

Reciprocal peer tutoring in an emergency remote teaching course: examining its impact on university students' social-emotional and cognitive learning needs

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Abstract

Peer tutoring as an educational strategy has not been widely recognized at Polish universities so far. Little attention has been given to the connection between peer tutoring and the affective domain of learning. Also, the current teaching pedagogies prioritize cognitive learning outcomes over social-emotional learning outcomes. The period of emergency remote teaching caused by the Covid-19 pandemic brought forward the role of social-emotional learning needs. The present study aims to contribute to the discussion on the types of peer tutoring and the modes of their delivery complementary with the Polish system of higher education. Thus, the investigation offers an insight into the perception of the impact that online peer tutoring has on the learning process of the English Department students. The purpose of the study was thus twofold: to find out the effects of an online reciprocal peer tutoring strategy on the students' social-emotional learning, and to investigate the relation between online reciprocal peer tutoring and the students' perceived gains in knowledge. The research revealed that online reciprocal peer tutoring has a potential to be a beneficial instructional strategy for both remote and face-to-face university courses.

1. Introduction

The sudden widespread launch of remote teaching triggered by the Covid-19 health crisis contributed to the degeneration of the relationships between academic teachers and students. As positive relations between these two groups constitute the essence of tutoring, the weakening of these ties resulted in the diminishing role of tutoring in lesson planning. In addition, selected means of content delivery turned out not to fully comply with the model of remote education which affected tutoring as well. As observed by Liu et al., (2021, p. 2) “higher education was severely disrupted as courses moved online (with varying degrees of success), campus life grinded to a halt, formative personal and intellectual experiences were snatched away”. Thus, social distancing stripped academia of what lies at its core i.e. a vibrant life and direct interaction between students and professors.

An abundant number of reports confirmed negative effects of isolation on students’ social and emotional wellbeing and in consequence on their learning (see e.g. Browning et al., 2021; Camacho-Zuñiga et al., 2021; Kohls et al., 2021, Visser, 2021, for a review). This, in turn, contributed to deficient achievements of both cognitive and social-emotional learning outcomes. At the same time, social-emotional learning (SEL) was defined as the primary area of concern (cf. Plakhotnik et al., 2021) in the time of the pandemic. A survey conducted by Barnes & Noble College Insights (Barnes & Noble Education, 2020) revealed that 55% of college students in the U.S. expressed their concern over the lack of social integration. The students stressed that collaborative learning with peers helps them learn better. In the same vein, the report on the remote teaching at the Pedagogical University of Cracow (Długosz, 2020, pp.34-36) revealed that students prefer means of communication that include learning in real time via an online platform (48%) rather than being sent out course materials for self study (1%) or pre-recorded lectures for self-paced learning (5%). This clearly reveals the students’ need for academic interaction, personal contact and communication with instructors and fellow students.

Although studies have recognized the value of personal face-to-face communication in meeting social-emotional learning outcomes, research has yet to systematically investigate the effect of peer tutoring delivered exclusively in an online mode. In light of this, the present inquiry aimed to evaluate the usability and applicability of reciprocal peer tutoring in an online course. The investigation was conducted during the third term of remote instruction period (winter semester 2021) and aimed to investigate the effects that reciprocal peer tutoring might have on the students’ social-emotional and cognitive learning. As the mode of delivery for both the tutoring session and

its evaluation was online, it allowed for an immediate insight into students' reactions. These were measured with reference to the students' perceived level of satisfaction with the peer tutoring task, motivation, self-efficacy and gains in knowledge.

2. Beginnings of university tutoring

Tutoring as an instructional strategy dates back to 400 B.C. in Ancient Greece. The first tutors are considered to be Aristotle, his tutor Plato and Plato's tutor Socrates (Tessmer, 2009). Socratic teaching revolved around shaping the curiosity of the tutees rather than providing them with ultimate answers and factorial knowledge. Socrates was known for confusing and stunning his interlocutors with questions that meant to ignite their curiosity (Nails, 2020). As pointed out by Mintz (2014) in the *Plato's Apology of Socrates*, Socrates denies that he was a teacher, thus distancing himself from the traditional education of his times. In contrast to the then current teachers he did not make money out of the educational activities he practiced nor was he the transmitter of knowledge to the predominantly receptive tutees. Instead, he assisted the students in the journey of discovery the truth by means of questioning. This new school of education laid grounds for the future development of academic tutoring.

