



Research paper

The use of cooperative learning in English as foreign language classes: The prevalence, fidelity, and challenges

Mohammad Tamimy^{a, *}, Naser Rashidi^a, Joyce Hwee Ling Koh^b

^a Department of Foreign Languages and Linguistics, Shiraz University, Shiraz, Iran

^b Higher Education Development Centre, University of Otago, Dunedin, New Zealand

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ABSTRACT

Cooperative learning has often been examined through experimental research with evidence of its numerous benefits. However, the extent and fidelity of its classroom use are understudied, and even there are few reports about its limited and unfaithful use. Using grounded theory, this exploratory study examined semi-structured detailed interviews from 14 Iranian English as foreign language (EFL) teachers to derive a framework explaining their conception and practice of cooperative learning. The findings suggested that, notwithstanding the positive beliefs about its benefits, cooperative learning is not extensively and faithfully used in the classes because of teachers' knowledge, beliefs, and some implementation challenges.

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1. Introduction

Cooperative learning is a teaching approach where learners share information and work together in organized groups to achieve a mutual goal. It is an important strategy for the teaching of English as foreign language (EFL) because as a pivot to task-based language learning and cooperative language learning (Long, 2009; Richards & Rodgers, 2001), it can leverage group work by reconciling its potential advantages with its possible problems including inattention, disruption, off-topic talks, free riding, etc. (Ellis, 2003). Cooperative learning is not merely group work, but also requires students to be mutually dependent in order to achieve their learning outcomes (Johnson and Johnson, 2017a).

Several controlled experiments within broad domain of education showed positive associations among cooperative learning and learning achievement, affect, and social behavior (e.g., Arnaiz-Sanchez et al., 2020; Bardach et al., 2019; Van Ryzin & Roseth, 2019). For instance, a meta-analysis by Roseth et al. (2008) found that cooperative learning is associated with higher achievement, positive peer-relationships, and empathy (Van Ryzin & Roseth, 2019). Cooperative learning is also found to reduce socio-

educational problems including bullying, victimization, and stress (Van Ryzin & Roseth, 2018). Similar experiments, testifying to the positive effect of cooperative learning, can be found in EFL teaching (e.g., Becirovic et al., 2022; Ning, 2013; Ning & Hornby, 2014). For instance, Teng (2022) found that cooperative learning with metacognitive instruction positively affects EFL learners' writing and Lan et al. (2013) reported that a mobile-supported cooperative learning system can improve EFL learners' reading ability. Likewise, Alamdari and Ghani (2022) maintained that cooperative learning thrives EFL learners' motivation. Yet, the results of these controlled experiments cannot be readily taken as litmus test of cooperative learning's actual classroom functionality (Kvernbekk, 2016; van Leeuwen & Janssen, 2019) because situation in controlled experiments may not be representative of how cooperative learning is being implemented in actual classes (Baines et al., 2015; Kutnick & Blatchford, 2014). Hence, of particular concern is the fact that teachers may not implement cooperative learning with adequate fidelity. This is reflected in Davidson's (2021) call for more research on extent and fidelity of its use.

There is sporadic evidence within broad domain of education that extent and fidelity of use are a complex interaction among factors such as teacher beliefs and readiness to manage collaboration, student readiness for collaboration, and implementation challenges such as free-riding, off-task behavior, and dissension among students (Abramczyk & Jurkowski, 2020; Buchs et al., 2017;

* Corresponding author.

E-mail address: mohammad.tamimy@gmail.com (M. Tamimy).

Gillies, 2003; Gillies & Boyle, 2010; Howe, 2014; Le et al., 2018; Mulisa & Mekonnen, 2019; Popov et al., 2012). However, the extent to which teachers are able to implement cooperative learning in actual classrooms, the level of implementation fidelity that may be possible within classroom contexts, and how these factors may be related to the challenges teachers face are not well-understood (Abramczyk & Jurkowski, 2020; van Leeuwen & Janssen, 2019).

Similar gaps are noted in extant EFL research (Ellis, 2003; Graves & Garton, 2017). Experimental studies indicate that cooperative learning has positive cognitive and affective effects on EFL students (e.g., Ghaith, 2002; Jalilifar, 2010; Ning & Hornby, 2014), but studies investigating actual implementation of it in EFL classrooms are notably elusive (Yoshimura et al., 2021). In fact, none of the available studies (e.g., Abramczyk & Jurkowski, 2020; Buchs et al., 2017; Gillies, 2003; Gillies & Boyle, 2010; Howe, 2014; Le et al., 2018; Mulisa & Mekonnen, 2019; Popov et al., 2012; Saborit et al., 2016; Veldman et al., 2020) were based on EFL classes. The scrutiny of the implementation of cooperative learning gets more pressing when we know that group work use in the broad domain of education is generally reported not to be consistent with the principles of cooperative learning and at the service of pedagogic goals (Baines et al., 2003; Chan, 2017).

Examining how EFL teachers use cooperative learning is important because it is not only the backbone of *cooperative language learning*, a distinct approach to language teaching (See Richards & Rodgers, 2001), but also informs highly influential approaches such as *communicative language teaching* and *task-based teaching* (Ellis, 2003; Long, 2009; Richards & Rodgers, 2001). In fact, established second language learning theories including interaction model and sociocultural theory suggest that purposeful interaction with peers through cooperative group work can serve as a safe zone of proximal development for language development (Gass & Mackey, 2020; Lantolf et al., 2020; Lantolf & Poehner, 2014).

Recognizing current research gaps, this study examines how teachers implement cooperative learning in actual classrooms through semi-structured interviews conducted with 14 Iranian EFL teachers. Grounded theory was used as an approach to analyze the inter-relationships, if any, among how extensively teachers use cooperative learning, their implementation fidelity, and possible implementation challenges they faced. This study attempts to develop insights into the factors influencing EFL teachers' conception and implementation of cooperative learning. The paper proceeds with a review of the key theoretical concepts of cooperative learning, pertinent empirical studies, and an introduction of the research questions. This is followed by a presentation of the methodology and major findings, and a discussion of the implications of these findings to the practice of cooperative learning.

2. Literature review

2.1. Theoretical perspectives of cooperative learning

Cooperative learning is generally known as the educational use of group work, but not every group work is equivalent to cooperative learning (Baines et al., 2017; Ghahraman & Tamimy, 2017; Kutnick & Blatchford, 2014). It has several undergirding theoretical perspectives that outline what influences its implementation fidelity (Johnson and Johnson, 2017a). Vygotsky and Piaget's ideas of constructivism provide a cognitive-developmental perspective for cooperative learning in that higher-order mental functioning is developed socially, whereby learners interact, receive and internalize mediation from a more adept peer in a nonthreatening situation (Inns & Slavin, 2018). From a behavioral-social perspective, motivation is assigned a consequential role (Inns & Slavin, 2018) and collective reward is considered the main impetus for

cooperation (Johnson and Johnson, 2017a). From the social interdependence theory perspective, which is the most powerful theory of cooperation (Johnson & Johnson, 2017a, 2017b), "... the way in which interdependence is structured determines how individuals interact, and the interaction pattern determines the outcomes of the situation" (Johnson and Johnson, 2017b, p. 286). It must be highlighted that these different perspectives are complementary, rather than contradictory (Davidson, 2021; Inns & Slavin, 2018) and amongst them, social interdependence might be considered "by far the most important theory dealing with cooperation" (Johnson and Johnson, 2017a, p. 89). It generally includes at least the main elements of the other perspectives, including Inns and Slavin's (2018) integrated model.

