



## Concept of Cooperative Learning in Australia and Iran

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| ARTICLE INFO   | ABSTRACT   |
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| <p>Received: 28 February 2023<br/> Revised: 03 April 2023<br/> Accepted: 14 November 2023<br/> Online: 06 December 2023</p>        | <p>Research background shows that university teachers in the field of education have different definitions of cooperative learning with some not differentiating among group work, collaborative learning, and cooperative learning. The main purpose of the current study is not to distinguish these three concepts from each other, but to identify the perceptions of university academics in Australia and Iran. The current study intends to present a clearer understanding of cooperative learning, highlighting the similarities and differences that may exist between the two countries. This was a qualitative study involving 23 university teachers who were interviewed on their understanding of cooperative learning. Thematic analysis was used to analyse the in-depth interview data which were coded and organized using Atlas/ti software. Participants in both Australia and Iran defined cooperative learning as an interactive procedure. They used similar terms such as active learning, exchange of knowledge, and individual accountability. Australian participants emphasized the shared goal, defining the roles and planning, while Iranian participants paid more attention to the management aspects of cooperative learning. This cross-cultural study identifies new insights of cooperative learning that may need to be considered in order to develop the quality of teaching and learning in university classrooms.</p> |
| <p>KEY WORDS</p> <p>Comparative qualitative study<br/> Cooperative learning,<br/> University teachers<br/> Australia<br/> Iran</p> |  |

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## 1. Introduction

Although in most scientific and executive settings, scholars and educational leaders have talked about active learning, traditional methods still cast a shadow on the educational system and caused students to face less challenging situations, fewer opportunities for interaction, and mutual thinking. In this situation, although virtual environment has replaced the blackboard and movable chairs, but university teachers are often speakers and expect students to be receivers of knowledge. In active teaching methods, the students are active, the instructor is considered a member of the class and by creating the right conditions, he/she facilitates the learning process. In this situation, students are inquisitive people who can ask, be curious, discover, solve problems, think, discuss with each other and develop their natural learning abilities. Students who study in this way not only learn better but also enjoy learning more (Karamti, 2017). Among the active methods that have attracted the attention of scholars today is cooperative learning. Cooperative learning is a pedagogical practice that has attracted much attention over the last three decades because of a large body of research that indicates students gain both academically and socially when they have opportunities to interact with others to accomplish shared goals (Johnson and Johnson, 2005; Johnson, Johnson & Holubec, 2013). Cooperative learning is defined as small groups where students work together to maximize their own and each other's learning (Gaith, 2018), and, in so doing, promote a variety of positive cognitive, affective, and social benefits (Slavin, 1999; Swanson, McCulley, Osman, Lewis, & Solis, 2019). While cooperative learning is well recognised as an active pedagogical approach to learning and teaching, traditional teaching via didactic lecturing remains prevalent in university classrooms (Sabat *et al.* 2022). Cooperative learning has the potential to positively affect student success (Cohen, Ben-Zvi, & Hod, 2023; Keramati, 2007, 2010, 2014; Keramati & Hoseini, 2008), incentivize learning, build intergroup relationships, and a host of other well-researched outcomes (Baloche & Brody, 2017; Troussas, Giannakas, Sgouropoulou, & Voyiatzis, 2023; Garcia and Jesús, 2023). As an active learning strategy, it plays a key role in developing students' research competencies, problem-solving abilities, critical thinking capabilities, and written communication (Rieg, Lima, Mesquita, Scramim, & Mattasoglio, 2022), and democratic behaviour (Baessa, Chesterfield & Ramos, 2002).