University tutoring itself traces back to the 11th century when the first European universities such as the University of Bologna, the University of Paris and the University of Oxford were founded. These educational establishments were run as self-governing corporations of students and masters (Britannica, 2021). The relationships between these two were initiated by a student. The student selected his master on the basis of his personal criteria. Then, the master would put together a course of study for the student while the student would attend the master's lectures for up to four years of study. As observed by Grant (1996, p. 39) these "master-student clusters allowed for more personalized relationships within the more formal and perhaps forbidding institutional structure of the university as a whole". The two main forms of academic instructions included the lecture (*lectio*) and the disputation (*disputatio*). The lectures were less interactive, though they still involved commentaries of the texts under study. The ensuing disputations were student-centered and the students were the leading participants.

A further distinction on the types of tutorials recognizes between *disputatio ordinaria* and *disputatio de quolibet*. The first type of disputation was organized weekly and attended by the academic community of students and masters. It was structured according to the procedure which would begin

with a question posed by a master and followed by with a discussion of other faculty members and students who were encouraged to argue and oppose. The latter type of disputation was held once or twice a year. The audience were responsible for the direction of the disputation, whereas the lead master did not know what questions would be asked and elaborated on (Lawn, 1993; Schwinges, 2003). Consequently, the disputations were perceived as an essential aspect of university education which created a unique relationship between the student and his master. The important role of the tutor and the impact he had on the student's life resulted in the fact "that graduates would often only mention who they studied under, rather than which university they attended" (Antalffy, 2020, page not provided).

Although tutoring entered the English university of Oxford as early as the 11th century (Moore, 1968) it was not until the 1800s that the tutoring system, as an officially recognized teaching mode was established at the University of Oxford and later at the University of Cambridge. In the mid-1880, Henry Newman, an Oxford academic, gave a series of lectures on the purpose of university. Newman saw its value in the mark the education leaves on a student, the dominant role of teaching over research, and an impact that the community of students has on individuals seeking broader education. This attitude paved the way to a more personalized and individualized learning and teaching approaches (Lochtie et al., 2018). The form of a tutoring system that is currently recognized in academia originated in 1882 and is rooted in the Socratic teaching pedagogy practiced by professor Benjamin Jowett from the University of Oxford (Markham, 1967 in Balwant & Doon, 2021). The early tutorials drew from the Socratic method in which students were engaged in discussions. That approach not only promoted gains in knowledge but also utilized independent thinking and enhanced the strategies of critical-thinking and problem-solving. Nowadays, the Oxford tutorial is still regarded as exemplary for its genre of instruction and is considered by some as the 'jewel in the crown' (Palfreyman, 2008, p. 15).

A uniform definition of tutoring is not easy to formulate as the models of tutoring have changed over time. This was caused by the transformations in the structure of universities, their mission and the then current key teaching pedagogies. The increasing number of students referred to as 'massification' of education (Hornsby & Osman, 2014) and cuts in fundings challenged the traditional tutorial that included communication of one-to-one or one to a handful of students. Following the new demands of the university system a series of accommodations to the traditional tutoring have been introduced over the years. These alterations include, among others, the application of peer tutoring along with information communication technologies. There-

fore nowadays, tutoring is less coherent and structured and does not form the core of university instruction. Instead, it seems to be “separated from the mainstream delivery of the curricula” (Lochte, et al., 2018, p. 3). In order to arrive at a working definition for tutoring as of the 2000s, Balwant and Doon (2008) performed a scoping review to explore available alternatives to the Oxford tutorial system. The models under scrutiny recognized, among others the application of ICT, peer instruction, collaborative learning, communication systems, and tailored learning. The overview concluded with the definition of tutorials as “personalized and student-centered small group sessions that provide a safe space for deeper engagement with the subject area in order to develop important skills and abilities that are targeted by the course” (2008, p. 3). Interestingly, peer tutoring was found to be the most favoured alternative to the Oxford tutorial.

