning context. Attitudes (ATTI) and enjoyment (ENJ) demonstrated significant differences across contexts (F= 19.09, p<0.05, η^2=0.081, and F= 13.71, p<0.05, η^2=0.058, respectively). Eta square values suggest that 8.1% and 5.8% of the variance in attitudes and enjoyment, respectively, can be attributed to the learning context. These findings highlight a moderate practical significance. While the effect sizes vary from small to moderate, they collectively indicate that the type of learning environment significantly influences students' perceptions of reality pedagogy-related scales. These findings emphasize the importance of tailoring pedagogical approaches to the specific context to create more favorable learning environments and attitudes among students.

The ANOVA revealed that there was a difference somewhere among the means of scales, but the precise location of differences is not clear. To locate the exact place of differences, a post hoc Tukey test comparison of the means was performed for involvement, cooperation, personal relevance, critical voice, shared control, attitudes and enjoyment. Table 4 represents the results of the Tukey test.

The results of the post hoc Tukey test indicated that at the level of 0. 05 there was a significant difference between involvement level of students at public high schools and universities as well as private language schools. Concerning cooperation and personal relevance, significant differences were found between public high school and university as well as private language school students; however, private language school and university students did not differ in their perceptions of cooperation and personal relevance. As far as critical voice and shared control were concerned, it was found that public school students were different from university and private language school students in their perceptions; however, no significant differences were found between critical voice and shared control levels of students at university and private language schools. Regarding attitude and enjoyment, it was found that public high school students differed from university and private language school students. Private language school and university students did not differ in their perceptions in this regard.

To see whether there was any relationship between students' learning environment perceptions regarding reality pedagogy as assessed by the QuALESA's five scales and their overall attitudes toward the English language course as assessed by the QuALESA's two attitudinal scales (attitude and enjoyment), the Pearson product–moment correlations were run (the second research question). The results of the simple correlation analyses presented in Table 5 indicated that all five learning environment scales (involvement, cooperation, personal relevance, critical voice, shared control) were positively and significantly correlated with attitude to language course (p<0.01, 0< r <1). The simple correlation between personal relevance and attitudinal scales as well as critical voice and attitudinal scales was the highest of all five learning environment scales, respectively (r = 0.65, 0.63).

To answer the last research question aiming at examining whether students' perceptions differ significantly between gender, an independent-samples t-test was used.

As can be seen in table 6, there was a statistically difference between the two groups regarding their perceptions in the scales of critical voice (t=2.23, p<0. 05) and the same finding was also obtained for attitude and enjoyment. In other words, females were significantly higher in their perceptions of critical voice, attitude, and enjoyment. However, for

Table 4 The Tukey HSD Test for comparing perception means in three contexts

Dependent variables	(I) Context	(J) Context	Mean difference (I-J)	Std. Error	Sig.
INV	PS	PLS	−5.80380*	.84181	.000
		UNI	−3.13713*	.91704	.002
	PLS	PS	5.80380*	.84181	.000
		UNI	2.66667*	.81336	.003
	UNI	PS	3.13713*	.91704	.002
		PLS	−2.66667*	.81336	.003
COP	PS	PLS	−4.62198*	.92230	.000
		UNI	−3.94016*	1.00472	.000
	PLS	PS	4.62198*	.92230	.000
		UNI	.68182	.89113	.725
	UNI	PS	3.94016*	1.00472	.000
		PLS	−.68182	.89113	.725
PR	PS	PLS	−5.13046*	.88740	.000
		UNI	−4.76682*	.96670	.000
	PLS	PS	5.13046*	.88740	.000
		UNI	.36364	.85741	.906
	UNI	PS	4.76682*	.96670	.000
		PLS	−.36364	.85741	.906
CV	PS	PLS	−3.16932*	.89347	.001
		UNI	−1.46225	.97331	.292
	PLS	PS	3.16932*	.89347	.001
		UNI	1.70707	.86327	.120
	UNI	PS	1.46225	.97331	.292
		PLS	−1.70707	.86327	.120
SHC	PS	PLS	−2.66050*	.74514	.001
		UNI	−2.70596*	.81173	.003
	PLS	PS	2.66050*	.74514	.001
		UNI	−.04545	.71996	.998
	UNI	PS	2.70596*	.81173	.003
		PLS	.04545	.71996	.998
ATTI	PS	PLS	−3.86047*	.74988	.000
		UNI	−4.70390*	.81689	.000
	PLS	PS	3.86047*	.74988	.000
		UNI	−.84343	.72453	.476
	UNI	PS	4.70390*	.81689	.000
		PLS	.84343	.72453	.476
ENJ	PS	PLS	−3.55196*	.62627	.000
		UNI	−2.45095*	.68224	.001
	PLS	PS	3.55196*	.62627	.000
		UNI	1.10101	.60511	.166
	UNI	PS	2.45095*	.68224	.001
		PLS	−1.10101	.60511	.166

Table 5 Correlation between students' perceptions and attitude scales

Perceptions	Attitudes and Enjoyment		
	N	Sig. (2-tailed)	r
INV	232	.000	.484
COP	232	.000	.441
PR	232	.000	.656
CV	232	.000	.632
SHC	232	.000	.439

INV stands for involvement, COP for cooperation, PR for personal relevance, CV for critical voice, SHC for shared control, ATT for attitudes, and ENJ for enjoyment.