Drawing upon social interdependence theory, Johnson and Johnson (2017a) suggest some characteristics of cooperative learning including positive interdependence (outcome, means, and boundary), promotive interaction, individual accountability, social skills, and group processing. Positive outcome interdependence is the defining characteristic of cooperative learning whereby group members strive together towards a mutual goal such that each member's contribution is critical for the achievement of outcomes and the realization of rewards (Gillies & Boyle, 2010; Johnson et al., 1991). There is means interdependence where there are mutually exclusive division of resources, tasks, and roles among the members so that they are obliged to cooperate (Johnson & Johnson, 2009). There is also boundary interdependence where intergroup boundaries are demarcated by environmental, proximal, historical, expectational, or communal factors, encouraging members to focus on their group characteristics (Johnson & Johnson, 2009). Promotive interaction, critical for higher achievement, is another characteristic of cooperative learning where group members help and exchange resources with each other and question each other's ideas respectfully so that group goals are being achieved in a trustful manner (Gillies, 2019; Howe, 2014; Johnson and Johnson, 2017a). To preserve positive interdependence and promotive interaction from threats like free-riding and sucker-effect, there must also be individual accountability where how much each member has contributed to the group goal is known (Johnson and Johnson, 2017a). Social skills and group processing are important for supporting cooperative learning. Social skills, though not clearly operationalized in the literature, are believed to be skills which help group members to coordinate individual efforts, to build trust, to "communicate accurately and unambiguously, accept and support one another, and resolve conflicts constructively" (Johnson and Johnson, 2017a, p. 113). Group processing can be defined as a recurring procedure in which group reflects on each member's contribution to the group, positive or negative, and thereupon, future compensatory measures such as diagnosis of the errors and effort recalibration are planned (Johnson and Johnson, 2017a).

2.2. Classroom implementation of cooperative learning

Although cooperative learning is theoretically well-founded, review of its functioning in practice is also important because it can show the enablers and barriers of cooperative learning use and provide an overview of the research methods employed. Some survey studies provide insights about the implementation of cooperative learning in actual classrooms. In a survey of teachers in K-12 and vocational schools within Montreal, Abrami et al. (2004) found that although cooperative learning is often used, teachers may not implement it faithfully to positive interdependence and individual accountability because of their beliefs about its usability and their ability. With elementary school teachers from Geneva, Buchs et al. (2017) noticed that it is occasionally used because of teachers' beliefs, time, and curriculum. Popov et al. (2012)

discovered that students' group experiences in a Dutch university were hampered by free-riding, English language skills, unwillingness to communicate, and cultural factors. [Abramczyk and Jurkowski \(2020\)](#) surveyed language teachers in K-12 and vocational schools in Poland and found that they rarely used cooperative learning as they were unfamiliar with it.

Further insights about cooperative learning implementation were revealed through interview studies. [Gillies and Boyle \(2010\)](#) studied ten middle-school subject teachers in Australia and found that these teachers faced problems with off-task socialization, time-consumption, group composition, and assessment during cooperative learning. Worth mentioning, [Gillies and Boyle \(2010\)](#) only enquired about the challenges and did not take into account the extent and fidelity of use. [Le et al. \(2018\)](#) conducted a grounded theory study with 19 Vietnamese teacher educators and 23 student teachers of natural sciences, mathematics, and literature and noted that critical obstacles included free-riding, school culture and students' lack of collaborative skills. Another grounded theory study with 23 secondary schools students from Ethiopia by [Mulisa and Mekonnen \(2019\)](#) showed that lack of preparation for group work, free-riding, lack of belief in the value of cooperation, harassment, and lack of accountability encumbered the use of cooperative learning. These findings indicate that the implementation fidelity of cooperative learning influences how well it functions in classrooms. If positive interdependence and individual accountability were adequately present, the students were incentivized to contribute their share and some of these challenges, including free-riding, unwillingness to communicate, off-task talk, and harassment would not have taken place. However, there is still limited understanding of implementation fidelity of groups in EFL context.

As evident, extant studies tend to be conducted in the broad realm of education and there is a dearth of studies on the use of cooperative learning in the EFL classes. Moreover, there are some limitations in current studies. Some of them (e.g., [Abramczyk & Jurkowski, 2020](#); [Abrami et al., 2004](#); [Buchs et al., 2017](#); [Popov et al., 2012](#)) used one-off surveys that may not adequately facilitate in-depth study of the fidelity of teachers' practice ([Borg, 2018](#); [van Leeuwen & Janssen, 2019](#)). Furthermore, the fidelity of implementation tends to be measured with few Likert scale items, sometimes dummy items (e.g., [Abramczyk & Jurkowski, 2020](#)), which could provide insights about teachers' attitudes, but present limitations for contextualized understanding of their knowledge and practice. The few available qualitative studies provided more in-depth understanding of teachers' implementation practices. However, available studies such as [Le et al. \(2018\)](#) and [Mulisa and Mekonnen \(2019\)](#) used maximum variation sampling of participants from as diverse disciplines as science, math, and geography, so they may not tease out how subject differences influence learning tasks, communication structures, and cooperation patterns ([Ghahraman and Tamimy, 2017](#)). Therefore, these studies may offer insights for understanding cooperative learning implementation, but more contextualized studies are needed to distill the nuances of implementing cooperative learning in EFL contexts.

2.3. Current study

With the need for more research into the implementation of cooperative learning, this study uses a grounded theory approach to lay the foundation for a conceptual framework of the factors underlying EFL teachers, conceptions and practices of cooperative learning and their inter-relationships, which could be further refined and expanded on in follow-up studies. This study aims to show a focused image of cooperative learning, specifically in terms of extent and fidelity of implementation, to explain why it might

perform or underperform, and to discuss the implications of these findings for the preparation of EFL teachers. Hence, this study explores the following research questions:

1. How frequently is cooperative learning implemented in Iranian EFL classes?
2. What is the fidelity of the implementation of cooperation learning in Iranian EFL classes?
3. What factors play role in cooperative learning implementation in Iranian EFL classes?

3. Method

This is a qualitative exploratory study, utilizing grounded theory as an analysis approach, because qualitative research may provide more knowledge about cooperative learning implementation in natural classroom settings ([Borg, 2018](#)). Grounded theory "moves beyond description to generate or discover a theory that emerges from the data and provides an *explanation* [emphasis added] of a process, an action, or an interaction" ([Ary et al., 2019, p. 400](#)). Given the dearth of studies on EFL teachers' implementation of cooperative learning, a grounded approach will be appropriate for adding to the knowledge in this context ([Birks and Mills \(2015\)](#)). This study adopts a pragmatic blend of both Glaserian and Straussian grounded theory as it is suggested that a *both-and* approach can be strategically utilized ([Birks & Mills, 2015](#); [Hadley, 2017](#)). Therefore, drawing upon social interdependence theory, the Straussian version, which assigns the observer interpretation more weight than the mere data in theory generation ([Hadley, 2017](#)), was used as a perspective to explore the nuances associated with EFL teachers' cooperative learning practices, specifically the fidelity of use. The Glaserian perspective, which forbids previous theoretical conceptions, was used as a theoretical lens to understand the extent of the implementation and drivers underlying teachers' practice of cooperative learning. Although grounded theory is fundamentally inductive, it also can incorporate the use of deductive and abductive approaches in the aspiration for theory building ([Timonen et al., 2018](#)), so the first and the third research questions were more inductively answered, while the second one included abduction because fidelity was determined in terms of social interdependence theory.

