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DYNAMICS AND CAUSAL FACTORS OF TEAM SATISFACTION IN AN OPEN AND DISTANCE LEARNING COLLABORATIVE WRITING CLASS

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ABSTRACT

Purpose – Instructors and students are compelled to calibrate to overcome pedagogical, technological and social challenges posed by the rapid adaptation of open and distance learning (ODL) in view of the current global pandemic. Against this backdrop, this study explored the impact of team dynamics (TD), team acquaintance (TA) and instructor support (IS) in ensuring team satisfaction (TS) in an academic writing course in an online collaborative learning environment.

Methodology – This study employed a sequential mixed methods design. Quantitative data was obtained through a survey questionnaire

from 67 students enrolled in an academic writing course based on convenience sampling from three different faculties of a Malaysian university. Subsequently, eight purposively selected students who represented each faculty and of varied language proficiency were interviewed in a focus group discussion (FGD) for in-depth feedback about the variables and how these impacted TS as a whole. The quantitative data was analysed using descriptive analysis, regression and chi square tests while thematic analysis was conducted accordingly on the qualitative data in addressing the specific research questions.

Findings – This study manifested a positive and significant correlation between TD and TS. The integral and supportive role of IS has been found to be substantially important in ensuring success in collaborative group work in ODL. Although qualitative data showed amicable relationship and cultural homogeneity, the quantitative findings did not indicate the significant role of TA in meeting the requirements of the course, that is, working collaboratively to accomplish academic writing tasks.

Significance – This study provides useful insights into the success of an online collaborative learning context. The findings also serve to guide educators in designing, delivering and navigating effective pedagogy in the ODL environment.

Keywords: Collaborative learning, team dynamics, team acquaintance, team satisfaction, instructor support, ODL, writing lessons.

INTRODUCTION

The world is bound to witness a cascading fundamental shift (Kaur & Bhatt, 2020) in the way the process of teaching and learning is carried out (Khan et al., 2020), with the adoption of ODL in response to the current pandemic fettering traditional classroom teaching and learning. Although educational technologies like the mobile phone, radio, and television have been used in some contexts, ODL has emerged as the most significant means of emergency remote teaching in order to utilise the potential benefits of interactive online learning environment during the current global crisis (Adarkwah, 2021; Dhawan, 2020; Kaur & Bhatt, 2020). However, researchers in

the sub-disciplines of online learning and distance learning find this emergency adoption of online delivery mode strikingly different from the traditional and well-planned online education known for decades owing to the unprecedented shift to less than ideal circumstances without any time for planning, preparation, and development (Hodges et al., 2020; Whittle et al., 2020).

As the lines between near and far have been blurred, this emergency adaptation in teaching and learning has become the mainstay of education today, as Kaur and Bhatt (2020, p. 42) predicted, "for a good period of time, virtual or remote learning will occupy a big fraction of the pedagogical enterprise, while ODL courses will become more appealing to the masses." In embracing this paradigm shift and transformation, students and instructors are making adjustments to overcome technological, pedagogical and social challenges and to ensure that all stakeholders are able to accrue optimum benefits in present day education (Dhawan, 2020; Kaur & Bhatt, 2020; Khan et al., 2020). From preparation, implementation to assessments, courses in ODL are designed and delivered via various online platforms where the teacher's role has been transformed rapidly from that of a mere input provider to a facilitator of learning. Whilst the platform for learning has shifted from face-to-face to an impersonal medium, the weightage and breakdown of assessment components have remained largely unchanged in many courses. This includes assessments involving groupwork and presentations, which must be carried out as effectively as pre ODL.

At university level in Malaysia, English courses, groupwork and collaborative learning are an integral part of the coursework and assessment component, in line with the aspiration of developing students' skills of communication, leadership and critical thinking (Ghavifekr, 2020; Ibrahim et al., 2015; Samat & Abd Rahman, 2019). These components are aligned with the six generic skills outlined in the Malaysia Education Blueprint 2013–2025 (Ministry of Education, 2013), and subscribe directly to the 4Cs of 21st century learning: collaboration, critical thinking, creativity and communication (Tang et al., 2020). Thus, collaborative group work undoubtedly lends a convenient and helpful tool to develop a supportive attitude towards learning (Ghavifekr, 2020; Sofroniou & Poutos, 2016; Woelk, 2019).

The benefits of collaborative group work are valid and have been unequivocally proven by numerous empirical research (Chatterjee &

Correia, 2020; Ghavifekr, 2020; Hautala & Schmidt, 2019; Kaendler et al., 2015; Kamala & Abdul Aziz, 2020; Ruys et al., 2014; Shi & Liu, 2013; Sofroniou & Poutos, 2016; Warsah et al., 2021), but the problem lies in the extent of its effectiveness given the limitations of ODL platforms where communication is impersonal, sometimes synchronous, at other times asynchronous, including being not too familiar with one's peers, one's English language proficiency which imposes inhibitions for fluent communication and overall anxiety of the entire course being conducted online. In encountering a shifting landscape, which is essentially different from pre-planned online courses, how does one manage collaborative learning with the current challenges? What role does the instructor play and to what extent is the instructor the catalyst of learning, as some contend that the instructor's role has been played down in online learning. Therefore, a study that investigates the complementary role of peers through teamwork and team dynamics as well as the role of the instructor in establishing overall team satisfaction in carrying out tasks is timely as there has been no detailed investigation of the factors to date.

Based on the framework of Collaborative Learning Theory and guided by Ku et al.'s (2013) model of collaborative learning, this study aims to investigate how TD, TA, and IS play a complementary role in establishing TS in a collaborative digital learning mode in an English for Academic Writing course at an institution of higher learning in Malaysia for a group of learners (of indigenous origins) of almost homogenous cultural background. The study was carried out within the scope of an English for Academic Writing course as the course stipulates and mandates collaborative work in its assessments. Two of the three course assessments require collaborative and team effort for accomplishment of tasks, hence the choice of the course for the study. The research questions for the study are as follows:

- 1. To what extent does team dynamics lead to team satisfaction in an online collaborative academic writing course?
- 2. To what extent does team acquaintance lead to team satisfaction in an online collaborative academic writing course?
- 3. To what extent does instructor support lead to team satisfaction in an online collaborative academic writing course?

The directional hypotheses of the study are summarized in Table 1.

Table 1

Summary of Hypotheses

Hypothesis	Description
H1	Team dynamics has a significant positive relationship with team satisfaction.
H2	Team acquaintance has a significant positive relationship with team satisfaction.
Н3	Instructor support has a significant positive relationship with team satisfaction.