Proponents of the definition of cooperative learning emphasize the active exchange of ideas between small groups and believe that these interactions not only increase students' interest in school and education, but also have an effect on strengthening their social skills and critical thinking (Gokal, 1995). Through this approach, students work with each other in the form of small groups and try to maximize their own and others' learning and achieve mastery in the field of

academic subjects through cooperation and consultation (Onwuebuozie, 2001; Cohen, Ben-Zvi, & Hod, 2023; Keramati, 2007, 2010, 2014; Keramati & Hoseini, 2008). In these conditions, each person feels responsible for the learning of others and tries to both learn and transfer what he has learned to others. As a result, a kind of mutual respect is created between the students (Leighton, 1994). According to Kilim (1994), cooperative learning occurs when in small groups each student helps the learning of another student. According to Slavin (2004), the concept of collaborative learning is a general term. The term *cooperative learning* refers to an approach in which students work together in small heterogeneous groups (usually 4 people) to achieve shared goals, and in addition to being responsible for their own learning, they also feel responsible for the learning of others. Therefore, cooperative learning is not simply placing students in a group to achieve a certain learning goal, but rather an educational strategy that aims to strengthen learning, build trust in others, cultivate critical thinking, create friendship between the two sexes, and pay attention to racial and ethnic differences (Keramati, 2017).

Cooperative learning is based on the theoretical perspective of social interdependence theory. It recommends that when students are interdependently connected, they will collaborate with each other to accomplish their common goal. It also involves the instructional use of small groups so that students work together to maximize their own and others' learning (Johnson and Johnson, 2009). Cooperative learning has two main prerequisites. Tasks need to be structured to ensure students are interdependent and individually accountable as group work does not necessarily mean that members will work together cooperatively (Jolliffe, 2012). Cooperative learning, requires students to work together on a common task, sharing information and supporting one another (Barkley, Cross & Major, 2014) while collaborative learning occurs when students and faculty work together to create knowledge (Matthews, Cooper, Davidson, and Hawkes, 1995). Cooperative learning employs a structured form of heterogeneous teams, keeps individual accountability, promotes positive interdependence, instils group processing, and improves social and leadership skills. Most researchers believe that these components distinguish cooperative learning from other small group or paired learning processes, including collaborative learning (Millis, 2010). Cooperative learning is considered to be the most structured approach to learning in groups while collaborative learning is less structured and more flexible.

Collaborative learning has three basic features: intentional design, co-laboring, and meaningful learning (Barkley, Cross, and Major, 2014). In collaborative learning, it is not up to the teacher to monitor group learning, but rather the teacher's responsibility is to become a member, along with students, of a community in search of knowledge (Bruffee, 1995).

Collaborative learning represents a different attitude to interaction whereby students are given more control over their learning (Gillies & Ashman, 2003). Cooperative learning is more suitable for use with primary school children while collaborative learning is better suited for university students (Bruffee, 1995). Collaborative learning assumes that the university students have previously acquired social skills and the motivation to achieve common goals (Matthews et al. 1995). Bruffee (1995) argues that cooperative learning is perceived as more suitable for initial knowledge construction, while collaborative learning is understood as being better suited for more complex cognitive knowledge acquisition, which requires a critical attitude to learning. However, some scholars today in higher education, including Slavin (2019), use the term *cooperative learning*. Unfortunately, owing to the teacher-centered approach to teaching, students are often resistant to cooperative learning (Abrami, Poulsen, & Chambers, 2004; Gillies & Ashman, 2003). They perceive this approach as an unstructured and unplanned activity that is influenced by cultural, cognitive, and linguistic factors. These data highlighted the need to provide students with more structure and direction for cooperative learning environments and the significance of building intercultural learning opportunities for students to better understand the effect of cultural backgrounds on approaches to cooperative learning in multi-national circumstances (Hennebry and Fordyce, 2018).

In a study exploring students' perceptions of cooperative learning, Volet and Ang (1998) found that both Australian and Singaporean/Malaysian students preferred to work in culturally similar peer groups where group members agreed with each other rather, than challenged their style of thinking. Students highlighted a need for more help to ensure they remained focused and on task. As a consequence, the authors suggested that effective cooperative learning needs substantial planning and organisation. In fact, structured cooperative learning can result in positive learning experiences as perceived in Hänze and Berger's (2007) comparison between a cooperative jigsaw activity, and traditional direct instruction.