3.1. Sampling and participant profiles

Grounded theory demands purposive sampling without overriding the naturalness of the data ([Birks & Mills, 2015](#); [Hadley, 2017](#)). To maintain this balance, purposeful sampling using maximum variation and snowball techniques ([Ary et al., 2019, p. 382](#)) were utilized. Fourteen teachers with different years of experience teaching English as a foreign language to different levels of students in language institutes of Iran participated in this study ([Table 1](#)). In the light of structural corroboration ([Ary et al., 2019](#)), this enhanced the likelihood for the emergence of a credible theory covering different ranges of experience. The participants were teaching materials such as *Interchange*, *Top Notch*, *American English File*, *Passages*, *New Headway*, and *Solutions*—which are widely used for English teaching globally. As [Table 1](#) represents, all the participants were graduates of disciplines related to the English language, have taken at least two two-credit unit courses on teaching methodology taught based on [Larsen-Freeman \(2000\)](#) and [Richards and Rodgers \(2001\)](#), which include chapters on cooperative learning. Further, they all attended teacher training programs based on the teachers' guide books of the courses they were teaching, which emphasized group work. Today, in the light of the burgeoning need for communicative ability, communicative language

Table 1
The participants.

Pseudonym	Sex	Education	Experience (<i>unknown before data collection</i>)	Learners' Age	Work City, Province ^a
T1	F	MA, English Literature	7 yrs.	14–35	Nazar Abad, Alborz
T2	M	MA, TESOL	3.5 yrs.	15–20	Karaj, Alborz
T3	F	Master's Student, TESOL	5 yrs.	16–27	Shahriar, Tehran
T4	M	BA, English Translation	12 yrs.	15–32	Shahriar, Tehran
T5	M	MA, TESOL	1 yr.	13–19	Tehran, Tehran
T6	F	MA, TESOL	5 yrs.	13–25	Tehran, Tehran
T7	F	MA, Translation Studies	4 yrs.	13–16	Shiraz, Fars
T8	F	MA, Translation Studies	4 yrs.	8–18	Shiraz, Fars
T9	M	MA, TESOL	13 yrs.	19–40	Tehran, Tehran
T10	F	Master's Student, TESOL	15 yrs.	10–16	Tehran, Tehran
T11	M	MA, TESOL	9 yrs.	15–40	Qazvin, Qazvin
T12	F	BA student, English Translation	4 yrs.	12–25	Tehran, Tehran
T13	F	MA, TESOL	8 yrs.	5–8	Shiraz, Fars
T14	F	BA, English Translation	15 yrs.	22–55	Tehran, Tehran

^a Note. Teachers worked in different institutes, even if they worked in the same city.

teaching approach, whose lynchpin is group work, holds sway in language teaching, language teacher training, and ELT curriculum (Nunan, 2001). Hence, the course books the participants taught, including *Interchanges*, *Four Corners*, and *Top Notch*, required the teachers to employ group work.

3.2. Data collection

The university where this research was conducted does not have a formal ethics committee to review and approve research processes prior to data collection. Nevertheless, to ensure ethical compliance, we have ensured that research processes, how the data will be used, and measures for protecting participant identity have been clearly explained and informed consent was sought. The participants were assured of the confidentiality of their identity, and that they could withdraw from the study at any time. Participants gave informed consent verbally and their expression of consent was audio-recorded individually. They participated in semi-structured individual interviews, which is typically used for grounded theory studies (Birks & Mills, 2015). The interviews were conducted over the phone or via Skype and varied between 30 and 80 minutes in duration. The interviews focused on understanding and probing the deep experiences and personal perspectives of the participants (Ary et al., 2019) in terms of how they rationalized the adoption and implementation of cooperative learning in EFL teaching. The questions were exploratory rather than fixed upon the theoretical concepts of cooperative learning, seeking to understand and probe the participants' perspectives and instructional perspectives. This was to allow the emergence of a theoretical explanatory framework (Corbin & Strauss, 2015, p. 70) while not contradicting the purpose of grounded theory with over-reliance on the framing of pre-established theories. Therefore, the interview questions focused on participants' knowledge of cooperative learning including definition, principles, and techniques, their instructional practices in terms of the frequency and duration of group work in their classrooms (i.e. their average class duration and the proportion of class time dedicated to group work), their group work implementation strategies, the challenges they encountered and if they would like to use it more. Credibility was improved by probing participants for evidence and they were invited to share lesson artefacts as triangulating evidence where possible. As for the duration of the group work, the participants were asked how long a session of their classes on average is and how much they dedicate to group work on average. The participants were asked to articulate what they understood by cooperative learning and to narrate a few episodes of group work use in their classes. These narratives were

guided, amongst other things, by probes unraveling how they group students, what task they use, how they reward, how group members interacted, and what role the teachers played. To know about the fidelity of use, these narratives were examined for the presence of theoretical concepts required for effective cooperation, namely, positive interdependence, individual accountability, promotive interaction, social skills, and group processing (Johnson & Johnson, 2017b). Their understandings represented their knowledge and consistency of their narratives with the theoretical concepts showed the fidelity of their performance.

The data collection stopped at 14 participants because after interviewing 12 teachers, repeated categories and concepts were substantial, portending saturation (Corbin & Strauss, 2015). The interviews were conducted and later analyzed, in the participants' mother tongue, Persian, so that chances for the dilution of ideas due to the language problems were minimized. Only the sections reported as excerpts and narrations in this paper were translated to English. The accuracy of these translations was ascertained through member check.

3.3. Data analysis

Data were transcribed verbatim and then coded using MAXQDA 2018. The analysis started with open coding to derive general concepts or categories that outline the dimensionality variations of raw data (Corbin & Strauss, 2015). The analysis then proceeded to axial coding wherein categories of the same type and their sub-concepts, with their own dimensionality variations or similarities, were compared and related to form a larger more abstract category (Ary et al., 2019; Corbin & Strauss, 2015). In this process, negative cases received especial attention to make theory more coherent and saturated. Finally, through selective coding, the categories were cross-compared to form logical integrative explanations of the phenomenon (Ary et al., 2019). The integration process, which serves the cause of grounded theory by offering conceptual clarity using model/framework construction (Timonen et al., 2018), is important because categories must "be linked and filled in with detail in order to construct a dense and explanatory theory" (Corbin & Strauss, 2015, p. 194). To arrive at the framework, the categories standing for the raw data (e.g., beliefs, age, knowledge, etc.) were delineated, statements about their relationships was made, and using data-consistent logical analytic interpretation abstract diagram explaining the relationships was discovered and presented in the form of the integration diagram, i.e., the framework (Corbin & Strauss, 2015). As warranted by grounded theory, the constant comparative method was used throughout these interrelated

phases (Ary et al., 2019; Corbin & Strauss, 2015). To assure the credibility of the analysis, not only the transcripts and the interpretations of each participant's data were returned to himself/herself for member checking, but also the raw data, coding, and interpretations were sent to two professors of education for peer-debriefing.

