

June 2023

## Interprofessional Teamwork Through Remote Collaboration: A Mixed-Methods Approach

Sabina Kupershmidt  
*USD*, Sabina.Kupershmidt@usd.edu

Tracy Cleveland  
tracy.cleveland@usd.edu

Mandy J. Williams  
*USD*, mandy.williams@usd.edu

Whitney Lucas Molitor  
*University of South Dakota*, whitney.lucasmolitor@usd.edu

Follow this and additional works at: <https://red.library.usd.edu/aesculapius>



Part of the [Education Commons](#), [Nursing Commons](#), and the [Public Health Commons](#)

---

### Recommended Citation

Kupershmidt S, Cleveland T, Williams MJ, Lucas Molitor W. Interprofessional Teamwork Through Remote Collaboration: A Mixed-Methods Approach. *Aesculapius*. 2023 Mar 31; 4(1):Article 2. Available from: <https://red.library.usd.edu/aesculapius/vol4/iss1/2>. Free full text article.

This Article is brought to you for free and open access by USD RED. It has been accepted for inclusion in *Aesculapius Journal (Health Sciences & Medicine)* by an authorized editor of USD RED. For more information, please contact [dloftus@usd.edu](mailto:dloftus@usd.edu).

## Introduction

Regulatory agencies and professional societies such as the World Health Organization (WHO), Institute for Healthcare Improvement, and Institute of Medicine/National Academy of Medicine have recommended interprofessional approaches to achieve integrated health outcomes (Institute of Medicine Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, 2011). The American Association of Colleges of Nursing (AACN), recently issued a new set of “Essentials” (Giddens et al., 2022) providing standards and core competencies for 21<sup>st</sup> century nursing schools; one of 10 identified domains is labelled “Interprofessional partnerships” (AACN, 2021). Interprofessional education is defined as “when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes” (IPEC, 2016). The Health Professions Accreditors Collaborative have issued a joint “Guidance on Developing Quality Interprofessional Education for the Health Professions” (Health Professions Accreditors Collaborative, 2019). Evidence shows that when professionals working in healthcare understand each other’s roles and responsibilities, they communicate better and offer safer and higher quality patient care (Rosen et al., 2018).

Interprofessional education (IPE) is most effective when interaction occurs between professions and when learning methods reflect the real world practice experiences of students (Schot et al., 2020). This principle was challenged during the current COVID-19 pandemic. Due to the sudden move to increased online learning, institutions of higher learning have had to improvise and adapt their established interprofessional learning (IPL) environments to an online format (Wetzlmair et al., 2021). This presented many challenges because little was known about how team functions translate into the online environment (Power et al., 2021).

As a means of prioritizing IPE and learning, the Interprofessional Health Education Center (IHEC) was established at a Great Plains University in 2017. The goal of the IHEC is to advance IPE and learning through curriculum and faculty development and to impact the health of the surrounding population. In March of 2021, campus administration announced that regular face-to-face classes would need to be conducted online due to the COVID-19 pandemic. Administration emphasized that interprofessional standards would have to be maintained. Instead of the regularly scheduled, face-to-face, IPE activity, IHEC leadership decided to offer an online activity using the Zoom platform. Interprofessional teams would be simulated by using the breakout room function.

The purpose of this report was to determine if learners and faculty observers perceived that interprofessional teamwork could be practiced using this novel format.

## Methods

### Design and Setting

This was a single-center, cross-sectional study, with a retrospective design. Data from a single IPE event conducted in March 2020 were analyzed.

### Participants

Participants were students in the School of Health Sciences (SHS) at a university in a Great Plains state. The SHS encompasses 9 departments granting undergraduate and graduate degrees. Eight departments participated: Dental Hygiene (DHYG), Health Sciences (HSC), Medical Laboratory Sciences (MLS), Nursing (NURS), Occupational Therapy (OT), Physician Assistant (PA), and Physical Therapy (PT). In addition, Communication Science and Disorders (CSD), from the College of Arts and Sciences participated. Participants were recruited and enrolled through departmental IHEC representatives. The sample size was 150.