Another key consideration in implementing cooperative learning is the academic's role. The role of university teachers is very important in structuring team activities in the classroom. They can facilitate students' interactions (Gillies, 2016), manage group work efficiently in a cooperative classroom (Millis 2010), offer direction and provide constructive feedback on students' activities (Gioiosa & Kinkela, 2022; McCabe & O'Connor, 2014), and create more pleasant learning environments for students (Beckers, Voordt, and Dewulf, 2016). University teachers can simply implement cooperative learning in their classrooms (Millis, 2010), provided they have a clear understanding of what cooperative learning involves. Despite the importance of this issue, our

knowledge in this area is very limited. Even we do not clearly know how university teachers who implement cooperative learning in their classrooms understand it. Do their understandings focus on cooperative learning, collaborative learning, group work, or none of these?

Although students report positively of their perceptions of cooperative learning (Keramati & Gillies, 2021, 2022a, 2022b, 2022c, 2022d; Sakata, Candappa & Oketch, 2021), few studies have reported on the perception of university teachers from diverse cultural backgrounds. The exploration of these perceptions is essential for understanding the university teachers' experiences and developing pedagogies that are more suited to higher education. Moreover, since cooperative learning is increasingly applied in different educational settings ranging from primary school to higher education (Panadero & Järvelä, 2015), more research is required to investigate cooperative learning from different cultural angles so it can be a more active and well-organized mode of learning for all students. Moreover, despite cooperative learning is well documented pedagogical practice that promotes academic achievement and socialization, yet many university teachers struggle with defining and implementing it in their classes (Gillies & Boyle, 2010). In this study we sought to understand what university teachers thought about cooperative learning in Australia and Iran. Indeed, this study sought to answer the following research question:

How do university teachers define cooperative learning in Australia and Iran?

## **2. Research Method**

### *2.1 Participants*

The participants were faculty members in The University of Queensland in Australia and three major public universities in Iran including University of Tehran, University of Shahid Beheshti, and University of Allameh Tabataaee. Most of faculty members taught in the fields of teaching-learning methods, curriculum, educational leadership, and educational psychology. Among the faculty members, university teachers were selected for the present study who had declared that they use the cooperative learning approach in the university classroom and volunteered to participate in the interviews. So, a purposeful selection method was used and the participants were chosen based on the predetermined criterion of being experienced in using cooperative learning in their classrooms. All participants in Australia and Iran worked in the field of educational sciences.

### *2.2 Instruments*

Structured, semi-structured and unstructured interviews have advantages and limitations. Due to the nature of the present study, data were collected through unstructured interviews.

Unstructured interviews are inherently flexible and dynamic and reflect the complex perspectives of interviewees without restriction. The more unstructured the interview, the more likely it is to get lively and spontaneous answers. Unstructured interviews require more expertise and knowledge of the interviewee (Tracy, 2019). In the current study all the interviews were conducted by the authors and were unstructured. Each interview lasted approximately 35 min and participants were asked to respond to the following open-ended question:

- What do you think cooperative learning is?
- In what activities do you remember hearing this term?

All interviews were audio-recorded with the permission of the participants and were fully transcribed. The interviews were conducted in both countries in the office of the faculty members by appointment.

### 3.3 Procedure

In order to avoid any bias and human error, qualitative data analysis software was used. As there was a considerable volume of data, Atlas/ti software was used to code and organize the data. One of the most common strategies for reporting findings is to organize quotations by theme (Tracy, 2019). Therefore, thematic analysis was used to analyse the data. Thematic analysis is one of the useful approaches in the field of psychology and education, which can be used in most research due to its flexibility (Braun and Clarke, 2006, 2019). It is actually an approach for qualitative data analysis and investigation of interactions, groups, situations, organizations or cultures (Boyatzis, 1998). In-depth interviews were conducted in Iran in May, June and July 2019 and in Australia in September, October, and November 2019. An Australian academic transcribed the content of the interviews, and then the authors reviewed the interview file and typed the text several times to minimize possible errors in transcribing the interviews.