3. Peer tutoring

As observed by Berghmans et al. (2012) peer tutoring is one of the most frequently implemented formats of peer assisted learning. It is defined as “an instructional strategy that employs peer interaction for the purpose of teaching and learning” (Ginsburg-Block, 2010, p. 1183). Several features typical of peer tutoring approaches can be distinguished. These include ‘specific’ role-taking as tutor or tutee, same age or cross-age grouping, targeted or whole class tutorials, reciprocal or one way interactional model, same or mixed-ability grouping, objectives (cognitive or social-emotional gains) and length of the intervention (Topping, 2005). Following the classification by Hott and Walker (2012) *classwide tutoring* is the most frequently used form of peer tutoring. In this model more advanced students are paired or grouped with their less advanced peers. Students take turns and alternate the roles as tutors and tutees or both and follow a highly structured procedure. Student pairings can be fluid and reflect their achievement level and mutual rapport. *Peer Assisted Learning Strategies* (PALS) is considered to be either a version of classwide tutoring or a supplemental peer-tutoring programme (U.S. Department of Education, 2012). This peer-mediated instruction was developed at Vanderbilt University (ref. The Fuchs Research Group, 2019) and is characterized by a structured set of activities in reading or maths that students perform in pairs. Students take turns and act as a tutor or a tutee. The pairing is based on the teacher’s judgment of the students’ abilities and skills. Most frequently, the student who needs some support is paired with a student who is willing to offer them some assistance and help. Thus, the programme aims to serve students with varying academic needs as well as learning disabilities.

The next type of peer tutoring is referred to as *cross-age peer tutoring* and is characterized by a stable grouping in which older students work with their younger peers. Their achievement levels may be similar or vary to some degree, and the roles of the tutor and the tutee are assigned to them and do not alternate. Older students are tutors while their younger peers undertake the role of a tutee (Gautrey, 1990). Tutors serve as role models not only in the area of content knowledge but also study habits, and classroom behaviour (Leland & Fitzpatrick, 1993). In addition, the positive effects in academic performance and attitudes were observed for both tutors and tutees (Cohen, Kulik, & Kulik, 1982 in Gensemer, 2000).

There is also *reciprocal peer tutoring* (RPT) in which students of the same academic background cooperate in pairs or groups and alternate their roles as tutor and tutee during each session. High performing students are often grouped with low performing students. This format includes the use of structured teaching materials, stresses monitoring of students' answers as well as reciprocal evaluation and encouragement among peers (Gazula, et al., 2017; Svellingen et al., 2021). In sum, peer tutoring utilizes a student-centered approach and promotes and strengthens collaborative learning which is reciprocal in nature.

As reported by (Topping, 1996) the first study on reciprocal peer tutoring was published by Goldschmid and Goldschmid in 1976. This involved a trial in three different learning conditions: in a teacher-led group, independent study and peer tutoring group. The peer tutoring group exceeded the remaining two groups at the post-test and revealed a high level of satisfaction with the learning experience. A similar study by Fantuzzo et al. (1989, in Topping, 1996) was administered to students majoring in psychology who were divided into three experimental groups: reciprocal peer tutoring, questioning and the control group. Students placed in a peer-led group reciprocated their roles in creating tests and administering them to each other, scoring and giving feedback. The questioning group students were tasked to design the tests, but did not administer or feedback on their results, while in the control group the students were to watch the instructional video and answer the questions related to its content. When final examination scores were compared, the reciprocal peer tutoring group obtained significantly better results than the other two groups. Additionally a significant improvement was observed in reference to students' satisfaction with this task, while the distress indicators were reduced.

Recent studies on reciprocal peer tutoring in higher education report on its positive effect on the learners' experience. A systematic review of the role of reciprocal peer tutoring (RPT) in the education of health professionals

(Gazula et al., 2017) revealed that most authors used RPT as a main teaching method rather than supplementary activity. The justification for the use of RPT included its application to the particular medical training, assessment of academic progress, transfer of skills from theory to practice (clinical setting) and developing non-technical skills. The generic non discipline-specific benefits included gains in knowledge and skills, improvement in communication and collaborative work, as well as enhancement of independent learning and problem solving skills. These are in line with the observations of Svellinggen et al. (2021) derived from the peer tutoring intervention in nursing. Students worked in groups of four and alternated the role of a facilitator (tutor), a patient and an observer in student-lead simulations. The results of the study reported on intellectual gains and personal growth. Student-tutors pointed to their increase in motivation and confidence. The participants described this activity as both challenging and enjoyable and providing a safe learning environment.