TD comprises several aspects, namely, participation, communication, collaboration, trust and cohesion (Greenlee & Karanxha, 2010, as cited in Ku et al., 2013, p. 3). TA encompasses sharing of cultural information, personal information, sharing professional expertise, getting to know team members and treating team members accordingly. These two aspects are interrelated and closely intercorrelated with each other. Finally, IS relates to the support, guidance, and supervision extended by the instructor in the entire process of preparing for group assignments. The reciprocal relationship with TS is when perceptions of individual team members are based on the team's quality of interaction and process (Wall, 1987, as cited in Ku et al., 2013).

The study also expounds on the role of the instructor as an instrumental construct in the ODL context. Apparently, awareness among instructors on the importance of applying collaborative learning in the teaching process is deemed insufficient although it is a key aspect in shaping the holistic development of students (Ghavifekr, 2020; Walker et al., 2020). A few studies (Kaendler, et al., 2015; Van Leeuwen, et al., 2013) have explored the complementary role of the instructor and team members in creating overall TS in collaborative learning, especially in relation to distant teaching and learning contexts. The present study is necessary and significant in view of the looming new reality in education. A 2018 report by the Organisation for Economic Co-operation and Development entitled "The Future of Education and Skills: Education 2030", firmly iterated the need for future-ready students to exercise agency, in managing their own education and thereafter in handling life experiences ("Gearing up for

a new reality in education," 2022). The report states, "to help enable agency, educators must not only recognise learners' individuality but also acknowledge the wider set of relationships – with their teachers, peers, families and communities – that influence their learning". Hence, in order to enable learners to face the reality of education today and beyond, factors of team dynamics, team acquaintance and instructor support are of significance and warrant investigation.

LITERATURE REVIEW

Collaborative Learning

Collaborative learning is a learner-centered approach that entails group learning to promote exchange and participation of members to create a shared cognition. In education, the word collaboration is used to imply a philosophy of interaction where people take responsibility for their own actions, including learning, in which they respect their peers' abilities and contributions (Laal & Ghodsi, 2012). In collaborative learning, a group or clusters of students come together to organize and divide the work for a common objective, that is, successful completion of a large assigned task. Each student is not only accountable for his/her share of work but is also responsible for the team as a whole. Individuals may work briefly on the task, share output with a partner, and subsequently to the whole group. Thus, they accomplish more by working in a group than they would otherwise. Besides gaining and retaining more knowledge, collaborative work also enhances critical thinking.

In an online class, collaborative work may occur within smaller breakout groups. In more formal learning, students are divided into specific teams working on a task to be completed within a stipulated duration, for example, an instructor assigning student groups with the task of writing an academic paper after explaining the learning objectives, steps and successful accomplishment criteria. The instructor's role is to guide and monitor the work, as well as evaluate group and individual performance. Collaborative learning is particularly useful in completing assessments as it encourages students to take responsibility for their participation in teamwork and to help them understand the nature of collaboration as opposed to competition (Lew, 2020). Assessment is also vital to evaluate group productivity and how well individuals work together in establishing team dynamics, team acquaintance and for greater team satisfaction whilst developing soft skills through communication, critical thinking and leadership ability. In collaborative learning, grading may be for individual contributions (diagnosed through feedback, peer assessment, and reflection) and/or total group performance. Examples of individual and group contributions may include tests or assignments, oral presentations, preparation of written portfolios, rubrics, performance-based assessments, participation, media work, and/or anonymous feedback.

Collaborative Learning Theory

Collaborative Learning Theory is rooted in the idea of zone of proximal development (ZPD), as postulated by Lev Vygotsky. Vygotsky's concept of ZPD postulates that learning is a naturally social act, and it occurs through collaborative interaction with more knowledgeable peers, attempting to solve problems, and seeking to understand the world (Kaur, 2017; Lasmawan & Budiarta, 2020). He highlighted that interaction and collective attempts to learning is the first step towards learner autonomy and noted that what children can do collectively today, they can do independently tomorrow (Ismail & Al Allaq, 2019; Kaur, 2017; Lasmawan & Budiarta, 2020). Besides, learners are guided towards reasoning, solving problems, drawing conclusions, and constructing knowledge by working cooperatively. It can effectively accommodate their individual differences and preferences to better address their needs based on the theory of multiple intelligences (Ismail & Al Allaq, 2019). In a wider perspective, Chatterjee and Correia (2020) also found collaborative learning to positively develop learners' communication competence in a range of dimensions such as affection, cognition, social, and metacognition. The broad concept of collaboration makes it non-restrictive within certain rules of learning as active interactions occur in a variety of ways within and beyond the classroom.

Team Dynamics

Each team consists of individuals with varying skills, weaknesses, and expertise, where communication and interactions, shared work, collaboration, trust and cohesion of team members create positive team dynamics. Positive team dynamics help members work more successfully together and thus create a better chance of meeting their objectives. Considering the importance of meeting defined objectives, instructors need to have sufficient insight into the dynamics of group activities so as to enhance student experience (Arashpour et al., 2020), hence, can promote TD to improve behaviour and performance of group members by carefully understanding the elements that positively influence TD and promoting them while planning collaborative group tasks (Khuzwayo, 2018; Walker et al., 2020; Woelk, 2019).

Team Acquaintance

TA encompasses sharing of cultural information, personal information, sharing professional expertise, getting to know team members and treating team members accordingly. Previous studies (Ku et al., 2013; Tseng et al., 2009) revealed positive correlation between TA and TS, meaning that knowing each other promotes higher satisfaction among team members in collaborative work. These studies found that team acquaintance encourages and improves team members' confidence as they are assured that no harm can come to them if there are positive actions of team members.

Instructor Support

It is important that the instructor actively promotes the creation of a conducive and positive learning environment throughout the process of preparing group tasks. Instructor's support in promoting collaborative learning, enhancing learner motivation and fostering learner autonomy has been established in numerous studies (Chowdhury et al., 2021; Kaur, 2014; Qureshi et al., 2021; Tseng et al., 2009).