4. Findings

Analysis of data, as can be seen in more detail in the sections below, evinced that cooperative learning is not extensively and faithfully used in the EFL classes studied because the elements of effective cooperative learning such as positive interdependence, individual accountability, promotive interaction, social skills, and group processing were absent in the narratives teachers provided of their implementation of cooperative learning (see *Teacher Knowledge and Fidelity of Implementation*). This loose implementation found to be due to teachers' beliefs about group work, student factors, teacher knowledge, and a group of challenges, ranging from the structural ones to the motivational and cultural ones (Fig. 1). The challenges not only diluted the implementation, but also overwhelmed beliefs. Teacher knowledge was a determinant of fidelity and explained the role of age and challenges in the sense that the teachers of higher fidelity, in comparison to those of low and almost no fidelity, experienced less challenges and had less problems with the learners of lower ages. In fact, it was observed that higher knowledge of the principles of cooperative learning, specifically positive outcome interdependence, could mitigate some of the challenges arising from the group dynamics and student preparation including conflict and confusion. If teacher knew how to implement a cooperative learning task in which outcome interdependence, instead of means interdependence, is present, off-topic talk, free-riding, and conflict would be reduced. Overall, this can suggest, directly or indirectly, that higher knowledge could improve the classroom implementation of cooperative learning. The findings schematized in Fig. 1 will be supported and elaborated on in the following three sections.

4.1. Teacher beliefs, learner age, and extent of adoption

It was found that cooperative learning is peripherally used in the classes, ranging from 0 to 30% of class time. This amount is considered under-utilization because, on the one hand, at most 21% of the participants used it 20–30% of their class time, and the others (79%) used it less than 15% of the class time on average, whereas communicative language teaching generally demands a substantial amount of group work (Lazaraton, 2014; Nunan, 2001; Poupore, 2016). On the other hand, the participants showed their dissatisfaction with the extent they used cooperative learning using expressions such as “I do group work very little” (T1), “generally, well, I occasionally do pair work” (T4), and “I used it not much....only when I played them a film or something” (T8). Moreover, they almost all wished they used it more.

Teachers' beliefs about the effectiveness of group work partially explained how extensively it was used. Negative beliefs directly hindered the use of group work, or even halted it. For example, T10, who did not consider group work beneficial, used it for only 10 minutes of a 90-minute class duration because she did not believe in the effectiveness. Her negative beliefs arise from the challenges she has encountered:

Well, see, I have witnessed many times that students act playfully, while doing group work, and use less of their time, uh, I try to reduce the group work. When students feel that they're monitored, when they have feeling of competition, that's much better. After all, I have seen when they're given ten minutes, they start chatting, and when asked to offer the outcome [of group work], they have nothing to offer, because they have not talked at all [about the task]. This has always happened to me, not one or two times! They assume as if they're given a break.

Positive beliefs, notwithstanding their contribution to the extensive implementation of group work, were of limited impact so that even the most positive beliefs towards group work led to an implementation degree of no more than 30%, such as T9:

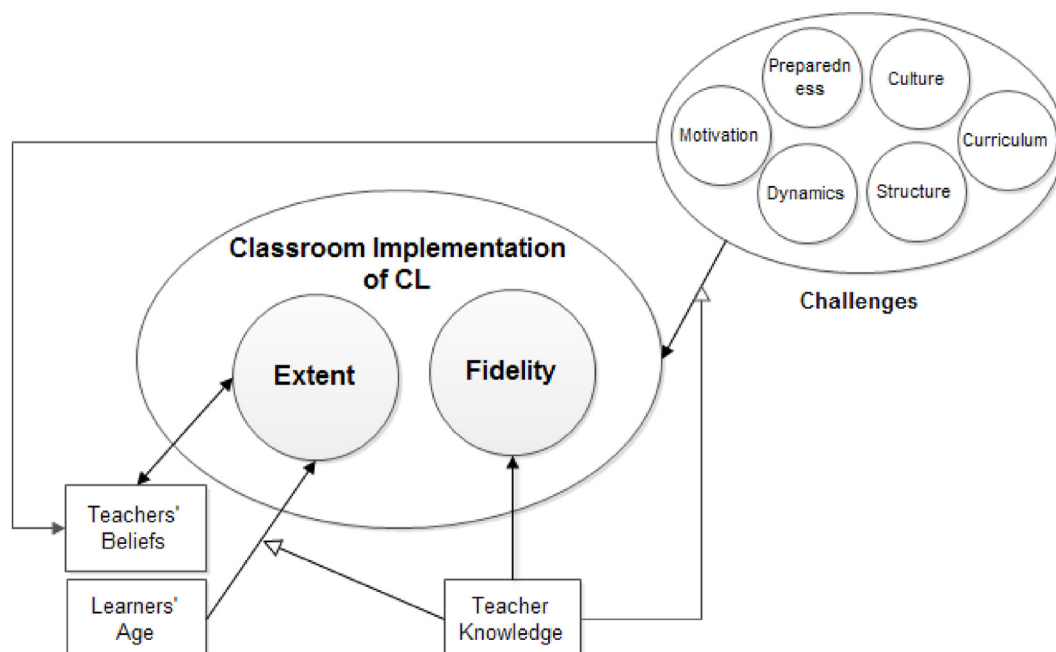


Fig. 1. Conceptual map of the actual use of cooperative learning.

I should let you know if we assume a class to be one and a half hour and I am to teach three pages, I think, out of this one and a half hour, I use 20–30 minutes [20–30%] for group work [emphasis added].

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It is REALLY effective and beneficial. The first point I can say in this regard is that, among its advantages, [it improves] learners' self-confidence. As I told, there're some students who don't like to speak in groups, but there're others who, after a while, turned from a shy student into a dominating speaker.

This limited role can be indicative of the counterbalancing of the positive influence of the beliefs by some challenges, which may deteriorate the beliefs over the course of time. For example, T4 who used to believe that group work should be extensively used gradually encountered challenges which made him not only to use it less extensively, but also disdain it:

Previously, I used to be more motivated; now, it is much less. Indeed, now I do not do this [group work] usually ... Sometimes there are situations in the class that I see group work is simply wasting of the time. It is not tenable at all. I came to the point that I had better teach my-self. (T4)

One consideration for the extent of adoption of group work was the age of students. It was reported that older students especially adults, in comparison to kids and teenagers, are easier to be involved in group work, as indicated by T3:

This [the extent of the use of group work] depends on my classes. Classes of a bit older students have more understanding, so they make less noise during group work; they do more group work; they cooperate more; for example, ages of about 17–18 and higher do much more group work, but even then, out of 100% of the class, equal to 90 minutes, I would perhaps do 20 minutes of group work.

The age factor could be controlled by teachers' knowledge and skill because the teachers who had a more nuanced understanding of cooperative learning (e.g., T7,T11,T12) and taught the learners of the same ages as others did not point to the effect of age at all, but those who had less knowledge of cooperative learning unanimously alluded to the age factor. Future studies are recommended

to see if age factor could also be attributed to the learners' length of experience of cooperative learning and/or their developmental growth.

Further, it is understood that group work is not equally used for all language skills. Its use, however marginal, was commonly preponderated by the activities focusing on speaking, in comparison to reading, listening, writing, and grammar.

4.2. Teacher Knowledge and Fidelity of Implementation

The scrutiny of the teacher narratives showed that teachers' use of group work had generally relatively little fidelity to cooperative learning, but it was not uniform; rather, it had some systematic internal variation. Teachers used group work as simple gathering, non-cooperative interaction, or semi-cooperative learning (see Table 2). Teachers from the simple gathering group did not include any theoretical elements of cooperative learning in their practice. They put learners into ad-hoc groups without discernible assessment or collective reward, nor was the interaction promotive. This category resembles a pseudo-learning group, which was posited to be less effective than individual learning (Johnson & Johnson, 1999). Those constituting the non-cooperative interaction group included means interdependence and individual accountability, which are common with any type of interaction, but lacked outcome interdependence, a necessary element of cooperative learning. The semi-cooperative group had outcome interdependence, a must for cooperative learning, but lacked solid elements of individual accountability, promotive interaction, social skills, and group processing.