Male and female Australian participants were de-identified and given a unique ID number e.g., AMP 1, AFP 2. Male and female Iranian participants were de-identified and given a unique ID number e.g., IMP 1, IFP 2. The authors discussed the research with the participants before the research commenced and after the data were collected. Participants were assured that their personal information was protected. They were required to sign a consent form indicating that they understood the purpose of the study, the requirements for data collection, the protection of confidentiality, and their right to withdraw at any stage. Validation was achieved by having an independent assessor confirm the themes and sub-themes that were identified. Validity is therefore

important as it shows that there is agreement on the coding (Sandelowski, Barroso, and Volis, 2007); the higher the agreement, the greater the validity (Ryan and Bernard, 2003).

#### 4.3 Assurance on translations to English

The data of the current study were collected from two countries with two different cultures and also two different languages. It was a big challenge to convert Persian data into English and also to understand the interviews conducted in the English-speaking country. So, we have taken steps to certify the accuracy of translating the document from Persian to English: one of the authors of the article, who is Persian, translated the text into English. The detailed editing was done by another author of the article who is a citizen of an English speaking country. Interaction between the authors, who were from both English-speaking and Persian-speaking countries, reduced possible translation mistakes.

### 3. Findings

We intended to hear the different dimensions cooperative learning from the language of university teachers in two different countries, and while identifying the differences and similarities, achieve a comprehensive and acceptable definition. Analysis of interview data in the two countries revealed similarities and differences. Participants in both countries emphasized individual responsibility and positive interdependence. However, the differences are significant: Participants in Australia emphasized a shared goal and useful and accurate planning while the participants in Iran emphasized the classroom control and time management. Female participants in Australia focused more on identifying the roles while male participants emphasized a shared goal (Table 1).

Table 1: Total number of times the topic of the interviews by gender in Australia and Iran

| Similarities/differences |                    | Australia |      | Iran   |      | Total |
|--------------------------|--------------------|-----------|------|--------|------|-------|
|                          |                    | Female    | Male | Female | Male |       |
|                          | Exchange of ideas  | 6         | 9    | 8      | 3    | 30    |
|                          | Responsibility     | 16        | 16   | 5      | 11   | 48    |
| Differences              | Shared goals       | 5         | 12   | -      | -    | 17    |
|                          | Novelty            | -         | -    | 3      | 4    | 7     |
|                          | Useful planning    | 3         | 2    | -      | -    | 5     |
|                          | Accurate planning  | 4         | 2    | -      | -    | 6     |
|                          | Time management    | -         | -    | 4      | 2    | 6     |
|                          | Classroom control  | -         | -    | 4      | 3    | 7     |
|                          | Defining the roles | 12        | 5    | -      | -    | 17    |
| Total                    |                    | 46        | 46   | 24     | 23   | 143   |

Figure 1 shows the sub-themes related to the themes extracted from the interview text. In figure 1, the similarities and differences of university teachers' perception of cooperative learning have been clearly revealed. The similarities between the two countries in the definition of cooperative learning are highlighted in green, the unique definition of university teachers in Australia is highlighted in blue, and the unique definition of university teachers in Iran is highlighted in yellow.