The data collected from the Teacher Training Programme in primary education (Miravet et al., 2014) offered an insight into the impact of RPT on students' self-concept and attitude of solidarity. The peer tutoring activity rose the students' self-awareness of being useful and capable of utilizing teaching skills. This also contributed to an increase in their confidence level, and general satisfaction with the educational experience. When the factor of solidarity was analyzed it revealed that the activity allowed the students to build closer bonds with their peers, which in consequence contributed to a faster progress in the subject matter. In addition, the peer tutoring task created a comfortable and safe learning environment. This encouraged students to ask questions and lessened the fear of being judged and criticized for not measuring up. Finally, collaborative learning setting in which students could interact with each other was reported to have increased their motivation.

To conclude, tutoring as an instructional strategy has been present in academia for centuries. However, its use and degree of application into a lecture room have fluctuated over time. All the alterations in how tutoring is conceptualized and used reflect the changing priorities of higher education. Nowadays, remote and blended teaching pose another test to tutoring. The new educational setting might potentially direct further research into validating the existing types of tutorials against their functionality in distance teaching as well as diagnosing the gaps in social-emotional learning needs of tutors and tutees in face-to-face and remote learning.

4. Research aims and Rationale

The aforementioned studies on a negative impact of remote teaching on the students' social-emotional and cognitive learning led to the primary purpose of the present study. Namely, to investigate benefits and limitations of online reciprocal peer tutoring in meeting the students' learning needs. The study also contributes to the discussion on the role of peer tutoring as a student-led instructional strategy in a university course. It is to be stressed that tutoring models have just started to be revised and implemented in the Polish institutions of higher education as a part of the governmental programme Masters of Didactics (Brdulak et al., 2019). Till then, tutoring was not institutionally recognized as an instructional strategy. Interestingly, the models which are implemented now are teacher-led with one-on-one instructions. Peer tutoring as a form of collaborative learning has not marked its place in the Polish academia yet.

Finally, although online tutoring services have been a part of the US system of higher education for some time now, they have not been widely available at Polish universities so far. The first asynchronous online services were offered in the US in mid 1990s by Paradise Valley Community College via a discussion forum (WebBoard), while the earliest synchronous sessions were available through the NetTutor for Math system operated at Utah Valley State College (Turrentine & MacDonald, 2006). The sessions were tutor-led, offered at one-on-one basis and focused on knowledge building. Over time, the tutoring centers started to offer other types of tutoring services including peer tutoring sessions through university units such as Learning Centers, or Reading Centers. In the absence of systemic online tutoring programmes at Polish universities, the present study offers a validation of online reciprocal peer tutoring as an instructional strategy that might foster social interactions and contribute to gains in knowledge.

5. Method

A cross-sectional study was conducted at the Department of English at one of the Polish universities. A questionnaire was designed to assess the views of students who participated in an online reciprocal peer tutoring session. A 5-point Likert scales were used to grade responses and collect quantitative data while the corresponding open-ended questions collected qualitative data. Three of the Likert scales were bipolar and one was unipolar. To allow for the use of interval scale the response items were matched to values 1 to 5.

5.1 Participants

The research sample comprised 27 students enrolled in the MA programme in English. The ratio of male to female students was 7:20. They were in the first year of a two-year masters programme in English and majored in either TESOL or Translation studies. At the time of data collection the students were closing their winter semester and learning online for a year due to the compulsory closure of the campus resulting from the Covid-19 pandemic. The peer tutoring activity was integrated with a 30-hour course on Academic skills in which the students were instructed in two separate groups of 17–18 students. The students were informed that the peer tutoring activity and a follow-up survey constitute a research project therefore by filling in and submitting the online survey they expressed their consent. In total, 27 students out of 35 returned the survey.

5.2 Instruments

There was one self-assessment questionnaire used in this study (see Appendix 1). The survey was conducted on the completion of the reciprocal peer tutoring session. It examined the students' perceptions on the following four measures: *Reactions*, *Motivation*, *Self-efficacy* and *Gains in knowledge*. The *Reactions* measure assessed the students' level of satisfaction from the participation in this reciprocal peer tutoring session. The *Motivation* measure assessed the students' level of motivation during the activity, while the *Self-efficacy* measure assessed the students' confidence in the successful completion of the task. The last measure i.e. *Gains in knowledge* determined to what extent the task helped the students master the content knowledge. Thus, the survey consisted of four closed-ended questions and six open-ended questions. The closed-ended questions used a 5-point Likert scale while the open-ended questions asked about positive and negative aspects of this instructional strategy. Social-emotional learning outcomes that is *Reactions*, *Motivation*, and *Self-efficacy* were measured with both closed-ended questions (*How* questions) and a corresponding open-ended questions (*What* questions). *Gains in knowledge* were measured with a closed-ended question.