Teachers had different levels of understanding which was associated with their fidelity of implementation. Participants who described cooperative learning as a group activity with a shared goal to which all members must contribute tend to implement semi-cooperative group work. For example, T11, who had more knowledge of cooperative learning demonstrated more confident deployment of positive interdependence:

If you mean group learning, we can assign a task to a specific group, groups which we have formed in the class, assign the task, and then tell them about the objectives [of the task], tell them what it yields, what our aim is, and what we want of them; give them task to do in groups. In group means [pause] cooperate together for a shared goal. Shared goal can be that all the members contribute to one task, although they might do different pieces.

Table 2
Examination of the group work for the elements of cooperative learning.

		Positive Interdependence			Individual accountability	Promotive interaction	Social skills	Group Processing
		Outcome	Means	Boundary				
Simple Gathering	T1	-	≅+	-	-	-	-	-
	T4	-	+	-	-	-	-	-
	T6	-	+	-	-	-	-	-
	T8	-	+	-	-	-	-	-
	T13	-	≅+	-	-	-	-	-
	T14	-	≅+	-	-	-	-	-
Non-Cooperative Interaction	T2	-	+	≅-	+	-	-	-
	T3	-	+	-	outperformers: +	-	-	-
	T5	-	≅+	-	+	-	-	-
	T9	-	+	-	+	-	-	-
	T10	-	≅-	-	+	-	-	-
Semi- Cooperative	T7	≅+	+	-	-	-	-	-
	T11	+	+	+	-	-	-	-
	T12	grammar: reading: speaking: +	+	-	≅+	-	-	-

Note. -:absent; ≅-: relatively absent; ≅+: relatively present; +: present.

For the simple gatherings, cooperative learning was characterized as non-individual work with no understanding of the nuances of cooperation and positive interdependence. For example, T8 whose use of group work included almost no theoretical element of cooperative learning characterized cooperative learning simply as a situation where “two, or three, or more learners work together”. In non-cooperative interaction group, resembling traditional classroom learning group (Johnson & Johnson, 1999), where non-specific elements of cooperation were present, cooperative learning was regarded as interaction found in learner centered learning. For example, T9 described his cooperative lesson as:

In cooperative learning, students are engaged with the task. They are in homogenous groups. *They interact with each other.* Cooperative learning is student centered learning.

4.3. Implementation and challenges

The inextensive and loose implementation of cooperative learning in class was found to be associated with some challenges, which can be put into six general categories of teachers' motivation, students' preparedness, group dynamics, culture, structural factors, and curriculum (see Fig. 2). Before discussing each of these factors,

the relationship between teacher knowledge and the challenges is worth attention. Interestingly, it was found that teacher knowledge was associated with the role of challenges because the semi-cooperative group, who implemented group work with higher fidelity to cooperative learning because of their higher knowledge, experienced less challenges. As a piece of evidence, the members of the semi-cooperative group (T7, T11, and T12) in comparison to the other two groups reported less concern about teacher motivation, student preparation, and some sub-elements of dynamics and structural factors including noise, population, conflict, and dominance. If the teachers knew about the importance of outcome interdependence, they could have created a structure inducing the learners to avoid off-topic talk, conflict, and confusion.

4.3.1. Teacher motivation

“No attention or credit is given to the person who is doing more group work; it doesn't matter for the system at all.” (T2)

As a common theme in the data, teacher motivation was found to explicitly afflict the classroom use of cooperative learning. This included teachers' concerns about the absence of competitive salary, lack of in-service teacher training opportunities and valid teacher evaluation system, perceived lack of valid system for the

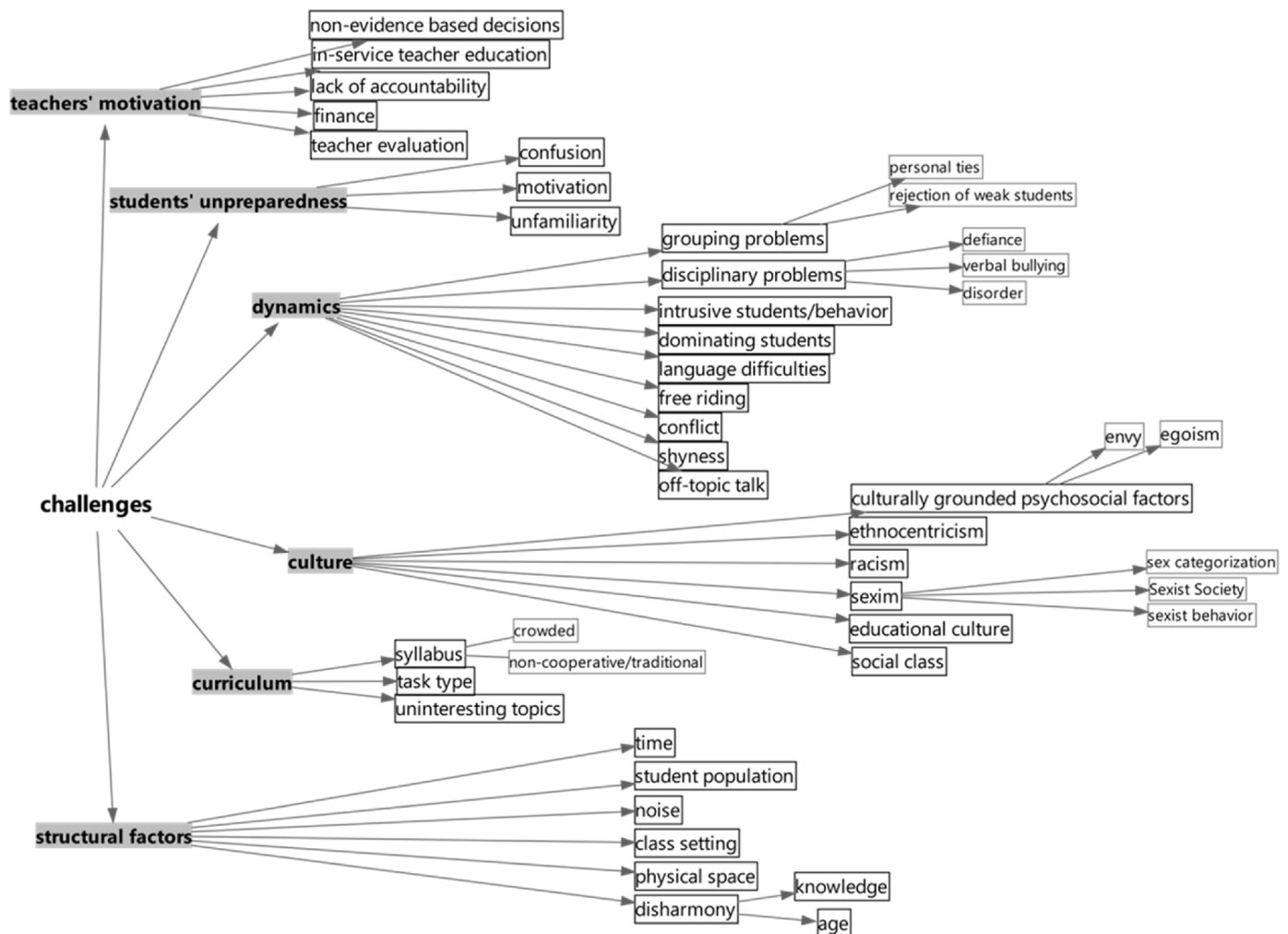


Fig. 2. Challenges influencing the classroom use of cooperative learning.

assessment and evaluation of the learners, and perceptions of curricula being developed with no regard for the learners' needs and the teachers' opinions. The participants almost all complained that institutions promote learners into the higher levels with no valid evaluation for what teachers perceived to be financial benefits. The perceived gaps between course objectives and learners' levels presented teachers with difficult teaching contexts that demotivated them because, on the one hand, they felt to be laboring in vain, and on the other hand, they faced with acute upcoming classroom difficulties arose by the mismatch between the course objectives and ill-qualified learners.