### Procedure

The activity was delivered online via the Zoom Platform (ZoomInfo Technologies Inc. Vancouver, WA). Supporting materials, instructions and fillable forms were made available through the online learning management platform, Desire2Learn (D2L). Resources to guide interprofessional team behaviors included: 1. A Welcome Letter, explaining student learning objectives and goals, 2. TeamSTEPPS Pocket Guide (AHA, 2019), and 3. A Table listing the IPEC Core Competencies (IPEC, 2016).

The schedule of events was as follows: One day in advance, supporting materials and instructions were made available through D2L. On the day of the activity, participants accessed the activity through a single Zoom connection. Participants were given a 15-minute period to log on. Next, students participated in a synchronous 1-hour lecture including a topic overview, resources, and rules of engagement, followed by a discussion. Then, students were divided into interprofessional teams and placed in 10 separate breakout rooms. Over a one-hour period students worked as a team to complete their assigned task. The task was: You are asked to devise a mitigation strategy for a SARS-COV-2 outbreak in a small college town. In order to minimize morbidity and mortality, as well as social and economic impacts of SARS-COV-2/COVID-19, students working as interprofessional teams will propose a community mitigation strategy. Interprofessional student-designed mitigation strategies were shared in a 1.5 hour, facilitator-led debriefing with the entire group.

### Instruments, Data Sources

#### Custom Designed Exit Survey

A self-designed exit survey was administered using PsychData via an electronic link at the end of the debriefing session. Items included in the analysis are shown in Table 1.

### **Jefferson Teamwork Observation Guide**

Three open-ended questions included in the Appendix to the Jefferson Teamwork Observation Guide (JTOG) (Lyons et al., 2016) were used to measure perceptions of team behaviors in students. Qualitative data were analyzed independently. Each question provided the initial structure to the responses. Participant responses were sorted into emerging themes through a process of inductive analysis by one of the authors (TC). At the completion of this process, themes that had emerged were cross-checked by the remaining authors to make adjustments and to enhance reliability.

### **Faculty Observer Questionnaire**

A self-designed questionnaire was provided through an electronic link for faculty who observed interprofessional behavior of the teams. The survey remained accessible for 48 hours following the event. Items analyzed are listed in Table 2.

### **Ethical and Legal considerations**

This research was conducted in compliance with appropriate data protection laws and regulations. As a retrospective study of students that were participating in scheduled class activities, the research was deemed to be “not human subjects research” by the institution’s IRB. No personal data were processed in a way that would reveal the identity of the participants and all data were anonymized, and depersonalized.

### **Data Analysis**

Data were analyzed using descriptive statistics with SPSS (IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp). An  $\alpha$  level of .05 was used for all statistical tests. To detect correlations between two variables, Spearman’s  $r$  was calculated for non-parametric data.

### **Results**

Participants had been grouped into interprofessional teams consisting of at least three different professions by assigning participants to breakout rooms on the day prior to the event. Unexpectedly, this functionality did not work, and the Zoom host assigned participants to breakout teams on the spot. This impromptu approach proved to be practical and effective; it resulted in 10 teams of 13 -16 participants with at least 3 professions represented in each team.

### **Demographics**

Participants came from CSD (2), DHYG (30), MLS (6), NURS (67), OT (2), PA (11), PT (29), and undergraduate HSC (2) degree programs. The largest proportion, 84 % (127), identified as female. Advanced students were in the majority: 39 % (45) were in a professional graduate program, 58 % (67) were college seniors and only 4 % were below senior level.

One hundred and fifty students returned responses to the custom-designed exit survey via Google Forms using an electronic link. Six items on the Exit Survey were analyzed and are presented in Table 1. The results showed that 67/150 (79 %)

respondents had participated in at least one previous IPE activity. Only 32/150 (21 %) did not have exposure to previous IPE activities

### **Interprofessional experience from the viewpoint of the participants**

Breakout-rooms enabled teamwork after the introductory joint Zoom session was complete. Each breakout session had at least three different professions present and one faculty member observing interprofessional team behaviors.

