



Dialogue in the classroom and in a peer-tutoring program: how do we connect and learn in online and face to face spaces?

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University tutorials have been part of course design for decades. Tutorials often promote smaller group discussions, where students collaborate and connect to peers, arguably improving academic outcomes and supporting development of social skills. Since the COVID-19 pandemic, however, many challenges emerged on to how to move towards more cooperative forms of learning, how to support students' connections to a learning community, whilst still maintaining social distancing. This article discusses students' experiences of tutorial sessions implemented prior and after the pandemic, in a first-year course at a Chilean university. Overall results indicate that while there were no significant differences in students' perceptions of learning from tutorials pre and during the pandemic, both groups experienced some opportunities and challenges which are discussed.

Keywords: tutoring; classroom interactions; emergency remote teaching

Introduction

In the past few years, there has been a significant increase in the number of students enrolled in the Pedagogy in History and Social Sciences course. The larger enrolments have been altering the classroom dynamic, decreasing opportunities for meaningful interactions. To address these emergent issues, the course teacher implemented a re-design of the course, which included peer tutorials with a focus on two key dimensions: critical thinking and emotional education.

Tutorial sessions were implemented to two first-year groups of students (hereafter 'tutored students') and involved student tutors selected from upper grades. This article discusses students' experiences from these two peer tutorial interventions with students in Education, and the potential of these interventions in relation to their effectiveness for promoting active and cooperative approaches to learning (Johnson & Johnson, 2018) among students of similar ages. Due to the COVID-19 pandemic, we were able to contrast the tutorial program in its online version and the face to face version. A number of digital tools were used during the courses, including a learning management system (Edmodo), presentation tools such as PowerPoints, YouTube clips, as well as tools used by students to compose their work (e.g. Padlets, Google Docs, and others). In addition, online tutorials used conference call software (Zoom).

This research seeks to contribute to the educational research with a focus on active and developmentally focused learning for life (Watson, 2004). The following questions guided the research: what are the effects of participating in a peer tutoring intervention from the point of view of its actors; and what challenges are observed between face-to-face and online peer tutoring?

Literature review on tutorials

In this article, the concept of peer tutoring implies a relationship between students, with one taking the role of 'a tutor' and the other of 'being tutored'. Underlying this relationship is an element of cooperation in which students of similar ages are supporting each other during the learning process, and therefore tutorials can be considered as a type of cooperative learning (Johnson, 2003). This pedagogical strategy is supported by the theory of social interdependence (Deutsch, 1949), which postulates that when goals are structured with others in a cooperative manner, motivation to achieve them increases. Furthermore, the literature suggests the existence

of a strong relationship between cooperative and active learning, in that the latter establishes opportunities for dialogue, where students share and build on each other's understandings of a topic, and jointly make decisions about their learning process (Johnson & Johnson, 2018). Cooperative learning can also be aligned with socio-constructivist theoretical approaches, particularly as it creates dialogic spaces for knowledge co-construction, promoted by both the peer-tutor and the peer-learner. Knowledge co-construction can also be related to Vygotsky's (1978) notion of the "zone of proximal development", where someone's mediation might support a learner's transition process, from an initial point towards their learning potential.

There are various approaches to tutorials. Some tutorial designs contemplate the teacher as a peer guide, while others focus on students of the same or close age (Borrero, 2008; Schwille, 2008; Webb & Mastergeorge, 2003). The latter approach has gained momentum in the past few years, given that positive effects have been identified by several researchers. Comparative research has reported increased richness in peer interaction with improvements in learning processes, and in positive affective attitudes linked to learning (Andreucci & Curiche, 2017; Moliner & Alegre, 2020; Provencio et al., 2018; Torrado-Arenas et al., 2016). In addition, more authentic and personalized guidance has been associated with a peer guided process (Cassany, 1999). As Alzate-Medina and Peña-Borrero (2010) point out there is great merit in tutorials, as they pay particular attention to one's needs. Meta-analyses conducted more than four decades ago also identified positive effects for both, the tutors and the tutored (Cohen et al., 1982). Evidence shows that learning mediation is more effective between students who are close in age – as these students are likely to share similar understandings of life processes, where the tutor might have gone through comparable experiences in recent times (Bowman-Perrott et al., 2013), but also because there is greater horizontality in the relationship between these two (Good & Brophy, 1997). In general, an increase in students' motivation towards studying is reported, as well as better academic performance (Alzate-Medina & Peña-Borrero, 2010). Drawing on the above literature, this research adopts a definition of peer tutoring as a teaching-learning strategy that consists of bringing together students of similar ages to accompany their peers in the development of certain disciplinary content over time. A key element to the peer tutoring described in this paper involves understanding the roles acquired and performed by students of similar ages, and the opportunities for connections between peers that these roles create.