4.3.2. Learners' preparedness

"With some tasks, the learners get confused. It doesn't matter how much you model the task, they still are confused!" (T1)

Learners' willingness and preparedness for cooperative learning was another challenge. Students were uncomfortable and shocked to be involved in cooperative tasks probably because they had typically learnt in teacher-centered environments. The teachers shared about learners being confused and unable to fathom what they should do in the task even after repeated modeling by the teacher. Learners may also be absent from class because of demotivation. Some may not be willing to attend class or the younger students may be dependent on their guardians' decisions for class attendance, or students may not find the need to attend class, if they believed that they could be promoted into the next level without any significant effort.

4.3.3. Group dynamics

"There was a very weak learner. Whatever group I assigned him/her to, refused to accept [him/her as a member]. They really drove me up the wall Finally, I rubbed off his/her name myself [from all groups] and told the class that he/she and me are one group!" (T7)

Teachers faced challenges forming groups because learners might not be willing to accept the teachers' decision for personal and cultural reasons. Besides, they might publicly reject the weaker peers as their group members. This can bring about a situation of inequality and distress that makes the class intolerable for the less adept students. Moreover, intrusive error corrections made by the more knowledgeable group members could undermine group members' self-confidence and hinder cooperation. Shy learners could be afraid of the others' judgments whereas dominant learners reigned and made communication and cooperation processes difficult for other learners. Shyness was more of a problem in coed classes in comparison to the sex segregated ones.

Furthermore, teachers complained that disciplinary problems like defiance, bullying, and disorder impeded their use of cooperative learning. These disciplinary problems were more common with the younger learners and as their age increased, they were less commonly reported. Among them, bullying was reported to be a function of socioeconomic status in the sense that for any given age, more bullying was reported in the socioeconomically disadvantaged regions. Another challenge was uneven English language proficiency among students, which impeded the quality of communication needed for a cooperative language task. Off-topic talk, usually done in L1, was reported to be more common with the younger learners. This could have arisen because of lack of supervision by the teachers, lack of group skills, and/or language difficulties. Finally, conflict among the group members caused by

the differences in opinions and beliefs could discourage cooperation through contribution withdrawal or quarrel making.

4.3.4. Culture

"Group learning isn't in Iranians' mentality. Now, we need a scientist who, based on Iranians' mindset, devise an approach for cooperative learning [laughter]." (T10)

Culture can be a source of challenge in different ways. First, the teachers complained that the learners have been acculturated in a predominantly competitive school culture which may in turn discourage them from cooperating with others. Akin to this, the learners' predisposition for egoism and envy, maintained to be culturally rooted (Tamimy, 2019), was reported to disrupt cooperation in the sense that learners would either refrain from helping the others, claiming the others' loss is none of their business (T10), or try to damage the others, especially those of better social and academic standing, emotionally or academically for envy. Social class afflicted the cooperation in the sense that those lower and above the normal social class of the given context were not considered welcome, receiving sarcasms like "dandy" or "peasant".

Racism and sexism were also an issue. As for racism, learners were reported to be mocked at for their accents which damaged their self-confidence and even led to course withdrawal, as observed for different students including a Yazdi girl (T10), Afghan people (T12 & T6), a Turkish girl (T10), and a Canadian-born boy (T7). As apropos of sexism, it must be mentioned that Iranian culture, notwithstanding its heterogeneity, is generally sex segregated for political reasons, so some learners, especially the girls, were reported to feel uncomfortable in a coed class, let alone work with a group member of an opposite sex. Evidently, there were some sexist sarcasms, or a clash between the girls and the boys' gangs, which inevitably derailed the cooperation. It must be mentioned that age was found to be negatively related to issues instigated by sexism. Additionally, ethnocentrism unsettled cooperation in the sense that learners often refrained from interacting with members of different ideologies, looks, and clothing styles.

4.3.5. Structural factors

"Learners should be of the proper and similar level. When the learners' level is good and the class is strong and good, grouping and management are easier and, if the class size permits too, more cooperative learning will be used." (T11)

The role of structural factors could not be ignored in the implementation of cooperative learning. Cooperative learning was reported to require more classroom space and time so that learners can form groups and get to cooperate genuinely. The teachers maintained that classes of traditional table row layout make the group work difficult as the learners have to move their chairs, if not fixed, or move themselves frequently during the course for different tasks. For classes of large population, cooperative learning will be difficult because, on the one hand, the teacher cannot easily monitor what learners are doing in their groups; on the other hand, the group work will create such a noise level that neither the group members can concentrate, nor the classes in neighbor remain uncomplaining. Large classes with scattered seating arrangement also make monitoring difficult. Incongruences in the learners' age and knowledge also plagued cooperative learning. An older learner in a group of younger peers might act bossy, and too much variance in the group members' age can lead to mutual misunderstanding

because the learners' worlds would be too distant from each other. Too much difference between the learners' knowledge levels, which was reported to be at least partly the result of unaccountable assessment system, can provoke group think, an unreasonably conformist situation (Turner & Pratkanis, 2010).

4.3.6. Curriculum

"One of the merits of Four Corners is that it includes all these [predefined group discussion parts], but American English Files does not!" (T12)

Curriculum, which logically varies across different institutes, can mold the use of cooperative learning through its syllabi, task types and content. Tight syllabus using multiple sources including separate titles for grammar, vocabulary and idioms, rather than an integrative one, does not permit the teacher room for cooperative activities because it overrides the time available. A syllabus revolving around a course book, like *Headway* or *American English File*, which does not incorporate much pair or group activities, can preclude the use of cooperative learning, in comparison to more group work friendly books like *Four Corners* and *Interchange*. Textbooks also dictate the tasks reserved for group work and thus, less group work is done with reading, grammar, and listening, in comparison to speaking. Even for speaking tasks, textbooks constrain the discussions to topics that teachers believe to be uninteresting for the learners and therefore, speaking group activities are not that lively.

5. Discussion

This study sought to untangle the extent and fidelity of cooperative learning implementation in intact EFL classes and its challenges. Supplementing the research on courses other than EFL (e.g., Abramczyk & Jurkowski, 2020; Buchs et al., 2017; Kutnick & Blatchford, 2014), the findings evinced that cooperative learning is not extensively and faithfully used in the EFL classes among the study participants because the elements of cooperative learning such as positive interdependence, individual accountability, promotive interaction, social skills, and group processing (Johnson and Johnson, 2017b) were absent in the narratives teachers provided for their implementation of cooperative learning. Teacher knowledge was a determinant of fidelity and was also associated with the role of age and challenges in the sense that the teachers who were able to implement cooperative learning with higher fidelity perceived themselves to be experiencing fewer challenges and had less problems with the learners of lower ages. Factors like curriculum, motivation, and culture also challenged implementation processes. The challenges not only diluted the classroom use, but even overwhelmed beliefs. In fact, it was observed that higher knowledge of the principles of cooperative learning, specifically positive outcome interdependence, could mitigate some of the challenges arising from the group dynamics and student preparation including conflict and confusion. If the teacher knew how to implement a cooperative learning task in which outcome interdependence, instead of means interdependence, is present, off-topic talk, free-riding, and conflict tend to be reduced.