This was the first entirely remote IPE event at the institution and the question was if the experienced students would recognize it as interprofessional. A surprising 84 % of respondents indicated that they experienced it as interprofessional (Table 1, item 2). Additionally, it was important to find out if students were more or less likely to experience the remote event as interprofessional if they had participated in prior IPE activities. As shown in Table 1, item 1, 78 % of the attendees reported having participated in at least one prior IP event. However, when Spearman's rho was calculated ( $r_s = -0.07396$ ,  $p$  (2-tailed) = 0.37), there was no significant association between variables 1 and 2. Similarly, there was no association between items 3 (Did you personally feel that you were a member of a functioning team?) and 1 ( $r_s = -0.03394$ ,  $p$ , 2-tailed = 0.68013), or item 4 (Did you feel like you had a role on the team?) and 1 ( $r_s = -0.0271$ ,  $p$ , 2-tailed = 0.74202). On the other hand, a moderate positive association between items 5 (Did you learn anything?) and 6 (How engaged were you?) was observed ( $r_s = 0.41$ ,  $p$ , 2-tailed = 0).

### **Qualitative Results**

To better understand the students' perceptions of their assigned team's ability to work collaboratively, responses to two of three open-ended questions adopted from the JTOG tool (Lyons et al., 2016) were evaluated: 1. Describe one aspect of team-based care that you observed today. and 3. Describe one new thing, either positive or negative, that you observed today about teamwork. A total of 103 respondents provided answers to the three questions.

#### **1. Aspects of team-based care**

Team-based care was most closely tied to a general sense of teamwork and collaboration among small group participants (65). Of those that noted teamwork, 43 participants directly mentioned interprofessional collaboration, whereas 22 participants made more generalized comments of team collaboration. While a sense of teamwork/collaboration appeared to be the predominant theme, some participants also noted respectful discussion (11) as a component to effective team-based care, along with leadership (8) and clear communication (5). One student summed up these thoughts by stating:

*“One aspect of team-based care that was observed today included each team member giving input into the case. My team worked together ... to come up with the best strategies for each situation. Each person portrayed specific leadership skills in order to be efficient and come up with creative*

*strategies. Another aspect is gaining knowledge on perspectives from others of various professions. Each person was respectful and interested in each person's professional opinion which helped us work together as a team and learn from each other (PT, 5, 1, JTOG 34)."*

This was supported by another student who said, "We added our specific discipline's point of view and collaborated together to come up with ideas that are plausible and suit most people (NSG, 4, 1, JTOG 33)." Another student said, "We all put our heads together to come together for a common goal. Even though there were disagreements, we all had one goal in mind... (MLS, 4, 2, JTOG 116)."

Respectful discussion was illustrated by these remarks, "I think in our team today really emphasized encouragement of what each team member had to say. Nobody put another person down for sharing their thoughts, and we all built up each answer and added on to each other's ideas (NSG, 4,1, JTOG18)." Another student said, "Everyone was very respectful of input; very inclusive of all aspects of health to be able to treat a patient as a whole (DH, 4, 1, JTOG54)."

### **3. Describe one new thing, either positive or negative, that you observed today about teamwork.**

The main theme here was *Professional Collaboration* with 70 participants identifying it. In some cases, participants focused on inclusiveness and the value of varying perspectives, others focused on everyone working together for the good of the team and patients to arrive at a solution. With respect to varying perspectives, one student stated, "One new thing that I gained ... was the importance of many different perspectives. Each of us have background in a different area. It is important to think outside of the box and consider the roles of other professions and the challenges they face. Going forward, I am more apt to think of other professions and their role in making a difference (PT, 5, 1, JTOG34)." Another student specifically mentioned their increased awareness for dental hygiene during the pandemic, "I got a better understanding from a dental hygiene's position and what they are going through at this time with their clients. That was something I have not thought about be will defiantly [sic] keep it in mind now (NSG, 4, 1, JTOG17)."

With respect to teamwork and patient care one student stated, "One new thing ...is that the health care professions are all focusing on the best care for patients, so even if there are different ideas ..., it is important to listen to all of the ideas ... to provide the best optimal care for patients (NSG, 4, 1, JTOG2)." Another student commented on the ability to effectively collaborate remotely, "One new thing that I observed was the ability of our group members to work together even though we were all at different locations throughout the state ... we could still come together despite our remote locations (NSG, 4, 1, JTOG35)." This was supported by another student who said, "Teamwork was great even with online, we used the chat function so we had a log of things that we said.... (MLS, 3, 2, JTOG105)."