Previous Studies

A large number of published studies over decades validate collaborative learning, both in face-to-face and online settings (Ezekoka & Gertrude, 2015; Ghavifekr, 2020; Kamala & Abdul Aziz, 2020; Ku et al., 2013; Olesen, 2020; Shi & Liu, 2013; Tseng et al., 2009). However, only a limited number of studies have investigated collaborative factors of TD, TA and IS for TS in traditional online courses. Despite this, no studies have been found to have investigated these factors in the context of emergency adoption of ODL. According to Tseng et al. (2009), trust among teammates and organizational practices are the two key factors for online collaboration satisfaction, whereas a study by Ezekoka and Gertrude (2015) revealed that use of

educational technology increases the level of participation of learners in collaborative learning. Online students' sense of community has been found to promote positive attitude towards collaborative learning by Chatterjee and Correia (2020). Jiang and Zhang (2020) noted that socializing activities prior to learning phases help students have better learning performance in mobile assisted collaborative learning environments. Ku et al. (2013) found that team dynamics, team acquaintance, and instructor support positively correlate with teamwork satisfaction. The present study, however, intended to strengthen understanding of these inter-connected relationships to enquire if the same could be said when students were grouped and coerced into online collaborative learning based on emergency ODL circumstances. In this study, the traditional face-to face writing course was suited to adapt to ODL needs, while the previous study was conducted on a specifically designed online course as was the case in Ku et al.'s study. In the present study, students had not met nor known each other well on a personal level, but were grouped for a common goal of fulfilling the needs of the academic writing course, which included developing students' ability to find and manage relevant information for academic writing within the framework of collaborative writing of academic tasks.

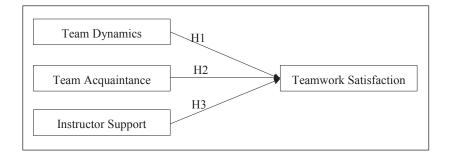
METHODOLOGY

Research Framework

The aim of this study was to investigate and explain the influence of three constructs, namely team dynamics (TD), team acquaintance (TA) and instructor support (IS) in ensuring team satisfaction (TS) in an academic writing course in general, and in completing group academic tasks in particular. The academic writing course was selected for the study since it primarily entailed collaborative group work to achieve its objectives of developing academic writing skills. Compared to other courses at the institution, this course was more focused and emphasised group work for task completion, as groups were established from the very beginning of the semester; hence, students worked with their team members for a duration of 14 weeks. The study employed sequential mixed methods design (Creswell, 2018), where quantitative data was obtained from 67 students (n=67) accessible to the researchers based on convenient sampling. The students were enrolled for a university course on academic writing that made an emergency shift from face-to-face to ODL class due to COVID-19. The data was analyzed using SPSS. Following this, eight purposively selected participants were later interviewed in a focus group discussion (FGD) to glean qualitative data on the content which was analysed thematically and presented according to the stated research questions. Figure 1 shows the research framework as follows:

Figure 1

Research Framework



All assignments and academic tasks required in the 14-week course was managed online by the instructor and students via Google and its associated tools such as Google Docs, Google Classroom, Google Meet, and Google Mail as Google is able to provide ubiquitous and easy-to-use solutions in learning (Olesen, 2020). To complement Google, other digital tools and apps such as WhatsApp and video calls were also employed by the participants to ensure smooth flow of work and communication among team members and with the instructor for optimal output in collaborative learning. The students had two major assessments of groupwork in the course, which cumulatively made up 70 percent of the course. They were assigned to a group of four members whom they were relatively unfamiliar with as these four students were in their second semester of study, and who had not known their peers in a personal environment. Thus, it was necessary to find out if sufficient acquaintance and bond had been forged and established during the course of collaborative work. The groups of four members worked collaboratively for 14 weeks to deliver the final output of an academic paper through the genre process approach (Badger & White, 2000) using the recursive process of prewriting. drafting, revising, and editing.

Participants

The 67 participants in the survey by way of a questionnaire which consisted of 25 males and 42 females, and were aged between 20 and 21 years. All participants were of Malay ethnicity, who enrolled for an academic writing course at a local university and were divided into three groups based on their faculties, namely Agrotechnology (Group 1), Applied Science (Group 2) and Computer Science (Group 3). They were readily approachable to be part of the study sample, hence the researchers adopted convenience sampling to collect data. The instructor variable was kept constant to ensure reliability of the data, meaning that the same instructor taught these three groups of students. Table 2 shows the profile of the respondents. Among the three groups from the various faculties involved in the study, Group 1 students were from the faculty of Agrotechnology (29.9%), Group 2 from Applied Sciences (38.8%) while Group 3 students were from Computer Science (31.3%). There were 37.7% males and 62.7% females, thus the male-female ratio was 1:2.

Table 2

Construct	Frequency	Percentage
Group		
Group 1	20	29.9
Group 2	26	38.8
Group 3	21	31.3
Gender		
Male	25	37.7
Female	42	62.7

Profile of Respondents

A total of eight students participated in the FGD. They were selected from the respondents of the survey representing each of the three groups mentioned. The selection of FGD participants was based on students' language proficiency. In order to ascertain their willingness, they were invited to participate in the FGD via WhatsApp message.

Instrument and Procedure

Surveys help researchers to obtain large amounts of information from a large sample of people to address their specific research questions (Taherdoost, 2019). The authors developed the quantitative survey for this study by adapting items for each sub construct from Ku et al. (2013), Tseng (2009), and Waters and Napier (2002). Initially, the researchers conducted a thorough literature search and compiled a list of items related to the research questions. Further discussion helped the researchers to finalise the items and prepare the first draft of the questionnaire for the survey. Some open-ended questions were carefully drafted to yield detailed responses on some of the topics through FGD. Three colleagues provided valuable feedback on both the survey and the FGD questionnaire. The feedback was used in revisions to ensure validity and linguistic clarity. The quantitative questionnaire comprised three major sections and used a 5-point Likert scale. Section one consisted of eight questions which elicited students' general response regarding collaborative learning in an ODL classroom. Samples of items in this section included: "Overall, collaborative learning experience in ODL classroom is a worthwhile experience", "Working online in groups is a waste of time", "Through the collaborative online activities we write better essays".

Section two consisted of 10 quantitative items, adapted from Tseng's (2009) Teamwork Satisfaction Scale. Sample items included: "I like working in a collaborative group with my teammates in ODL classroom", "I enjoy the experience of collaborative learning with my teammates in ODL classroom". The second part in Section two consisted of 20 items which were adapted from Waters and Napier's (2002) Student Attitude Survey. A total of 30 quantitative questions in Section two probed into the correlational relationship between TD, TA, IS with TS. Of the 30 quantitative questions, there were 12 items on TD, four items on TA, four items on IS, and 10 items on TS.

The quantitative survey instrument was administered in this study during the last week of the semester via Google Forms to obtain the students' insights. The goals of the study were explained in plain English. The respondents were assured of their anonymity and that their answers to the questions would remain confidential and would only be used for research purposes.