Methodology

The research employed a qualitative design whilst seeking to understand the meanings of the peer tutoring process for the participants themselves, and from there, to interpret possible relationships between their experiences and learning, from the perspective of the actors themselves (Merriam & Tisdell, 2015). That is, the focus was not on measuring specific learning outcomes, or particular factors, but on understanding students' experiences that may be associated with active learning approaches, after the re-design of the course adopted opportunities for peer tutoring.

Research context and participants

A total of 81 students took part in the project conducted during 2019 and 2020. In the first year (2019) 34 students, and in the second year (2020) 31 students of the Pedagogy in History and Social Sciences course participated in the project, as tutored students; in addition, 16 tutors were selected from cohorts of higher courses at the same degree. The sample of participants was selected according to an intentional or opinionated criterion (Scharager, 2001) as we worked with two cohorts of students and the group of tutors. Tutors were volunteers, with criteria for inclusion based on motivation and having taken the course previously.

Design of the tutorials

The design of the project contemplated 4 stages in 2019 (face-to-face mode) which were repeated and adapted during 2020 to the online mode, due to the COVID-19 lockdown restrictions. These included: 1) content design; 2) training of tutors; 3) implementation of tutorials; 4) feedback meetings between the teacher of the course and tutors. Training sessions for tutors were carried out prior to the beginning of the course by the course teacher, and included information about characteristics of tutorials, expected learning and a content guide developed from the literature review. In addition, practical sessions were incorporated in which active interaction for peer tutoring was modeled. Tutors-in-training then applied these modeling strategies and received feedback.

Data collection and analysis

A metacognitive form gathered feedback about the intervention at the end of the course, which included tutored and tutors' perceptions about the experience. The form included open questions such as: What did you learn during the tutorials; How did you feel during the tutorials; What strategies used during the tutorials would you replicate in your pedagogical practice; What were the main strengths and weaknesses of the tutoring workshop to support your learning; as well as a short survey.

A total of 81 metacognitive data points were analyzed, 16 corresponding to tutors and 65 to the tutored students. Data was processed through a content analysis technique, using Atlas-ti software, from which the information was coded and grouped into three main categories: cognitive development and pedagogical training; social dimension of learning; differences between the face-to-face and online modalities. This process allowed us to search for, and infer, the main components of their tutoring process experience (Bardin, 1986). Data collection and analysis also included a review of students' contributions via published posts in the Edmodo forum (the learning management system used in the course), as well as reflections made by tutors each week. There was a dedicated online space where participants were prompted to reflect on their experiences:

In this space you can include the experiences lived during the tutoring session. You can be guided by the following questions, as well as include other experiences: How did you feel, what would you keep/what would you modify from the process, what caught your attention, etc. Along with this, the ideas pointed out by the tutors in the meetings held between the teacher and the tutors during each week of the peer tutoring strategy, both in face-to-face format in the first year and in online mode in the second year, were considered.

Ethics

Ethics clearance for the conduct of this research was obtained in accordance to regulations in the human ethics committee at the university hosting this research. Pseudonyms are used for all participants in this research.

Results and discussion

Students raised many interesting aspects, but in this paper, we explore three main themes that emerged during the analysis: cognitive development and pedagogical training; social dimension of learning; and differences between the face-to-face and online modalities. Related to the first theme, content analysis revealed repeated occurrences associated with self-regulation of learning, such as planning, time management and monitoring (Bruna et al., 2017) for both tutors and tutored. As Florencia pointed out 'the tutorials gave me structure and order to my readings, and the process of discussing them helped my understanding and retention of the contents' (face-to-face tutored student, 2019). Similarly, Amanda noted 'I learned to organize my reading times and different ways to internalize knowledge from the readings' (face-to-face tutored student, 2019). Rocio also indicated 'I learned to manage my times better' (face-to-face tutor, 2019). In terms of content, participants indicated that they managed to acquire new knowledge in general and all students in both face-to-face and online tutorials considered the level of achievement between 'very good' and 'good' for content learning. Specifically, they detailed conceptual learning associated with socioemotional education and critical thinking. As Rocío indicated 'I learned the theoretical knowledge delivered by the texts regarding critical thinking and socioemotional education' (face-to-face tutor, 2019).

In terms of the social dimension of learning, students highlighted that there were more spaces for dialogue, conversation and collective learning. As Andre's pointed out 'the main strength is collective learning' (online tutored student, 2020). A greater possibility of asking questions, debates and discussions during tutorials, and activities associated with peer interaction such as shared readings, concept mapping and feedback processes were also raised as effective to promote dialogue. As illustrated in the following remark by Andrea 'I loved the development of dialogue or discussions around a common reading, because that way I learned or acquired knowledge, by the tutored and I would like to replicate it' (face-to-face tutor, 2019); and Javier 'I learned to link the content of the readings to a daily and pedagogical praxis, thanks to the communication and exchange of ideas with my group' (face-to-face tutored student, 2019). Students also pointed out that that 'there was a more informal and trusting relationship' (online tutored student, 2020) and Fernando remarked: 'the simple fact of learning based on experience is very gratifying, it leaves a feeling that we have done something good, because we all learn, more than I deliver and teach a content, I learn from them with each of their interventions or criticisms, in short in a reciprocal learning' (online tutor, 2020). As such, these participants identify the tutoring sessions as an instance of horizontality that made reciprocal teaching possible (Palincsar & Brown, 1985).