5.3 Study design and procedure

The current design of the study is a conceptual replication of an earlier study by one of the authors (Łodej, forthcoming). Both studies investigate the effects of tutoring on university students' emotional learning needs. However, in contrast to the previous study the current one looks particularly at reciprocal peer tutoring, both social-emotional and cognitive learning needs and targets students enrolled in the masters programme who study remotely. In detail, the study aims to identify the interplay between the use of recipro-

cal peer-tutoring and the students' social-emotional and cognitive learning needs. The purpose of the study was thus twofold i.e., to find out the effects of online reciprocal peer tutoring strategy on the students' social-emotional learning, and to investigate the relation between peer tutoring and students' perceived gains in knowledge. To achieve this aim, the following research questions were formulated:

1. To what extent does online reciprocal peer tutoring meet university students' social-emotional and cognitive learning needs?
2. What are the positive and negative outcomes of the application of reciprocal peer tutoring to an online course in reference to social-emotional learning?

The students collaborated on an online platform which allowed face-to-face communication in real time. They met virtually in the out-of-class time. Prior to the session the students were briefed on what the study is about and were advised to work in mixed ability groups of five students. Also, they were informed that their task is to give feedback on each other's written assignment in order to better its quality prior to its final submission for grading. The assignment required them to write a summary of a research article which would include all citation types that have been covered in the course. As the sessions were scheduled in an additional time, the students decided how long the meeting would last. After submission of their individual assignments for grading they were sent the self assessment survey for completion.

5.4 Results

In this study a descriptive statistics and Spearman's Rho correlation were used to determine if there were significant differences between the measures, that is, *Reactions*, *Motivation*, *Self-efficacy* and *Gains in knowledge*. The descriptive statistics was carried out to calculate the means, standard deviations and ranges for all four variables (see Table 1).

Table 1. Means and standard deviations of total sample (n = 27) on Reactions, Motivation, Self-efficacy and Gains in knowledge

	Social-emotional learning needs			Cognitive learning needs
	Reactions	Motivation	Self-efficacy	Gains in knowledge
M	3.89	4.07	3.52	4.22
SD	0.58	0.55	0.70	0.64
Minimum	3	3	2	3
Maximum	5	5	5	5

The data obtained from the descriptive statistics revealed that the mean score for *Gains in knowledge* (4.22) was the highest while for *Self-efficacy* (3.52) was the lowest for the combined category of social-emotional and cognitive learning needs. For variables listed under the category of social-emotional learning needs depicted the highest mean score for *Motivation* (4.07), the medium mean score for and *Reactions* (3.89), and the lowest mean score for *Self-efficacy* (3.52). Whereas standard deviation value for *Reactions* was 0.58, for *Motivation* 0.55, for *Self-efficacy* 0.70 and for *Gains in knowledge* 0.67. Figure 1 illustrates the distribution of mean scores in the sample allowing an insight into a general profile of the researched group of students.