Following the survey, the researchers purposively selected eight students for a Google Meet FGD, to ensure participation from each group with varying levels of language proficiency to obtain in-depth feedback on the variables and how they impacted TS as a whole. The FGD is a common qualitative method in research that pull in-depth

understanding from purposively selected individuals (O. Nyumba et al., 2018). One of the researchers served as facilitator of the FGD ensuring that discussions were held in a relaxed and comfortable environment. The FGD lasted 90 minutes whereby each participant was given the opportunity to speak sequentially. The data was video recorded and transcribed. The researchers applied Braun and Clarke's (2021) principles for reflexive thematic analysis which refer to a cluster of approaches to capture patterns in qualitative data. The six iterative and recursive stages of reflexive thematic analysis include: 1) data familiarisation, 2) data coding; 3) generating initial themes; 4) developing and reviewing themes; 5) refining, defining, and labelling themes; and 6) writing the report.

The researchers started by reading and rereading the FGD transcripts to become acquainted with the data, then labelled emergent patterns, idiosyncrasies, and noted ideas of particular interest. They reread the transcribed texts and initial notes to begin the code generating process. This was followed by several mutual discussions to group the codes into initial themes that emerged from the participants' responses. For example, the theme "advantages of ODL collaborative writing class" covered codes such as "cooperation", "easier communication", "a brand new experience", "helpful teammates" and "lecturer's guidance". A further review enabled the researchers to divide the initial themes and codes into two main themes and relevant sub-themes. Towards the final stage of the analytical process, the researchers refined, defined and named the themes and sub themes to fit the research questions of the study. As a result, the theme labelled as "advantages of ODL collaborative writing class" resulted in four sub themes, namely "positive interdependence", "advantages of using virtual platforms", "sharing of similar culture and professional expertise" and "positive role of the instructor". Whereas the three sub themes covering the "limitations of ODL collaborative writing class" were "inadequate internet access", "logistic and technological challenges", and "difficulties in adapting to online education". The researchers then reported the qualitative results alongside the quantitative findings to answer the research questions.

FINDINGS AND DISCUSSION

The reliability value for all items in the questionnaire was tested and found to be acceptable, and above 0.80 - TD (0.95), TA (0.89, IS

(0.83), and TS (0.95), indicating that the measurements achieved their reliability. The mean values obtained from the items in the questionnaire were above mid-point 3 and the standard deviation value was between 0.59 and 0.69, also indicating internal consistency among the items. The respondents understood the items and responded with valid answers for further analysis. The quantitative data were analysed using SPSS for reliability, correlation and hypotheses testing. Table 3 shows the descriptive analysis and reliability.

Table 3

Construct	Mean	Standard Deviation	Alpha
Teamwork Satisfaction	3.74	0.64	0.95
Team Dynamic	3.93	0.61	0.95
Team Acquaintance	3.89	0.69	0.89
Instructor Support	3.94	0.59	0.83

Descriptive Analysis and Reliability

Table 4 shows the correlations between the constructs used in this study. The results indicated that this set of data was free from multicollinearity because all values were below 0.80. Hence, the data could be used for further analysis.

Table 4

Correlation between Constructs

Construct	1	2	3	4
1. Teamwork Satisfaction				
2.Team Dynamic	.66**			
3. Team Acquaintance	.46**	.75**		
4.Instructor Support	.66**	.60**	.57**	

Table 5 presents linear regression analysis. The F-Value (27.80) with significant value (p<0.001) indicated that the model for this study was fit and valid for hypotheses testing. The results of all three constructs were tested, and reported in Table 5.

Table 5

Regression Analysis

Construct	Standardize Beta	t-value	p-value
Team Dynamics	0.58	4.25	0.00
Team Acquaintance	-0.20	-1.71	0.09
Instructor Support	0.48	4.28	0.00
Ν	67		
\mathbb{R}^2	0.57		
Adjusted R ²	0.55		
F-Value	27.80		
Significant	0.00		

Dependent Variable - Teamwork Satisfaction

General Response towards Collaborative Learning and Team Satisfaction

The majority of the participants expressed general acceptance of collaborative learning in the ODL classroom, and Google platforms, in particular. About 40.3 percent and 31.3 percent of the participants agreed and strongly agreed, respectively with the option of Google Classroom and Google Meet as the main choice of learning platforms in the ODL classroom during the full course of the semester. However, 28.4 percent of respondents remained ambivalent about this, as besides the university's self-developed learning management system (LMS), they were probably not exposed to many other learning platforms. Generally, Google Meet was preferred (70.2 percent), while the rest remained ambivalent about the use of Google Meet due to the high bandwidth required to use it. Interestingly, students were equally quite divided in their opinion as to whether online collaborative activities should be encouraged over face-to-face learning, with 46.3 percent being in agreement while 41.8 percent preferred to remain neutral.

Moreover, the descriptive responses undoubtedly revealed that students' satisfaction in working collaboratively substantially contributed to the success of collaborative learning in the ODL context. For instance, 60.2 percent expressed preference for working in a collaborative group with teammates and a nearly similar percentage, that is, 61.2 percent, favored solving problems with group members in the ODL classroom. The students' responses to the questionnaire showed that collaborative group work, problem-solving, interacting among classmates – all contributed to their motivation, enjoyment and creativity and helped the students produce better project quality and to acquire online collaboration skills from the process of teamwork in the ODL classroom. TS worked well for them and brought out each other's strengths allowing each member to flourish. The qualitative data received from the FGD interview with the respondents yielded the theme of general satisfaction on collaborative learning from the virtual platform. To quote a few responses verbatim: "Yes, like because easy for us to share our own information in WhatsApp group for example"; "I like because can make the work easier and can do discussion anytime".

Impact of Gender on Team Satisfaction

When the researchers put the quantitative data to chi-square tests (which is used to test for relationships between categorical variables) to find out if there were any disparities in the responses to achieve team satisfaction according to gender, they found no evidence to suggest that the categorization by gender played a significant role. The p-value of .16 in the asymptomatic significance column of the chi-square test presented in the following Table 6 indicated no statistically significant difference based on gender. Therefore, both genders equally impacted team satisfaction.

Table 6

	Value	df	(2-sided)
Pearson Chi-Square	29.71ª	23	.16
Likelihood Ratio	37.71	23	.03
Linear-by-Linear Association	2.27	1	.13
McNemar-Bowker Test			b
N of valid cases	67		

Impact of Gender on Team Satisfaction Asymptomatic Significance

To What Extent Does Team Dynamics Lead to Team Satisfaction in an Online Collaborative Academic Writing Course?

The results in Table 5 show that TD has a positive and significant influence on TS (β =0.58, t< 4.25, p<0.001), because the smaller the

p-value, the stronger the evidence for rejection of the null hypothesis. The contributing factors, which included items under team dynamics appeared to be the development of students' collaboration pattern, trust among team members towards achieving a common goal, understanding their role in communication, setting clear working goals and establishing norms, responding in a timely manner, frequency in communication, efficient way to track feedback and editing of documents.