Within this fluid interaction between tutor and tutored students it becomes possible for them to elaborate, expand or clarify ideas that have been pointed out in a faster way, and consequently, to engage in learning opportunities that seem to have greater relevance, based on feedback response through a dialogic process, which according to Howe et al (2019) is a type of interaction that promotes learning. This is mentioned by Ignacia, as she pointed out ‘maintain a much more fluid dialogue, allowing not only that they can participate when asked, but also that they can interrupt when they feel it is necessary’ (online tutor, 2020). Finally, the participants emphasized that through dialogue, it is possible to better situate the content to their concrete and personal experiences, which supports the anchoring of the constructs. In the words of Andrés, the tutorials created opportunities for ‘sharing personal experiences related to education and the texts discussed’ (online tutored student, 2020). The social dimension of learning is not just about what is learned, but how the learning interaction takes place, and so, it is important that the learning process encourages socially constructed conversations with others (Brown & Adler, 2008). This suggests that context and the affordances of certain spaces over others might be relevant, such as aspects related to interpersonal, social, material, historical and cultural mediation. Peer tutoring involves organizing actors, in a context of greater horizontality and closeness, which seems to respond to many of the aspects highlighted by social learning.

As Goodyear et al (2021) remind us peer tutoring learning activity is epistemically, physically, and socially situated. Material and digital tools, together with epistemic and social elements, are all part of an assemblage that contributes to influence learning processes (Goodyear & Carvalho, 2014). Understanding how these various design elements influence emergent learning is extremely important, particularly since the pivot to online modalities after the pandemic. In terms of the differences between the face-to-face and online modalities, while online technologies may contribute to the continuity of learning, it became apparent that the online modality requires specific design, and what is set for a face-to-face class may not necessarily work in an online space. The pandemic impacted the design of our tutorials challenging what had initially been planned as a face-to-face implementation in 2019 and required re-design and adaptation. Participants in the first version of the project did not report facing specific technological difficulties, and they did not comment on digital tools, perhaps as digital tools were recognized as part of an effective and playful pedagogical strategy. In contrast, the use of digital tools in the online version were more overtly pointed out. These included digital tools such as roulettes, Wordwall, PowerPoint, Padlet, Zoom and Mentimeter, which were highlighted by the students. For example, Fabiola pointed out that ‘without a doubt I would replicate the activities carried out with the Wordwall platform. I found it to be an excellent platform and ideal for use in this virtual context. In addition, its templates favor a more didactic and playful development in the classes’ (online tutor, 2020). Hernan remarked that ‘I think I would include these (technological) forms to my pedagogical practice, because it is different to the conventional form of classroom with the teacher only as a narrator and without response’ (online tutored student, 2020). And Ximena added that ‘the strategies used during the tutorials are all replicable in my future pedagogical practice, learning to use tools such as Zoom, Mentimeter, interactive whiteboard, Wordwall, are perfectly more dynamic strategies for a future in face to face and in my future work as a teacher’ (online tutor, 2020). Nevertheless, there were also challenges experienced by both groups of students. Barriers observed in the online modality were linked to student participation, which possibly indicates that the online modality requires greater commitment and internal motivation from students (Ryan & Deci, 2000), but also that the introduction of new tools can add uncertainties about Internet access and connectivity, whilst people also are dealing with remoteness and isolation (Green et al., 2020). As a Fabiola told, ‘sometimes, I felt a strange sensation when they did not turn on their camera...it is incredible how much the black screens affect [us]’ (online tutor, 2020). Challenges related to the face-to-face format related to noise and a lack of dedicated space. Cristian suggested that a major issue was ‘the noise of the room as it created a lot of noise (do to the room) being so small’ (face-to-face tutored student, 2019). Similarly, Juan pointed out that ‘better silence [could have been] achieved between groups, and a room enabled with better spaces would be ideal’ (face-to-face tutored student, 2019).

Conclusion

There are multiple current challenges in teaching and learning in higher education. Some of them include how to encourage active learning and promote students’ meaningful connections to a learning community, which have been arguably hindered since the recent increased numbers of students at the university level in Chile (Organization for Economic Cooperation and Development, 2019). In this paper, we discussed the implementation of peer tutoring, suggesting that participation in both face-to-face and online modalities, have allowed students to develop aspects of their identity as future teachers, which not only are grounded on active learning, but also foreground more collaborative and situated learning experiences (Brown et al., 1989; Johnson & Johnson, 2018). The tutorials encouraged students to connect to peers, to participate in co-construction of knowledge and to engage in self-regulation processes, overall creating a positive atmosphere to influence their learning journeys beyond the traditional teacher-centered modes of teaching and learning.

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