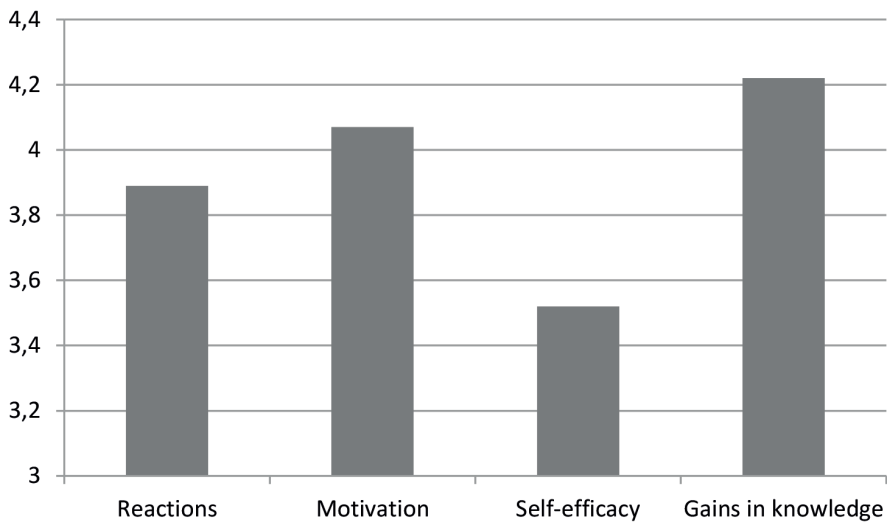


Figure 1. Mean scores of Reactions, Motivation, Self-efficacy, and Gains in knowledge

Next, the Spearman's Rho correlation (r_s) was used to investigate the relationship between the pairs of variables and the strength of this association. Table 2 reports the scores with reference to r_s value of the sample.

Table 2. R_s values for Reactions, Motivation, Self-efficacy, and Gains in knowledge

	Reactions	Motivation	Self-efficacy	Gains in knowledge
Reactions	1.000	0.371	-0.334	0.174
Motivation	0.371	1.000	-0.073	0.261
Self-efficacy	-0.334	-0.073	1.000	0.181
Gains in knowledge	0.174	0.261	0.181	1.000

Following Hopkins et al. (2009) the strength of positive and negative correlation is very weak for $r = 0.00-0.09$, weak for $r = 0.10-0.29$, moderate for $r = 0.30-0.49$, strong for $r = 0.50-0.69$, very strong for $r = 0.70-0.89$, and perfect for $r = 0.90-1.00$. The data showed that there was a moderate positive correlation between *Reactions* and *Motivation* ($n = 27$, $r = 0.371$, $p = 0.056$) with a p-value close to the level of statistical significance. Also, the correlation between *Reactions* and *Self-efficacy* reached the level of moderate correlation ($n = 27$, $r = -0.334$, $p = 0.087$). However, this correlation was negative. The weak correlation was observed between the remaining variables. There was a weak positive relationship between *Reaction* and *Gains in knowledge* ($n = 27$, $r = 0.174$, $p = 0.384$). Also, a weak positive relationship was observed between *Motivation* and *Gains in knowledge* ($n = 27$, $r = 0.261$, $p = 0.187$). Contrary, there was a weak negative relationship between *Motivation* and *Self-efficacy* ($n = 27$, $r = -0.073$, $p = 0.714$). Finally, a weak positive correlation was observed between *Self-efficacy* and *Gains in knowledge* ($n = 27$, $r = 0.181$, $p = 0.365$).

The quantitative analysis of the data was followed by a qualitative assessment of positive and negative aspects of reciprocal peer tutoring in reference to the students' social-emotional learning needs. The students' responses were grouped according to the main variable and its type. This resulted in the emergence of six categories: *Reactions (positive)*, *Reactions (negative)*, *Motivation (positive)*, *Motivation (negative)*, *Self-efficacy (positive)* and *Self-efficacy (negative)*. The responses were counted and arranged in a descending order of occurrences. Table 3 reports on the positive and negative aspects of reciprocal peer tutoring with reference to the affective domain of learning.

The data showed that *positive Reactions* were caused by the following features: collaborative work (8), learning by sharing (8), stress free activity (4), simplicity of the task (4), opportunity to help each other (2), additional revision of the course material (2), and enhancement of self-discipline. In the category of *negative Reactions* the leading response was none (11) followed by difficulty in managing an online task (5), uncertainty if the task had been performed correctly (4), time consuming (2) and lack of authority (2). Next, in the category of *positive Motivation* the students provided the following motivators: gains in knowledge (12), motivation received from peers/group (12), sense of responsibility (5). While the *negative Motivation* was associated with the following: none (10), difficulty in managing the task (8), uncertainty of the accuracy of one's performance (6), and time consuming (2). Finally, *positive Self-efficacy* was seen as correlated with: support from peers (9), recorded progress in content knowledge (8), none (3), friendly atmosphere (1). Contrary, *negative Self-efficacy* was related to: self-realization of the lack of

content knowledge (11), none (6), difficulty in managing group task (5), and sense of uncertainty (3).