A strong agreement of 19.4 percent complemented by an agreement of 50.7 percent from the respondents that their team developed clear collaborative patterns to increase team learning indicated the discipline that they had established, which increased their learning efficiency and TS in their collaborative ODL classroom. The synergy and clarity of their communication was also supported by the students in their in-depth interview. To quote some of their statements: "I like because we can make the work easier and can do the discussion any time"; "Our members are helpful ... we chat on WhatsApp to divide our tasks and discuss our feedback." This had certainly added to their preference for teamwork and played an important role in terms of TD in working together and succeeding as a team because it made them feel comfortable and facilitated their concentration on tasks.

The findings showed that students' strong collaborative pattern was strengthened by trust among team members in working towards the same goal. The majority of the respondents, that is, 79.1 percent agreed that their team set clear goals and established working norms. This positive interdependence in the framework of team spirit was also emphasised when they discussed their team collaboration in the FGD interview. One student said, "I enjoyed my classes.

Our group members were punctual ... we knew what to do and worked together". Another student noted, "I like working collaboratively as a group in the ODL classroom because my team members always give good cooperation and we can share the problems together." Their mutual reliance on other team members, doing the right thing created a circle of assurance, which was important to succeed as a group or as individuals. A goal-oriented team determines how to achieve their goals and the members become more responsible in playing their individual roles. Team members try to enhance their performance and respond to each other in a timely manner as a result of tracking goals. The majority of the students placed their trust in each team member to complete their work on time. This was confirmed by 50.7 percent of the student responses while another 26.9 percent strongly confirmed this. A similar opinion was found in the student responses in the FGD interview, "My group always support each other to produce good quality work"; "We try completing our task same time ... we share with others if difficulty ... we solve fast"; "I like it as a group because it would be much easier to do work on time". Punctuality of members played an important role in TD indicating a healthy relationship of mutual respect among team members and reinforcing a sense of shared responsibility in achieving a common goal.

Other positive influences, were frequent communication among team members, an efficient way to track the editing of documents, and receiving feedback from each other. Almost half, that is, 44.8 percent agreed while another 22.4 percent strongly agreed that their team members communicated with each other frequently. Many felt that their team had an efficient way to track the editing of documents. All these contributed toward positive TD. The qualitative data contributed in emphasising that their positive TD enhanced the members' enjoyment in the collaborative group task. To quote a few responses: "... working for essay, it is quite helpful for online using drive as I can edit my group members' work immediately"; "We were motivated and everyone tried to respond on time"; "It was fun for me."

The Malay culture is collectivist (Kaur, 2014), and has a lot of affinity with group learning and team dynamics; hence, evidently, these learners were open to the notion of collaborative work, instead of individual work. Studies suggest that collaborative learning strategies have been successfully used by Malaysian researchers to enhance their students' language skills (Ismail & Al Allaq, 2019; Kamala & Abdul Aziz, 2020; Yusuf et al., 2019). Therefore, it was no coincidence that effective group learning and team dynamics had led to a successful collaborative learning experience in this ODL environment.

The benefits of group work are well recognized. Loh and Ang (2020) identified the benefits in three aspects, namely academic, affective and social competence, where acquiring knowledge and improving intellectual and academic skills are among the academic benefits,

the emotional aspects such as appreciation, passion, motivation, and values are affective benefits and the capacity to get along with others in acceptable and appropriate ways is one of the social competency benefits. Hence, well-designed and properly delivered collaborative online courses are certainly the best remedial steps in prevalent emergency remote teaching contexts.

To What Extent Does Team Acquaintance Lead to Team Satisfaction in an Online Collaborative Academic Writing Course?

Based on regression analysis (Table 5), the data revealed that unfortunately, there was insufficient evidence to support the relationship between TA and TS (β =-0.20, t<-1.71, p<0.001). Although the sample was homogeneous as they were all from indigenous origin, there were students who were non-Muslims (3%) and belonged to different sub-indigenous groups. The students were from 14 different states in Malaysia, having different cultural practices and traditions, hence this sub construct was included as the finding was expected to show significant correlation.

The student questionnaire revealed that 49.3 percent of the students agreed that their team members shared cultural information to get to know each other better. Although they were primarily of a similar religion and culture, through the FGD, it was found that they shared information related to their plans for events such as *Eid-ul-Fitr*, in the preparation of meals and how their families celebrated such events in their online chats with peers. The same statement was strongly supported by another 19.4 percent of the students. However, 28.4 percent preferred to remain neutral on this. They expressed similar opinions in the in-depth interview, such as: "I know where my group members are from, they all know about mine, too"; "We speak the same language. Our food taste is similar." In a collaborative group task, sharing of such information among the team members establishes a strong rapport and builds consensus in striving to achieve teamwork goals.

An almost similar number of respondents, comprising 46.3 percent and 28.4 percent, agreed and strongly agreed respectively, that their team members shared personal information to get to know each other better to form a positive relationship among themselves. This certainly enabled them to interact among themselves with a more supportive attitude, with admissions such as, "I like working in groups. Exchanging our own information led me to be a better student."

An overwhelming majority of 83.6 percent consisting of agreed or strongly agreed showed that getting to know each other in their team allowed them to interact with their teammates more effectively. This is helpful in promoting learning by enhancing the students' level of motivation. Students who enjoy better relationships with their team members derive more academic enjoyment and develop better social skills.

Another positive finding about TA was that a greater part of the respondents agreed or strongly agreed with the view that their team members shared their professional expertise. Sharing of professional expertise is an important team process that helps a team in successfully accomplishing its tasks. Most of the students, that is, 76.1 percent concurred that their team members learned how other members wished to be treated and then acted accordingly. The FGD responses also generated similar opinions: "We never meet but we know each other"; "My teammates are helpful; I am helpful to them, too."

The above findings are supported by numerous studies. Ghavifekr (2020) noted that, learning in groups gives an opportunity to students to state their opinions on various matters relevant to their cultural identity. Studies show that, besides academic benefits, navigating group interaction constructively by showing respect for each other as unique individuals is a valuable skill one may learn through collaborative learning (Kamala & Abdul Aziz, 2020).

However, despite the benefits mentioned about TA, this study found limited evidence that TA contributed to TS, which contradicts many previous findings such as by Woelk (2019), Ku et al. (2013), and Tseng et al. (2009). This can be reasoned on the basis that TA had an insignificant role to play among team members in this impersonal context because they were primarily homogenous in terms of religion, ethnic background, cultural values, and general worldview. None had any exceptional professional expertise, academic or affective skills to complement overall performance. The common goal was to accomplish academic tasks, and thus, overly sharing of personal information, cultural sharing or special skills was not a matter of primary concern in achieving the common goal.