Although some students identified teamwork as a positive in an on-line or remote setting, others did not feel as engaged with their teams in this format. Eighteen students identified teamwork or participation in this format as a negative or shortcoming. One student said, “I learned that teamwork on Zoom is much more difficult... It is more difficult to tell when someone is going to talk. I also found it less personal and more uncomfortable to talk... I feel much more comfortable interacting with my group members when the scenario is face to face (NSG, 4, 1, JTOG30). Another student commented that it took a little longer for the group to warm up to one another to begin sharing and stated, “It took a second to get started ..., it would have been easier to start if we were in person ....(DH, 4, 1, JTOG45).”

Some students identified a lack of participation among their group members. One student stated, “Not every team member contributed to the conversation... (DH, 4, 1, JTOG54).” Another student noted, “There were a large number of people in our group that didn’t participate...(NSG, 4, 1, JTOG84).” Yet another student was able to see both positives and negatives to the online format:

*“Ideally this activity would have been done in person, although that wasn’t possible. Using zoom was both a positive and negative experience. I feel people didn’t participate as much over zoom because they could just mute themselves and/or turn off the camera and not pay attention. On the other hand, using zoom gave us the opportunity to practice working with others from various locations which could be a possible form of communicate in our future professions (SLP, 5,1, JTOG81).”*

Seven students identified technical difficulties as a shortcoming of their overall experience. One student noted,

*“While this was uncharted territory for such a large event to take place online, there were a few glitches with the system. People continued to report those glitches even though there was nothing that could be done about them instead of using the resources that were given in front of us to read. I am glad we were able to do the event even with the small technical issues. I learned a lot about the pandemic and what would be needed in the future if it were to happen again (PT, 5, 1, JTOG57).*

Other students commented that their own equipment and internet capabilities were hindrances to their overall experience.

### **Perceived Interprofessional Team Function from the Standpoint of the Observer**

There was some concern that an extrinsic factor, the audio quality of the Zoom connection might have affected the team outcomes. Seven of 10 break-out room observers responded to the Faculty Observer Questionnaire which addressed this concern. On a scale of 1-10, with 1 being “difficult to understand all of the time” and 10 being “good”, the audio quality was rated with a mean of 6.7, a median and a mode of 7, and a range of 3 (Table 2).

Team outcomes were assessed in items 2- 6 (Table 2). The table shows that there were only weak correlations between team outcomes and audio quality. Responses to two of the questions “Overall, I would rate this educational experience” rated on a scale of 1 (not useful) to 5 (excellent) and “I would recommend this or a similar experience to my students again”, rated on a scale of 1(disagree) to 5 (agree) were very strongly correlated (mean = 3.9,  $r = 1$ ).

### **Discussion**

IPE has long been a key learning strategy at this university. Since 2000, the SHS has organized at least one campus-wide event every semester that is open to participation by undergraduate and professional students.

#### **Key Results and Interpretation**

There is widespread concern about the impact of online learning forced by the pandemic among educators in general and on interprofessional education in particular (Wetzlmair et al., 2021). The ongoing global battle with COVID-19 has placed added emphasis on teamwork and IPE skills (McKinlay et al., 2021). Due to the sudden changes necessitated by the pandemic, an announcement that regular classes would need to be conducted online was made, leaving IHEC less than 2 weeks to adapt Spring Activities to an online format.

In this report, an interprofessional team of faculty planned the event and assessed student team behaviors during a remotely delivered event in 2020. The study design was mixed methods to triangulate data derived from quantitative, qualitative, and faculty surveys. Several principles of Adult Learning Theory (Merriam and Baumgartner, 2020) (Chapter 5) came into play in the design of the remote activity which integrated Action Learning. Action Learning combines learning and practice by coordinating learning activities (action) with knowledge and personal reflexivity to promote problem solving processes and build group dialogue (Zuber-Skerritt et al., 2020). These principles were observed in the “Covid Mitigation” problem-solving activity, combined with the background resources and the thorough debriefing period.

Nursing was the most prevalent profession at this IPE event (44%). Due to the long history of IPE activities at the institution, most of the participants were at an advanced level within their programs, and a majority had attended at least one



previous, in-person IPE activity. This prior experience provided the majority of students with a good basis for comparison.

Correlation analysis showed no association between prior participation in face-to-face IPE and the impression that today's activity was interprofessional, the perception that the student was part of a functioning team or the student's perceived role on the team (Table 1). On the other hand, a positive association was determined between items 5 (Did you learn anything?) and 6 (How engaged were you?) of the Student Exit Survey. This fits with previous findings that student engagement is a predictor of academic performance in an electronic learning environment (Rajabalee et al., 2020), as well as in the traditional classroom (Lee, 2014).