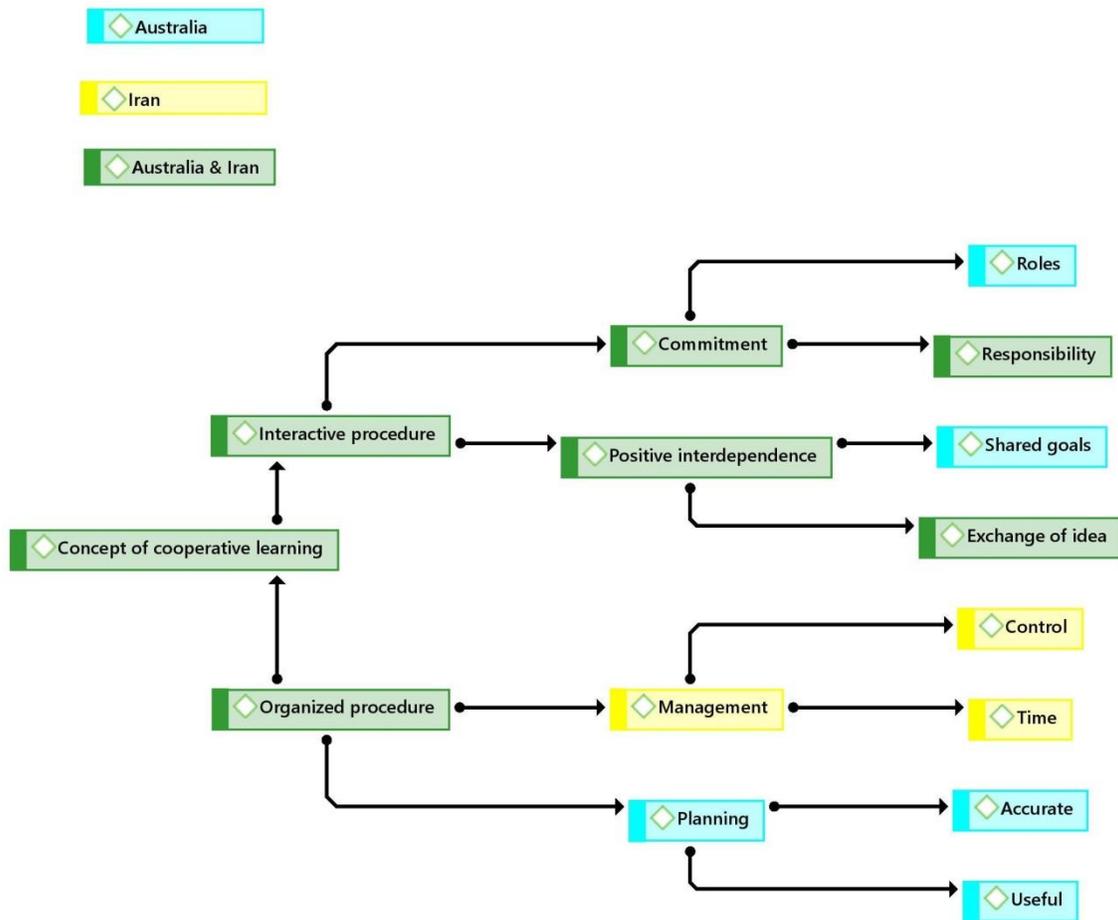


Figure 1. Similarities and differences in definitions of cooperative learning in Australia and Iran

### 3.1 Similarities

#### 3.1.1 Exchange of idea.

Australian participants believed in cooperative learning as there's a lot of interaction and exchange and active construction of knowledge. In this context, many quotes were

obtained from the interviews, which we cannot present all of them here, and some of them are mentioned as examples. One of them noted:

I think what cooperative learning involves is a process of engagement between different participants around a particular issue, so it's about active construction of knowledge as participants seek to build upon one another's understandings of the particular issue (AMP 7).

A female participant explained the difference between cooperative learning and group work with an interesting example:

I have one example that illustrates of how cooperative learning is different from group work. In my course we have an activity in where students in groups of four get something called playdough, which is a thing that you can mould and make things with. Individual students make something that represents knowledge with the playdough and then we start talking about it. Things like, a brain, or a book. These four students have to make something that represents knowledge, but they can only make one thing, so they have to work together in discussing (AFP 3).