To What Extent Does Instructor Support Lead to Team Satisfaction in an Online Collaborative Academic Writing Course?

IS was found to exert a positively significant influence on TS (β =0.48, t< 4.28, p<0.001). About 79.1 percent of the students collectively agreed that they were satisfied with the quality of guidance received from the instructor in completing their academic paper. The in-depth interview also yielded thumping reassurance of the instructor's key role in the successful completion of assessments: "the lecturer was really helpful"; "good guidance and receive more information from lecturer"; "so good and very clear explanation". The indispensable and inherent role of the instructor in collaborative writing was stressed by the students who said: "My lecturer has done a very good job in guiding our team and class in order to finish the task given". Another student related the following:

The lecturer help us in doing our project by doing Google Meet, respond to our question and always remind us about the project to be submitted because sometimes the students tend to forget to submit the work as there are many assignment to be submitted.

About 50 students (73.2%) claimed that the instructor was able to reduce anxiety experienced by the team while doing the assessments with admissions such as: "She guide us from zero to near to hero ... she teach us repeatedly with passion even we did a same mistake ...". "My lecturer is the best lecturer that I have"; "It's a great experience to work with [instructor's name]. She provided everything and extra consultation for each of our work."; "In my opinion, i sometimes got a little bit hard to stay on the track in ODL classroom but the quality received from the lecturer make me easy to learn in ODL classroom".

When faced with contradicting ideas or seeming confusion, the participants often consulted the instructor for referrals. About 71.1 percent or two-thirds of the students fully agreed that the instructor had acted as a referee when team members were unable to resolve differences. Some of the students shared the following: "Lecturer provide guidance and advise us a lot on how the work should be done. If lecturers didn't correct our mistakes we might have already did the assessment wrongly since the beginning."

The lecturer gives a lot of information for guidance us to run our work more simply. She gives moral support and guidelines to resolve our problem. She also spends much more time with us to complete our work. So, she shows professionalism and quality when teaching us.

Modelling of positive behaviour and reinforcement by the instructor went a long way to ensure its effect on the students who expressed their gratitude: "Thank you for all your comment that help to improve all the work. Everyone in the class have already give the best for you and all of us also."

Having a strict lecturer like [lecturer's name] is really a blessing for ODL students. Where we have to submit all the work in the stipulated time. And the lecturer gives the feedback and marking immediately in order to make the students keep doing their work.

It was also found that the instructor's role and guidance was in adherence to culturally responsive teaching (Gray, 2000, as cited in Kaur, 2014, p. 118). With 30 years of teaching experience, the students found the instructor to have sufficient repertoire of knowledge of Malay learners' preferences, including their affinity and taboos. The instructor was able to use the learners' cultural knowledge, prior experiences, learning styles' idiosyncrasies and diversity in learning patterns and personalities in making collaborative teamwork an effective experience for all. For instance, learners shared at FGD that they were given the liberty to self-select team members, brainstorm and decide on the topic and scope of writing their academic paper, collect articles and make other day-to-day decisions in accomplishing tasks, without stringent rules to abide by. They were satisfied because clear guidelines were offered, unlimited guidance and consultation was provided, yet, at the same time, the instructor did not introduce rules and strict instructions, a commendable effort given that ODL was a difficult time of adjustment and adaptation for all. The instructor's meta-awareness was evidenced from the students' feedback, "Lecturer guide us with detailed explanation on how to do our work properly and helps us to improve from our mistake"; "Excellent, I really love the way of guidance because it is really understanding and really helpful".

Finally, during the interview, some students also noted that video recordings were useful: "... easier for the students to understand

the points". In order to improve the quality of guidance and support provided in collaborative teamwork, the instructor made recordings of some lessons and shared the videos in Google Classroom (Stream). The recorded lessons on video could be viewed later if needed. It was found that about five lessons were recorded for the students' reference.

In summary, the role of the instructor in this study was paramount in manifesting the best values among students, such as teamwork, similar to other scholars' postulations and/or findings on collaborative learning (Kaendler et al., 2015; Kaur, 2014; Ku et al., 2013; Nagavci, 2020), all of whom asserted that the instructor is an important bridge, for example, in developing learner confidence (Kaur, 2014), imparting knowledge effectively to team members (Nagavci, 2020), and being able to plan student interaction, monitor, support, consolidate student interaction and reflect upon it (Kaendler, et al., 2015).

PROBLEMS ENCOUNTERED IN AN OPEN AND DISTANCE LEARNING ENVIRONMENT

This section presents bi-findings of this study, which were not the original objectives of the study. Students' FGD responses on the negative aspects of the ODL collaborative writing class are synthesized into three sub themes, namely poor Internet connectivity, logistical and technological issues, and difficulties in adapting to online education. Although on the whole, the majority of students in the current context were satisfied with the emergency remote teaching in the ODL environment, a number of students encountered challenges in adapting to the new environment, which were essentially three types. Firstly, the main challenge raised at the FGD was Internet connectivity: "My poor internet connection always causes me problems"; "Sometime my connection is poor and some information I cannot hear clearly. So I need to find more by asking my friend"; "I am not happy because sometimes the internet connection is not good enough and many students did miss the explanation given by lecturer. So, the group members deliver the explanation that we missed". Fortunately, for the students, strong team dynamics enabled effective communication and peer guidance in coping with connectivity woes. As some students failed to catch up with their virtual teammates as a consequence of poor Internet access that their ODL course required,

this can only be solved by equipping them well so that they can continue the course successfully.

Apart from this, a few participants found it difficult to adapt to the online learning environment which, unlike passive listening and note taking in a traditional classroom, demands learners to spring into action. Frustrations and laments by them were recorded: "I am unable to get 100 percent from lecturer when I can't see the lecturer face-to-face"; "I dislike. I prefer discussing face-to-face with them"; "I dislike because hard to communicate". Only positive attitude of the students can help overcome this problem because they must accept the current context and the challenges posed in their education. The number of negative comments were relatively small, almost negligible; hence, they were not quantified.

Lastly, some students found it difficult to keep pace with their other teammates and to handle the technological medium. One of them lamented, "... sometimes my group members just ignore my message and I need to ask them first, not they ask me. It is quite hard as it may slow down the process." Strong student motivation and provision of appropriate logistics could assist in overcoming this hurdle.

CONCLUSIONS AND RECOMMENDATIONS

This study showed that there is a positive and significant relationship between team dynamics and team satisfaction. In order to create positive relationships among group members, the presence of good dynamics is a vital requisite. However, it is not entirely necessary to be well acquainted with your team members to work towards a common goal and produce results (H2 is rejected). As for instructor support, the role of the instructor is indispensable in an online medium. Regardless of whether it is face-to-face learning or learning with digital tools, the instructor remains an integral part of the learning process. In making the collaborative effort more effective, videos and recorded sessions could be increased as points of references to increase understanding of the tasks at hand and that each week's lessons be recorded for team reference.