It was also found through the deep analysis and employment of probes that the participants' initial responses to the questions about the extent of cooperative learning use can be unreliable. This finding empirically supports Baines' et al. (2017) argument that "teachers can overestimate the extent and quality of the group work taking place, and close observation may show it to be actually quite limited" (p. 18). This also questions the credibility of

Abramczyk and Jurkowski (2020), Abrami et al. (2004), and Buchs et al. (2017) because they examined the frequency of use with a single Likert scale item. Thereupon, future quantitative research should be more rigorous about the validity of the instruments.

In line with Gillies and Boyle (2008, 2010), the teachers had relatively positive beliefs about cooperative learning. In accordance with the previous research (Abramczyk & Jurkowski, 2020; Abrami et al., 2004), teachers' beliefs about the effectiveness of cooperative learning could influence the extent of its use. However, contrary to Abrami et al. (2004), the success expectancy was not found to be the best determinant of the frequency of use because even the participants who had very positive beliefs were not seen to use cooperative learning for more than 30% of their class time. Moreover, consistent with Borg (2018), the relations between beliefs and practice were reciprocal, rather than unidirectional. This problematizes the available research on the classroom use of cooperative learning which assumes a unidirectional relation between belief and practice (e.g., Abramczyk & Jurkowski, 2020; Abrami et al., 2004).

Moreover, it was revealed, in line with Baines et al. (2017), that classroom use of group work loosely adhered to the principles of cooperative learning. In comparison to the experimental studies reporting effectiveness in controlled groups (e.g., Ghaith, 2002; Jalilifar, 2010; Ning & Hornby, 2014), this suggests that actual effectiveness cannot be simply judged based on experiments, but the evidence of actual classroom implementation is needed (Kutnick & Blatchford, 2014; Kvernbekk, 2016). In fact, among the practice of the study participants, almost no solid element of outcome interdependence, promotive interaction, social skills, and group processing was observed. This finding is partly consistent with Mulisa and Mekonnen (2019), which found that outcome interdependence, probably the most important determinant of group success (Johnson et al., 1991), absent in practice.

Like Le et al. (2018), the study showed that the way cooperative learning was used in the classroom had no allegiance to social skills and group processing. Similarly, Kutnick and Blatchford (2014) observed that group processing, "planning for purposeful interaction within classroom groups to draw upon discussion, cooperative and collaborative skills did not appear to exist" (p. 44). This finding is again contrary to Mulisa and Mekonnen (2019), which counted social skills and group processing as the most conspicuous element of Ethiopian classroom use of cooperative learning. This difference is by no means unexpected because cooperative learning has been being constantly and formally used for more than a decade in the form of *permanent groups* in Ethiopian schools, where Mulisa and Mekonnen (2019) was conducted, whereas it tends to have sporadic voluntary use in Iranian EFL classes in the form of ad hoc groups. Accordingly, it can be surmised as a direction for future research that the development of social skills and group processing is a function of the longevity of learners' experience with cooperative learning and the grouping endurance.

Fidelity of use was found to be related to the teachers' knowledge of cooperative learning because none of the participants, despite his/her education and experience, had a comprehensive definition of cooperative learning, nor had s/he sufficient familiarity with the principles and techniques for the implementation of it. This finding not only responds to the call of Buchs et al. (2017) for the examination of the role of teachers' knowledge, but also confirms arguments about the relation between the teachers' knowledge and the troubled use of cooperative learning (e.g., Le et al., 2018; Sharan, 2010). This corroborates Kutnick and Blatchford's (2014) main finding about the UK classrooms that teachers' insufficient knowledge hinders them to grouping strategically.

In view of the fact that the fidelity and the extent of cooperative learning use were not satisfactory and the bearing of beliefs on

them was suppressed, it can be inferred, consistent with Borg (2003), that some interfering factors, besides belief and knowledge are involved. These factors were realized to constitute six general categories of teachers' motivation, learners' unpreparedness, group dynamics, culture, curriculum, and structural factors. Teacher motivation, which was observed to be inflicted, among other things, by unaccountable teacher and learner evaluation systems employed in schools, discouraged teachers to invest in cooperative learning. Although this factor has been locus of research in the broader realm of teacher education (e.g., Kyndt et al., 2016; Osman & Warner, 2020), it has not been noticed yet by the available research on cooperative learning, save for its teacher education component discovered by Le et al. (2018) and Sharan (2010). Thus, more attention to the role of teacher motivation as driven by the macro-context is due. Amongst the factors subsumed as teacher motivation, the role of teacher training, consistent with Baines et al. (2015) and Chan (2017) was found to be seriously involved.

Learners' unpreparedness attenuated the use of cooperative learning in the sense that the learners' either considered it unbeneficial or felt apprehensive because they did not know what they should do. This corroborated the findings of previous studies (e.g., Baines et al., 2015; Baker & Clark, 2010; Gillies & Boyle, 2008, 2010; Mulisa & Mekonnen, 2019; Shimazoe & Aldrich, 2010). Addressing this issue, Le et al. (2018) believe that this confusion arises from the inadequate explanation of the goal of collaborative task. Shimazoe and Aldrich (2010), Baines et al. (2017), and Veldman et al. (2020) recommend the explicit briefing of the task along with the implementation of a transparent collective assessment strategy to encounter this issue. By way of specification, this study confirms the findings of Baines et al. (2015), from the primary education, that unfamiliarity with group work can cause serious challenges. Moreover, it must be mentioned that although briefing using strategies such as feedback, prompting, modeling, and questioning would be useful, it must not go to the extremes because too much or too little can have detrimental effect on the quality of collaboration (van Leeuwen & Janssen, 2019).

Group dynamics, the influential interpersonal processes that occur in and between groups over time (Forsyth, 2018, p. 18), constitutes the umbrella term for another category of factors overshadowing the use of cooperative learning. This finding supports the results of previous research which found grouping (e.g., Gillies & Boyle, 2008, 2010; Shimazoe & Aldrich, 2010), harassment (e.g., Mulisa & Mekonnen, 2019), rejection of the less adept learners (e.g., Le et al., 2018), dominating members (e.g., Mulisa & Mekonnen, 2019; Shimazoe & Aldrich, 2010), language abilities (e.g., Baker & Clark, 2010; Popov et al., 2012), free-riding (e.g., Baines et al., 2017; Le et al., 2018; Mulisa & Mekonnen, 2019; Popov et al., 2012), dissension (e.g., Mulisa & Mekonnen, 2019), and off-topic talk (e.g., Buchs et al., 2017; Le et al., 2018) influencing cooperative learning use in the intact classes. As evident, this study not only reaffirms the findings of the previous research with data from a new context, but also consolidates the sporadic factors different studies found through different methodologies using ground theory whose aim is to make systematic meaning of cross-case variations. Hence, the credibility, confirmability and transferability of the previous findings is strengthened. Baines et al. (2017) also named many of these problems and provided interesting potential solutions for them, which can be transferred to EFL classes.