Table 3. Breakdown of positive and negative aspects of reciprocal peer tutoring by category type, reference type and number of occurrences

Category type	Reference type	Number of occurrences
Reactions (positive)	Collaborative work	8
	Learning by sharing	8
	Stress free activity	4
	Simplicity of the task	4
	Opportunity to help each other	2
	Additional revision of the course material	2
	Enhancement of self-discipline	1
Reactions (negative)	None	11
	Difficulty in managing an online task	5
	Uncertainty of the accuracy of one's performance	4
	Time consuming	2
	Lack of authority	2
Motivation (positive)	Gains in knowledge	12
	Motivation received from peers/ group	12
	Sense of responsibility	5
Motivation (negative)	None	10
	Difficulty in managing the task	8
	Uncertainty of the accuracy of one's performance	6
	Time consuming	2
Self-efficacy (positive)	Support from peers	9
	Recorded progress in content knowledge	8
	Relevant course materials for reference	5
	None	3
	Friendly atmosphere	1

Self-efficacy (negative)	Self-realization of the lack of content knowledge	11
	None	6
	Difficulty in managing group task	5
	Sense of uncertainty	3

6. Discussion and Conclusions

The present investigation is inscribed in the current research line of the impact of emergency remote teaching on students' social-emotional and cognitive learning. In particular, the study looks at the English Department students and their perception of an impact of reciprocal peer tutoring strategy, which was delivered online, on their linguistic and social learning needs. The study revealed that online reciprocal peer tutoring meets both social-emotional and cognitive needs of university students who study off campus. Furthermore, institutionally enhanced collaborative learning was proved to provide students with a purposeful online group work in real time and thus triggered social interactions which the students were in need for. Additionally, this instructional strategy is seen to positively impact the cognitive domain that has also been negatively affected by distance education.

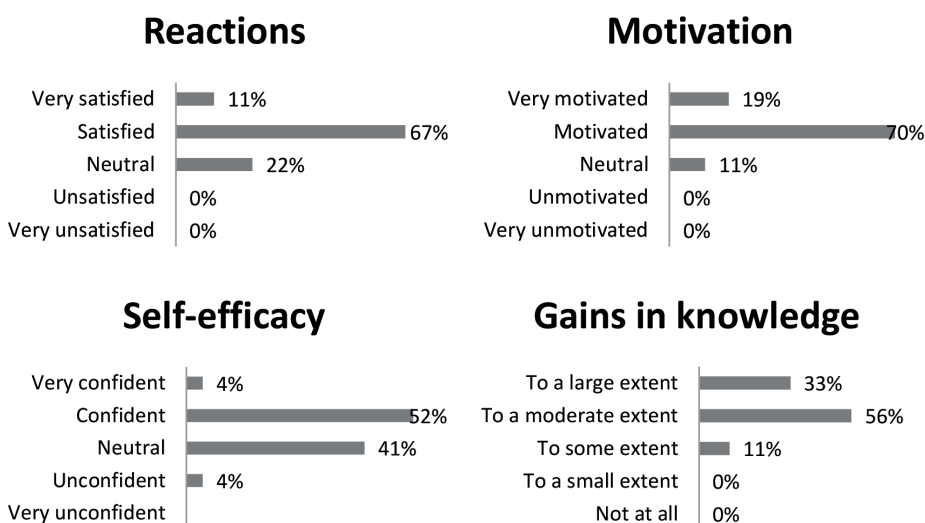


Figure 2. Students' responses on the impact of online reciprocal peer tutoring on their Reactions, Motivation, Self-efficacy and Gains in knowledge

In reference to the first research question on the extent to which online reciprocal peer tutoring meets university students' social-emotional and cognitive learning needs, the present study showed that both cognitive and social-emotional needs were met to a comparable extent. When the top two response items on the Liker scales were calculated for each measure it revealed that 89% percent of the surveyed students had left the session of online reciprocal peer tutoring feeling motivated and experiencing gains in knowledge (89%). In reference to the remaining two measures, 78% of students recorded high levels of satisfaction from this educational experience, and 56% expressed a strong belief in their abilities to perform well on the task. Figure 2 uses small-multiple bar charts to illustrate the extent to which the session of online reciprocal peer tutoring met the learning needs of the students.