The study has also demonstrated the value of ODL learning in emergency situations when face-to-face learning is unavailable by building team dynamics and providing adequate instructor support. Furthermore, it has revealed several existing drawbacks in implementing online education, such as slow Internet connections and the discomfort of faceless communication due to the monotony of staring at a screen for too long. It is imperative that technological support be readily in place to alleviate undue stress in the 14 weeks of learning sessions. Hence, our study has provided some useful insights into key ingredients for a successful online collaborative learning course using Google applications which could serve as a guide in designing and delivering effective pedagogy in the ODL environment, taking into account the problems and challenges one may encounter along the way.

This study was meticulously designed to examine the influence of TD, TA, and IS in ensuring TS in an academic writing course amid a shifting context due to the global health emergency, and future studies could explore this further. Although both quantitative and qualitative data from the students attending the ODL collaborative writing course were included, the findings of the study found that the instructor is an overriding factor in ensuring TS in the ODL environment. Therefore, future research on the topic could be conducted using a more qualitative method, by analyzing the perspectives of one or more instructors via in-depth qualitative interviews to further verify findings and provide a better insight into designing a generalized framework for successful ODL in emergency situations. Additionally, comparative data from different instructors may enrich research findings as the instructor (IS) seems to be the overriding factor in the class. It is a noteworthy enquiry on how different instructors in different cultural contexts could facilitate collaborative learning in a writing class. It is pertinent to find out if instructor support plays a similarly significant role in the success of online distance learning. It is even more important in the current global educational crisis because teachers are the primary points of contact for students and the first responders to ensure students' education.

Another vital consideration could be the inclusion of a heterogenous sample in future research to find out if team acquaintance significantly correlates with team satisfaction with participants of varied cultural backgrounds. Since this study did not yield a significant relationship between the two variables, it is hoped that a heterogenous sample could contribute to a more conclusive opinion on whether team acquaintance is germane in building team satisfaction in an ODL environment.

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REFERENCES

- Adarkwah, M. A. (2021). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19. *Education and Information Technologies*, 26(2), 1665–1685. https://doi. org/10.1007/s10639-020-10331-z
- Arashpour, M., Lamborn, J., & Farzanehfar, P. (2020). Group dynamics in higher education: Impacts of gender inclusiveness and selection interventions on collaborative learning. In *Claiming identity through redefined teaching in construction* programs. https://doi.org/10.4018/978-1-5225-8452-0.ch003
- Badger, R., & White, G. (2000) A process genre approach to teaching writing. *ELT Journal*, 54, 153-160. https://doi.org/10.1093/ elt/54.2.153
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328–352. https://doi.org/10.10 80/14780887.2020.1769238
- Chatterjee, R., & Correia, A. P. (2020). Online students' attitudes toward collaborative learning and sense of community. *American Journal of Distance Education*, *34*(1), 53–68. https:// doi.org/10.1080/08923647.2020.1703479
- Chowdhury, T. A., Roy, S., & Kabilan, M. K. (2021). Learner motivation in the EFL classrooms: Voices from a Bangladeshi university. *Indonesian Journal of Applied Linguistics*, 11(1), 221–232. https://doi.org/10.17509/ijal.v11i1.34618
- Creswell, J. W. (2018). *Education research planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). Pearson Publication.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. https://doi.org/10.1177/0047239520934018

- Ezekoka, & Gertrude, K. (2015). Maximizing the effects of collaborative learning through ICT. *Procedia – Social* and Behavioral Sciences, 176, 1005–1011. https://doi. org/10.1016/j.sbspro.2015.01.571
- Gearing up for a new reality in education. (2022, January 31). *The Star*. https://www.thestar.com.my/starpicks/2022/01/31/gearing-upfor-a-new-reality-in-education
- Ghavifekr, S. (2020). Collaborative learning: A key to enhance students' social interaction skills. *Malaysian Online Journal* of Educational Sciences, 8(4), 9–21. https://mjir.um.edu.my/ index.php/MOJES/article/view/26394/12190
- Hautala, J., & Schmidt, S. (2019). Learning across distances: An international collaborative learning project between Berlin and Turku. *Journal of Geography in Higher Education*, 43(2), 181–200. https://doi.org/10.1080/03098265.2019.1599331
- Hodges, A. C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. *Educause Review*. https://er.educause.edu/ articles/2020/3/the-difference-between-emergency-remoteteachingand-online-learnin
- Ibrahim, N., Shak, M. S. Y., Mohd, T., Ismail, N. A., Perumal, P. D., Zaidi, A., & Yasin, S. M. A.
- (2015). The importance of implementing collaborative learning in the English as a Second Language (ESL) classroom in Malaysia. *Procedia Economics and Finance*, 31(15), 346–353. https:// doi.org/10.1016/s2212-5671(15)01208-3
- Ismail, S.A.A., & AlAllaq, K. (2019). The nature of cooperative learning and differentiated instruction practices in English classes. *SAGE Open*, 9(2). https://doi.org/10.1177/2158244019856450
- Jiang, D., & Zhang, L. J. (2020). Collaborating with 'familiar' strangers in mobile-assisted environments: The effect of socializing activities on learning EFL writing. *Computers and Education*, 150(February), 103841. https://doi.org/10.1016/j. compedu.2020.103841
- Kaendler, C., Wiedmann, M., Rummel, N., & Spada, H. (2015). Teacher competencies for the implementation of collaborative learning in the classroom: A framework and research review. *Educational Psychology Review*, 27(3), 505–536. https://doi. org/10.1007/s10648-014-9288-9
- Kamala, R., & Abdul Aziz, A. (2020). Systematic review: The use of collaborative learning to develop students' guided writing and oral performance in poetry. *International Journal of Academic*

Research in Progressive Education and Development, 9(2), 544–573. https://doi.org/10.6007/ijarped/v9-i2/7663