Knowledge creation was one of the main components in Iranian interviewees' definition. They used fewer examples and tended to give a short definition. One participant commented:

Cooperative learning means building knowledge through synergy. When you are in a group, you hear different opinions from different people, and while you learn better, you also learn a lot of things and achieve comprehensive learning; because you get to know different angles of a subject. Such learning is more stable and has better applicability in life (IMP 5).

And another participant said:

Through teamwork in the university classroom, different ideas are combined and a new idea is formed. I truly believe that cooperative learning leads to knowledge creation. Because different thoughts can reinforce each other and the production of knowledge is done better. I always say to myself that I wish I had gotten to know this approach sooner because students learn better and more deeply and enjoy the learning process more (IFP 4).

IMP 2 also defined cooperative learning as knowledge sharing.

### *3.1.2 Responsibility.*

An Australian participant defined cooperative learning in terms of individual accountability and emphasized individual ownership:

So for me what that means is each of the students get given, or they decide, they might like to democratically decide and divvy it up as to what component of the goal they would like to have individual ownership of, and the key part is that while they have individual ownership of their particular component, the overall goal can't be achieved if someone doesn't do it (AFP 5).

She continued with great enthusiasm:

Individual accountability and responsibility is really important because for me that's the difference between group work and cooperative learning, so in group work you just get given a task and this isn't necessarily that individual accountability or responsibility whereas in cooperative learning there needs to be that individual component that you're responsible for (AFP 5).

Iranian participants also emphasized individual accountability, but in different terms:

Working in a group with individual responsibility provides a good environment for better learning (IMP 6).

In my opinion, cooperative learning means feeling mutual responsibility and helping each other to learn better (IMP 5).

In interactive environment, students try to learn and teach others (IMP 10).

### **3.2 Differences**

#### *3.2.1 Shared goals*

Although participants' definitions were largely similar in both countries, data analysis showed that their perceptions of cooperative learning as an interactive process were relatively different. Australian participants emphasized a shared goal. For example, AMP 8 said:

Cooperative learning involves a common goal that all students need to work together to accomplish.

Another Australian participant linked a common goal and individual responsibility:

I find that problematic whereas collaborative learning for me is having a common goal for that group that is achieved with each person in that group having their own responsibility for a component that's key for achieving the overall objective (AMP 5).

AMP 6 had a similar definition:

In co-operative learning members will pursue a common goal and they will pursue the goals following the principles of co-operative learning.

### 3.2.2 Planning/management

Australian participants emphasized effective and concise planning in defining cooperative learning, while Iranian participants used the term *time management* and *control class*:

In a way it's a very conscious process. It's not something that just happens; it's something that you do in a very conscious way (AMP 1).

Group work is more of awareness, a gap of understanding of how to use strategies effectively, of course time factors are the most important and planning (AFP 4).

In defining cooperative learning, I emphasize managed interaction. I think time management is very important (IFP 9).

Classroom culture is influenced by the cooperative culture in a society, and cooperative culture is influenced by the culture of democracy. So I think in a democratic society, there are better opportunities to participate in the classroom.

We still need controlled participation in the classroom (IFP 15).

### 3.2.3 Defining the roles

Australian participants believed that equal opportunities and defining the roles increase responsibility. Here are two examples of quotes:

Individual accountability and responsibility is really important because for me that's the difference between group work and collaborative learning, so in group work you just get given a task and this isn't necessarily that individual accountability or responsibility whereas in collaborative learning there needs to be that individual component that you're responsible for (AFP 5).

Because with cooperative learning strategies it is individuals within the group have defined roles so that they are better able to understand what their role in the group is in order to make a contribution. I guess in terms of co-operative learning, it's how the group members actually work together in accomplishing the task, so that they get the desired outcomes (AFP 4).