With regards to the second research question which investigated positive and negative outcomes of the application of reciprocal peer tutoring to an online course in reference to social-emotional learning, the data indicated that the number of positive learning outcomes was significantly higher than negative learning outcomes (81:48). The highest number of positive learning outcomes observed by students was recorded in the category of *Reactions* (29) and *Motivation* (29), and the lowest in the category of *Self-efficacy* (23). In contrast, the highest number of negative learning outcomes was attached to the category of *Self-efficacy* (19), and the lowest to the category of *Reactions* (13), while the category of *Motivation* attracted 16 commentaries which associated this parameter with negative learning outcomes. Interestingly, the students recognized positive aspects of collaborative learning and social interaction in all the three categories of *Reactions*, *Motivation*, and *Self-efficacy*. There were 45 references in total. The students pointed to the need and appreciation of social interactions by providing the following commentaries:

discussions in groups; working with other students; working together; studying with colleagues; support received from other students; the positive approach of the classmates; members of my group motivated each other; I didn't want to disappoint my friends; a two-way encouragement in the group; the thought that I could also help someone; having someone to check and correct my mistakes; the presence of a student tutor; working with classmates and receiving valuable feedback was reassuring; that correctness of my work was supported by others; a big group of students because I was sure that we would manage the task; that I had help of someone who knows how to do it; work with a group made me feel confident because I was sure that we could complete the task correctly (excerpts from students' commentaries).

Another aspect, this time negative, that reoccurred across all three categories referred to the students' sense of uncertainty about the accuracy of

course assignment they are working on, 14 references in total. The students associated this feeling with a perceived absence of authority. They expressed their feeling with the following statements:

We were not sure if we did our task correctly because there was nobody who could check it; The fact that the group naturally lacked a higher figure of a professor to which the students could turn for help, if the members of the group were unsure about something; At first, what stopped me was that I wasn't sure if I was right but, then, I assured myself that my work was done correctly; I wasn't always sure about certain elements e.g. if semicolon or commas are necessary in particular situations; Sometimes no one was sure about the answer; I wasn't always sure if my instructions were 100% correct; I feel insecure teaching others because I am afraid I can be wrong (excerpts from students' commentaries).

It can be speculated that the feeling of uncertainty may be dependent on the characteristics of Polish culture (ref. Hofstede Insights, 2021) especially its two dimensions i.e. power distance and uncertainty avoidance. In the Hofstede's model of national culture, cultures with high power distance (a score for Poland is 68) and uncertainty avoidance (a score for Poland is 93) are hierarchical societies, whose members look up and refer to authorities not peers or colleagues and feel threatened by ambiguous situations. Reciprocal peer tutoring is rooted in a collaborative group work, whose members learn from each other when taking up the role of authority (a tutor). The absence of an instructor who serves as reference point can also contribute to additional uncertainty and ambiguity in a classroom setting.

In conclusion, reciprocal peer tutoring as an instructional strategy has been positively assessed by the students enrolled in the MA programme in English. Also, the mode of delivery, that is, online did not seem to have a negative impact on its reception by students. Instead, this particular type of instruction can be treated as a response to the students' social-emotional and cognitive learning needs, aid classroom relations and bridge the gap between remote learning and personal interactions. Furthermore, we propose that online peer tutoring can be used as either integral or supplementary instructional strategy for enhancing social integration in remote or blended learning university courses in Poland. Also, it can be a supplementary strategy for implementing collaborative learning, peer-led instruction and student-centered approaches to tutoring in a face-to-face classroom environment.

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Appendix 1

Self-assessment of social-emotional and cognitive learning needs in an online reciprocal peer tutoring session.

REACTIONS

1. How satisfied are you with the educational experience you gained from this task?

very satisfied / satisfied / neutral / unsatisfied / very unsatisfied

2. What in particular did you about the task?

a) like

.....

b) dislike

.....

MOTIVATION

1. How motivated were you to perform this task?

very motivated / motivated / neutral / unmotivated / very unmotivated

2. What

a) motivated you to complete the task?

.....

b) demotivated you to complete the task?

.....

SELF-EFFICACY

1. How confident were you that you would be able to perform well on the task?

very confident / confident / neutral / unconfident / very unconfident

2. What elements of the task made you feel

a) confident?

.....

b) unconfident?

.....

GAINS IN KNOWLEDGE

To what extent did this task help you master quotations?

to a large extent / to a moderate extent / to some extent / to a small extent
/ not at all

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