Table 6 Independent-samples t-test results for gender differences in three settings

	t	df	Sig.(2-tailed)	Mean difference	Std. Error difference
INV	.505	230	.614	.38039	.75332
COP	1.505	230	.134	1.24365	.82639
PR	1.858	230	.064	1.38584	.74572
CV	2.238	230	.026	1.63335	.72989
SHC	−.810	230	.419	−.50909	.62862
ATTI	2.784	230	.006	1.87667	.67399
ENJ	4.581	230	.000	2.58366	.56395

Table 7 Correlation between students' perceptions and age

Perceptions	Age	Sig (2-tailed)
INV	.119	.071
COP	.114	.083
PR	.159*	.015
CV	.098	.135
SHC	.230 *	.000
ATTI	.241 *	.000
ENJ	.077	.241

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

involvement, cooperation, personal relevance, and shared control no significant differences were found.

To examine the relationship between EFL students' perceptions and their age, the Pearson product–moment correlation was run. Table 7 displays the results of the correlation.

The results presented in Table 7 indicated that perceptions of attitude (r=0. 241, p<0. 05), shared control (r=0. 230, p<0. 05), and personal relevance (r=0. 159, p<0. 05) were positively and significantly correlated with age. Students' perceptions of involvement, cooperation, critical voice, and enjoyment did not correlate with their age.

Overall the results reported in this section clearly suggest that Iranian EFL students perceived different levels of reality pedagogy in three contexts of English learning. Students in private language schools and universities were more satisfied with their learning environment than public high school students. This can be due to the fact that in

such environments, a more flexible system of teaching and learning would provide a platform for their participation, discussion, and active learning. That is to say that to some extent, private language schools and universities pivoted around principal features of reality pedagogy in terms of seven dimensions. Our study involving 224 students in English classrooms revealed the association patterns of their attitudes and enjoyment with a more constructivism environment in terms of reality pedagogy. In other words, personal relevance and critical voice values were the predominant features of reality pedagogy consistent with positive attitudes. Furthermore, this study highlighted differences in learning environment perception between male and females and among different age groups. It was found that females were significantly higher in their perceptions of critical voice, attitude, and enjoyment. Moreover, in terms of age, it was found that there was a significant relationship between age and perceptions of shared control, attitudes, and personal relevance.

5 Discussion

This study significantly advances the field of English language learning environments in Iran by pioneering the use of learning environment criteria based on reality pedagogy to investigate EFL students' perceptions and attitudes. Our findings offer valuable insights that can inform EFL educators striving to create a more conducive classroom learning environment.

The primary objective of this study was to compare English language students' perceptions of their classroom environments across three different contexts in Iran and their attitudes toward English courses. Notably, students in private language schools and universities held positive perceptions of their English classroom learning environment. However, these perceptions became less positive when examining public high schools. This contextual variation underscores the importance of understanding how different educational settings impact students' experiences. Furthermore, our research revealed strong positive associations between student attitudes and all scales of reality pedagogy. This suggests that educators should give careful consideration to the potential benefits of developing a more constructivist learning environment within the framework of reality pedagogy for English language instruction. The aspects of personal relevance and fostering critical voices emerged as significant predictors of students' attitudes toward English courses. These elements hold the potential to establish a unique and enjoyable learning environment that fosters motivation and engagement. It is incumbent upon teachers to recognize the effectiveness of incorporating student voice into their instructional practices, which can lead to greater participation, enhanced justice, and increased student motivation for learning (Parry, 2014).

Importantly, our findings align with previous research on students' attitudes and learning environments, demonstrating a consistent trajectory in meeting learners' needs for empowerment, motivation, and engagement (Ebrahimi, 2015; Khajavy et al., 2016; Lim & Fraser, 2018; Liu & Fraser, 2013; Wong & Fraser, 1996). Building upon this established foundation, our study contributes to the body of knowledge by introducing the novel perspective of reality pedagogy within the Iranian EFL context. In addition, our research suggests that gender-related differences exist in the context of EFL learning, which resonates with the findings of previous studies conducted by Robinson and Aldridge (2022) and Dunlop (2022). It is plausible that the learning environment promoted through reality

pedagogy has the potential to positively influence girls' attitudes toward English learning, which merits further exploration. Once again, this study offers invaluable insights to educators who aim to tailor their instructional methods to be more student-centered, constructivist, and efficient. As emphasized by Estaji, Zhaleh, and Berti (2023), the distinctive nature of L2 learning and teaching underscores the need for educators to earnestly attend to principles of justice within the instructional context. Our study highlights the key principles of reality pedagogy in this regard, with an emphasis on prioritizing relationships and valuing students' experiences and voices.