Culture is a factor whose bearing on the use of cooperative learning has either not been empirically noticed by the previous research (e.g., Abramczyk & Jurkowski, 2020; Buchs et al., 2017; Le et al., 2018; Mulisa & Mekonnen, 2019), or it has mostly been touched upon without instantiating clearly the ways in which

culture might exert its impact (e.g., Baker & Clark, 2010; Chan, 2017; Kyndt et al., 2013; Popov et al., 2012; Sharan, 2010). This study shed light on some phenomena through which culture is linked to the use of cooperative learning. Consistent with Tamimy (2019), it was found that the learners' noticeable predisposition for egoism and envy, which threatens cooperative learning, is at least partly cultural. Moreover, in line with Baker and Clark (2010), Sharan (2010), and Gillies (2019), this study showed that educational culture, if competitive and traditional, can damage the cooperation process. This study also found some cultural factors, unnoticed by the previous research, such as sexism (either behavioral or social), ethnocentrism, diversity intolerance, racism, and social class to challenge CL use. Chan (2017) advised that improvement of social skills can reduce the problems caused by culture. However, since his study has not pinpointed different components of cultural problems, the effectiveness of his reasonable recommendation should be tested in future.

Curriculum was found, in accord with the previous studies from disciplines other than TESOL (e.g., Buchs et al., 2017; Gillies & Boyle, 2010; Le et al., 2018), to constrain the use of cooperative learning. Explicating the influence of curriculum on the use of cooperative group work and in turn, its marginal status within ELT curricula, it must be mentioned that Ellis (2003) speculated that group work can suffer some disadvantages so it was suggestively recommended not to be included in the curricula. Nevertheless, he recommends cooperative learning as a remedy for the problems of group work, but this seems not to be seriously taken into account because Graves and Garton (2017) reported that group work is still found problem making. Future studies are recommended to examine the EFL curricula for the fidelity of their group/pair work components to cooperative learning.

Structural factors such as time, disharmony, space, and student population were also witnessed to impinge on cooperative learning. This finding is not only in congruence with Moreland et al. (2009), which considered group structure an interesting and important factor, but also, according to generic theory of group composition efforts (Moreland, 2010), delineates what structural factors are most important for the use of cooperative learning in EFL classes. It was also found, consistent with Blatchford and Russell (2019), that large class population and limited space, wherein pupils have to move chairs, can trouble the actual use of group work. Aside from these points, the findings, consistent with previous research, indicated that time constraints can hinder the use of cooperative learning (e.g., Abrami et al., 2004; Baker & Clark, 2010; Buchs et al., 2017; Gillies & Boyle, 2010; Hsiung, 2012). They supported Gillies and Boyle (2010) and Moreland et al. (2009), which found that size and disharmony, whether at its surface reification such as age or its deep instantiation like knowledge, influences group work. In fact, supporting Moreland (2010), it was revealed that small and homogenous working groups, whether in terms of age or ability, were overall considered better performing than the heterogeneous ones, unless special modifications to the group processes are made. Similarly, Chan (2017) reported that "problems will inevitably arise in cooperative learning groups which are heterogeneous in nature" (p. 186). It must be mentioned this finding might not be conclusive because Kutnick and Blatchford (2014) suggest that group size and composition are complex and can interact with the task type as well as the subject. Thus, future studies can examine this issue within EFL context.

Interpreting the findings of this study in the light of the EFL literature on cooperative learning a few important insights can be gained. First, it was shown that fidelity of implementation and the role of challenges can be attributed to teacher knowledge and beliefs, so it can disabuse studies like AbuSeileek (2012) of their search for the correction of the pathologies of cooperation by

withdrawal of some basic elements of cooperative learning. By the same token, it can inform Teng (2022) that positive advantage he discovered for cooperative-metacognitive instruction over what he named the mere cooperative group can be an advantage of a more faithfully implemented cooperative learning over a loose implementation of cooperative learning, rather than cooperative-metacognitive instruction because, to be faithfully implemented, cooperative learning would include group processing, which is relatively analogous to what Teng (2022) calls metacognitive knowledge, explicit instruction, and briefing. These two cases may be able to show that within TESOL, as can be the case with education (Kutnick & Blatchford, 2014), cooperative learning in all its possible degrees of infidelity might be conflated with cooperative learning under different guises. This study may also be able to explain the negative comments of some of the participants of Yoshimura's et al. (2021) about cooperative learning in terms of teachers' infidelity. This suggests that EFL research on cooperative learning in their designs should take into consideration the fidelity of use and the potential role of teacher knowledge. Moreover, the challenge curricular factors could make for the implementation of cooperative learning can show that, as Jacobs and Ball (1996) found, group work in ELT textbooks, despite its seeming prevalence, may still be to a considerable extent non-cooperation promotive. This highlights the need for more research on group work in today's ELT course books.

6. Conclusion

Cooperative learning is well-received because of the exemplary body of experimental research which unanimously testifies to its effectiveness. However, its classroom implementation is understudied and more importantly, there are reports of its limited and ineffective use. Thus, this study delved into the classroom use of cooperative learning in EFL classes through a grounded theory approach. The findings show that cooperative learning, notwithstanding the teachers' liking for it, is inadequately used in the Iranian EFL classes studied, and even this limited use lacked fidelity to the principles of cooperative learning due to some factors including teachers' knowledge, learners' age, structural factors, group dynamics, culture, learners' unpreparedness, teacher motivation, and curriculum.

Naturally, this study suffers some limitations. First, it identified six higher order factors challenging the classroom use of cooperative learning and their substructure, but did not delve into the relations between these factors because it was delimited to identifying different factors. Future research can draw upon the challenges identified to vet their internal interactions. Second, this study due to its method and data collection technique, which did not include observation, could not distinguish the impact of challenges separately on fidelity and extent, so explained it in terms of a broader concept, that is, classroom use. Further research can pinpoint the impact of challenges on the constituents of classroom implementation. This study delimited its data collection preference to the teachers and could not ensure if the same findings hold true from the learners' vantage point. This study was delimited to cooperative learning in general because almost all the participants expressed that they do not know about the specific implementation techniques of CL (e.g., STAD, JIGSAW, Learning Together, etc.). Thus, it could not explore the potential role of different application techniques of cooperative learning. The practitioners and future research might need to heed potential variation arising from the application of different techniques. Finally, the findings of this study due to its design should not be unduly extrapolated to the populations, whether Iranian or international; nevertheless, analytic generalizations can be tenable (Corbin & Strauss, 2015;

Firestone, 1993).

These findings can be suggestive of some implications. It is now definite that simple existence of tasks labeled group work in course books will not lead to cooperative group work (Gillies & Boyle, 2010), so the knowledge-base of teacher education should be honed to enable the teachers to address the implementation challenges. In fact, teacher development should pay special attention to the strategies for the deployment of positive outcome interdependence as its absence can considerably downgrade the effectiveness of cooperative learning and create simple gatherings (Chan, 2017). This might need the revision of the teachers' guide books, available for each ELT course book. Rich online resources which can support the effective use of cooperative learning can also be consulted (e.g., www.peerlearning.net). Evaluation and assessment procedures both on behalf of teachers and learners should be seriously redressed by the administrative bodies of the institutions and educational policy makers, otherwise teachers will lose their motivation to invest in group work and students will retrovert to their traditional behavior, inherited from their compulsive education. Finally, the future studies can develop psychometrically valid and reliable measurement instruments to quantify the role of each factor in the use of cooperative learning.

Data availability

The authors do not have permission to share data.

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