## 4. Discussion

The current study recognized the similarities and differences of university teachers' perceptions of cooperative learning in Australia and Iran. University teachers in both countries from the faculties of education were requested to participate in the interviews. Those who voluntarily participated in the interview spoke with interest about their experiences and their perception of the concept of cooperative learning. More concepts were extracted from the interviews conducted with participants in Australia. They provided more details in answering the interview questions. Perhaps the reason why participants in Iran responded with short answers to the interview questions is the novelty of this approach for them. In addition, in the definition of cooperative learning, they emphasized classroom management and control rather than creating a

free space for discussion. These perceptions can be explained in the following ways: The first possible explanation is that although they teach in the field of educational sciences in the university, they have not yet been able to completely separate themselves from the traditional teaching-learning approaches. As Sabat et al. (2022) noted despite cooperative learning having established its place as an active learning approach, traditional teaching methods are still used in university classrooms. The second possible explanation provides a different dimension of their perception and considers their definition that emphasizes classroom management to be in line with cooperative learning not collaborative learning. As Millis (2010) and Barkley, Cross, and Major (2014) mentioned, cooperative learning is more structured and probably requires more careful management and supervision. We also see traces of structured cooperative learning in the definition of participants in Australia. Instead of emphasizing classroom management, which is less flexible, they emphasized setting roles and effective and concise planning. In line with this result Jolliffe (2012) believes management and planning are necessary for the effective implementation of cooperative learning and emphasizes two main prerequisites: structured task and individual accountability. Similarly, Hänze and Berger's (2007) believe structured cooperative learning can result in positive learning experiences. Although the exchange of knowledge was also prominent in our study, we believe that more research needs to be conducted to investigate these topics. Moreover, as we are transitioning from traditional methods to interactive methods, we propose that it is better to commence working in groups so university teachers and their students can become familiar with working in groups and begin to reap the benefits ascribed to this approach to learning. The emphasis on shared goals was highlighted by participants in Australia. The shared goal is related to the feature of positive interdependence in social interdependence theory (Johnson & Johnson, 2005, 2009; Johnson, Johnson & Holubec, 2013). In defining cooperative learning as an interactive procedure, university teachers in both countries mentioned two characteristics: exchange of idea, and responsibility. These features are also in line with social interdependence theory (Johnson & Johnson, 2009) that mentions five basic features including positive interdependence, individual accountability, promotive interaction, social skills and group processing (Gillies & Ashman, 2003). As Barkley, Cross, and Major (2014) and Matthews et al. (1995) have also observed cooperative learning occurs when students and faculty work together to create knowledge.

## 5. Conclusion

University teachers' definition of cooperative learning in two different countries has different messages for university teachers and higher education policy makers, especially those dealing with the professional development of university faculty members. Also, summarizing these perceptions and identifying the differences and similarities can help in the development of cooperative learning knowledge in the final conclusion. In the current study the findings of the in-depth interviews with university teachers in Australia and Iran disclose new dimensions to Johnson and Johnson (2009) theory; dimensions such as exchange of idea, planning, and management. According to this, we can identify a new definition of cooperative learning for university classrooms: Cooperative learning is an interactive procedure that involves pre-planned and organised action through which all students have the opportunity to exchange idea to achieve a shared goal and improve their own and others' learning.

This study had three basic limitations: First, the interviews were conducted, partly, in Iran and partly, at the University of Queensland, Australia. The first author's sabbatical at the University of Queensland was limited by time so the authors were unable to collect a more detailed set of data which may have illuminated a wider range of perceptions about cooperative learning. Therefore, higher education policy makers need to consider making more facilities available to educators for cross-cultural studies so future researchers can explore this topic from a wider perspective. Second, although the content of the interviews was transcribed on paper by an Australian citizen, the first author's native language was not English; hence, there may have been some misunderstandings during the interviews. Perhaps, it may have been better to use two interviewers in this situation. Third, we selected only two countries to identify university teachers' perceptions of cooperative learning. More choices can reveal more comprehensive analysis. Researchers who want to follow this issue can study this issue in more countries and compare the results of their studies with the results of the present study.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

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