For example, one of the key components of reality pedagogy presented in this study is the use of student critical voice. This process encourages students to reflect on their experiences and to think critically about the social, political, and economic issues that impact their learning. Through critical reflection, students can develop the skills they need to analyze and understand complex issues and to take action to address them. Reality pedagogy also emphasizes the need for collaboration and cooperation between students, teachers, and members of the community. This approach encourages the active participation of students in the learning process and fosters a sense of community and belonging. Teacher justice" refers to the idea that teachers should work to actively address and dismantle the systems of inequality and oppression that exist in society and in schools (DiAngelo & Sensoy, 2014). This means recognizing and challenging biases and stereotypes, creating a culturally responsive curriculum, and implementing policies and practices that support equity and social justice. To provide a better understanding of the outcomes of reality pedagogy in terms of changes in students' perceptions of the learning environment and their attitudes in English learning environments and its fostering role in learning, it is recommended to study students' performance when engaging with reality pedagogy.

6 Conclusion

This study makes a significant contribution to the dynamic field of English language learning environments in Iran by introducing the novel application of learning environment criteria based on reality pedagogy to investigate EFL students' perceptions and attitudes. In addition to its initial findings, our research holds broader implications that resonate with educators, policymakers, and researchers in the field. *Contextual Variation in Learning Environments*: Our study unveils a notable contextual variation in students' perceptions across diverse educational settings in Iran. While students in private language schools and universities reported positive perceptions of their English classroom learning environment, their counterparts in public high schools expressed less enthusiasm. This disparity underscores the urgency of recognizing and addressing the unique challenges and opportunities that different contexts offer in EFL education. Further research is warranted to delve into the specific contextual factors underpinning these differences, allowing for the formulation of context-sensitive strategies to optimize learning environments (Littlewood, 2013). *Reality Pedagogy as a Constructivist Approach*: The robust positive associations observed between student attitudes and the various scales of reality pedagogy underscore the potential of adopting a constructivist approach within the framework of reality pedagogy for English language instruction. This approach encourages active student engagement, critical thinking, and meaningful connections to real-life experiences (Mebert et al., 2020). Educators are encouraged to explore concrete strategies for incorporating elements of reality pedagogy into their

teaching practices to enhance students' attitudes and motivation. *Empowering Student Voice and Justice:* Our study underscores the significance of personal relevance and the cultivation of critical voices as influential predictors of students' attitudes toward English courses. This reaffirms the value of empowering students to voice their perspectives and engage in meaningful discourse within the classroom (Applebee et al., 2003; Luke & Freebody, 1999). Educators should consider integrating opportunities for students to express their opinions and contribute to shaping their learning experiences. Furthermore, the concept of justice within reality pedagogy emphasizes addressing systemic inequalities within the instructional context, promoting a more equitable learning environment. *Gender-Related Aspects in EFL Learning:* Our findings suggest a gender-related dimension in EFL learning, aligning with previous studies conducted by Dunlop (2022). While our study primarily focuses on the influence of reality pedagogy, it raises questions about how gender dynamics intersect with pedagogical approaches (Moss-Racusin et al., 2012). Future research could delve deeper into these gender-related differences, exploring the nuances and implications for both male and female students in the EFL context. *Implications for Teacher Professional Development:* The benefits associated with reality pedagogy underscore the importance of teacher professional development. Educators may need training and support to effectively implement this approach, which prioritizes relationships and values students' experiences and voices (Darling-Hammond & Richardson, 2009). Future research could explore the impact of teacher training programs that incorporate reality pedagogy principles on instructional practices and student outcomes.

In conclusion, our study has made significant contributions to the field of English language learning environments in Iran by examining EFL students' perceptions and attitudes in the framework of reality pedagogy. Our findings underscore the potential of reality pedagogy to enhance EFL instruction by emphasizing justice, personal relevance, and critical voices. Educators can harness these principles to create more equitable and engaging English learning environments. To provide a more comprehensive perspective, we have also acknowledged the limitations of our study, such as sample size and context specificity. Future research endeavors should address these limitations and build upon our insights to further explore the applicability of reality pedagogy in diverse educational contexts.

Furthermore, as the field of English language education continues to evolve, it is essential to continue investigating the effectiveness of reality pedagogy and its potential to empower students, enhance motivation, and promote a more inclusive and engaging learning environment. Future empirical studies should also explore teachers' perceptions of reality pedagogy in English classrooms, providing a well-rounded understanding of its impact on both students and educators. In summary, our study encourages educators to consider the principles of reality pedagogy as a valuable tool for creating meaningful and equitable English language learning environments. It also emphasizes the need for continued research in this area to refine instructional practices and promote more effective and inclusive English language education.

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