- Kaur, N. (2014). Teacher-led initiatives in supporting learner empowerment among Malay tertiary learners. *Malaysian Journal of Learning and Instruction*, *11*, 101–126. http://www. ejournal.uum.edu.my/index.php/mjli/article/view/7667
- Kaur, N. (2017). The role of peers and cultural tools in supporting autonomous learning behaviours among Malay tertiary learners. *Pertanika Journal of Social Sciences and Humanities*, 25(1), 61–80.
- Kaur, N., & Bhatt, M. S. (2020). The face of education and the faceless teacher post COVID-19. *Journal of Humanities and Social Sciences Research*, 2(S), 39–48. https://doi.org/10.37534/ bp.jhssr.2020.v2.ns.id1030.p39
- Khan, R., Bashir, A., Basu, B. L., & Uddin, M. E. (2020). Emergency online instruction at higher education in Bangladesh during COVID-19: Challenges and suggestions. *Journal* of Asia TEFL, 17(4), 1497–1506. https://doi.org/10.18823/ asiatefl.2020.17.2.10.463
- Khuzwayo, M. E. (2018). Assessment of group work in initial teacher education and training. *South African Journal of Education*, 38(2), 1–11.
- https://doi.org/10.15700/saje.v38n2a1386
- Ku, H. Y., Tseng, H. W., & Akarasriworn, C. (2013). Collaboration factors, teamwork satisfaction, and student attitudes toward online collaborative learning. *Computers in Human Behavior*, 29(3), 922–929. https://doi.org/10.1016/j.chb.2012.12.019
- Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. *Procedia - Social and Behavioral Sciences*, 31, 486–490. https://doi.org/10.1016/j.sbspro.2011.12.091
- Lasmawan, I. W., & Budiarta, I. W. (2020). Vygotsky's zone of proximal development and the students' progress in learning (A heutagogical bibliographical review). *Jurnal Pendidikan Indonesia*, 9(4), 545–552. https://doi.org/10.23887/jpiundiksha.v9i4.29915
- Lew, G. K. (2020). Collaborative learning theory. *E-Learning Essentials* 2020.https://elearning2020.pressbooks.com/chapter/collaborative-learning-theory/
- Loh, R. C.-Y., & Ang, C.-S. (2020). Unravelling cooperative learning in higher education. *Research in Social Sciences and Technology*, *5*(2), 22–39. https://doi.org/10.46303/ressat.05.02.2

- Ministry of Education Malaysia (2013). *Malaysia EducationBlueprint* 2013-2025.https://www.moe.gov.my/menumedia/mediacetak/penerbitan/dasar/1207-malaysiaeducationblueprint-2013-2025/file
- Nagavci, M. H. (2020). Teaching English for specific purposes understanding the teacher's role in ESP teaching. In E. Hajrizi (Ed.), Proceedings of the 9th UBT International Conference on Language and Culture (pp. 18–23). https://knowledgecenter. ubt-uni.net/conference/2020/2020booksofproceedings/8
- O. Nyumba, T., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9(1), 20–32. https://doi.org/10.1111/2041-210X.12860
- Olesen, M. (2020). Cooperative collaboration in the hybrid space of Google docs based group work. *Education Sciences*, 10(10), 1–13. https://doi.org/10.3390/educsci10100269
- Qureshi, M. A., Khaskheli, A., Qureshi, J. A., Raza, S. A., & Yousufi, S. Q. (2021). Factors affecting students' learning performance through collaborative learning and engagement. *Interactive Learning Environments*, 0(0), 1–21. https://doi.org/10.1080/1 0494820.2021.1884886
- Ruys, I., Van Keer, H., & Aelterman, A. (2014). Student and novice teachers' stories about collaborative learning implementation. *Teachers and teaching: Theory and practice*, 20(6), 688–703. https://doi.org/10.1080/13540602.2014.885705
- Samat, F., & Abd Rahman, N. N. (2019). The perceptions on group work among Malaysian preuniversity gifted students. *e-Bangi*, 16(5), 1–7. https://ejournal.ukm.my/ebangi/article/ view/33485
- Shi, J. H., & Liu, L. H. (2013). Application of a dynamic collaborative learning oriented knowledge model. *Proceedings of the 2nd International Symposium on Computer, Communication, Control and Automation (ISCCCA-13)*, 175–178. https://doi. org/10.4028/www.scientific.net/AMM.347-350.3002
- Sofroniou, A., & Poutos, K. (2016). Investigating the effectiveness of group work in Mathematics. *Education Sciences*, 6(3), 1–15. https://doi.org/10.3390/educsci6030030
- Taherdoost, H. (2019). What is the best response scale for survey and questionnaire design: Review of different lengths of rating scale/attitude scale/likert scale. *International Journal* of Academic Research in Management (IJARM), 8(1), 1–10. www.elvedit.com

- Tang, T., Vezzani, V., & Eriksson, V. (2020). Developing critical thinking, collective creativity skills and problem solving through playful design jams. *Thinking Skills and Creativity*, 37, 100696. https://doi.org/10.1016/j.tsc.2020.100696
- Tseng, H., Wang, C. -H., Ku, H.-Y., & Sun, L. (2009). Key factors in online collaboration and their relationship to teamwork satisfaction. *Quarterly Review of Distance Education*, 10(2), 195–206, 251–252. http://search.proquest.com/docview/2311 83153?accountid=13044
- van Leeuwen, A., Janssen, J., Erkens, G., & Brekelmans, M. (2013). Teacher interventions in a synchronous, co-located CSCL setting: Analyzing focus, means, and temporality. *Computers in Human Behavior*, 29(4), 1377–1386. https://doi.org/10.1016/j. chb.2013.01.028
- Walker, E. R., Lang, D. L., Caruso, B. A., & Salas-Hernandez, L. (2020). Role of team dynamics in the learning process: A mixed-methods evaluation of a modified team-based learning approach in a behavioral research methods course. *Advances in Health Sciences Education*, 25, 383–399. https://doi. org/10.1007/s10459-019-09931-3
- Warsah, I., Morganna, R., Uyun, M., Hamengkubuwono, H., & Afandi, M. (2021). The impact of collaborative learning on learners' critical thinking skills. *International Journal of Instruction*, 14(2), 443–460. https://doi.org/10.29333/iji.2021.14225a
- Waters, L. H., & Napier, W. (2002). Building and supporting student team collaboration in the virtual classroom. *The Quarterly Review of Distance Education*, 3(3), 345-352.
- Whittle, C., Tiwari, S., Yan, S., & Williams, J. (2020). Emergency remote teaching environment: A conceptual framework for responsive online teaching in crises. *Information and Learning Sciences*, 121(5/6), 311–319. https://doi.org/10.1108/ILS-04-2020-0099
- Woelk, C. (2019). Better together: Leveraging group dynamics in conversational English classes. In J. Kimball & D. Shaffer (Eds.), KOTESOL PROCEEDINGS 2019 (pp. 257–263). https://koreatesol.org/content/kotesol-proceedings-2019
- Yusuf, Q., Jusoh, Z., & Yusuf, Y. Q. (2019). Cooperative learning strategies to enhance writing skills among second language learners. *International Journal of Instruction*, 12(1), 1399– 1412. www.e-iji.net