A qualitative study of the aspects of team-based care reported by the participants showed a major theme of "collaboration" followed by "respectful discussion", "leadership" and "clear communication" among online breakout group members. Professional collaboration was identified overwhelmingly as the positive observed by participants regarding teamwork. While at much lower numbers, some participants identified the remote setting, lack of student participation and technical difficulties as negatives to the on-line delivery of this event.

As society is approaching the end of the Pandemic, it is becoming clear to educators that remote interprofessional education opportunities will remain part of the active learning repertoire. Particularly at universities located in highly rural states such as South Dakota, health care educators must continue to be inclusive of outlying campuses and of practice partners. For example, only one university in South Dakota has a medical school and School of Health Sciences with 9 disciplines (USD). A different public university houses the only College of Pharmacy (SDSU); there are multiple Nursing degree granting programs located across the state. Remote opportunities such as described here will continue to be offered in order to enable participation for distant partners. Moreover, the processes are generalizable and can be adapted by other institutions.

### **Challenges and Resolutions**

The Zoom platform offers remote connections where participants can work in isolation, making them safer during the pandemic. Breakout rooms were used to group participants into interprofessional teams. The initial plan had been to group all teams into carefully planned interprofessional groups on the previous day. This function did not work and the groups had to be assembled 'on the fly'.

The main zoom connection was through a home network, with a lower bandwidth than the campus connection. To determine whether the technology impacted the team behaviors of the participants, we used the faculty observer questionnaire to look for correlations between the perceived quality of the audio and student engagement (Table 2). Surprisingly, the less-than-optimal conditions under which the event was conducted did not seem to correlate with student

engagement and the poor quality of the audio was not identified as an obstacle by the faculty observers.

### **Implications for Practice**

Interprofessional collaboration can be successfully achieved in an on-line format. This is important for educators to know as more universities offer hybrid and on-line learning options. Additionally, we found that student engagement is positively correlated with success in on-line learning. While educators strive to incorporate innovative ways to enhance learning it is important to recognize that student engagement did not suffer by using an on-line format. Both implications suggest that the interprofessional collaboration opportunity targeted with this activity was successful, allowing for students to work with and learn from each other while addressing a public health concern. We can only hope that this opportunity to work in a healthcare team, as well as those offered in-person will allow students to gain the collaborative skills necessary for clinical practice. Finally, technology, when working properly, can aid in the education of students when in-person learning is not feasible, however, significant attention must be designated ahead of time to troubleshoot potential complications.

### **Limitations**

Limitations associated with this research is the descriptive nature of the quantitative portion of this study. Descriptive data allow only for correlation and causation cannot be inferred. However, the mixed methods approach (with analysis of qualitative data) provided support for the conclusion that the remote activity was perceived as interprofessional.

### **Conclusions**

The experiences with remote delivery of interprofessional learning content show that interprofessional education is possible under extraordinary and limited circumstances. Despite their prior experience with IPE in teams that met face-to-face, the students recognized and accepted the event as interprofessional. Participants identified concepts associated with the original student learning objectives, such as, “collaboration”, “professional collaboration” ‘respectful discussions’, as having emerged in their groups’ discussions. The results of this research also align with existing knowledge showing that student engagement is an important factor in the success of online learning. The activity-based learning design that was used in the present study seems well-suited to keep the students engaged with the topic.

## Tables

**Table 1.** Student Exit Survey

item	Frequency (category)		
1 . To your knowledge, have you participated in previous IPE activities?	45 % (yes, more than one)	34 % (yes, one)	21 % (no)
2. Did you get the impression that today's activity was interprofessional?	84 % (yes)	16 % (no)	
3. Did you personally feel that you were a member of a functioning team?	74 % (Yes)	3 % (No)	22 % (Some of the time)
4 . Did you feel like you had a role on the team?	80 % (yes)	2 % (no)	17 % (Some of the time)
	<b>Mean ± SD</b>	<b>Spearman's ρ</b>	
5. Did you learn anything?	3.5 ± 1.0		
6. How engaged were you?	4.0 ± 0.9		

Rhos = 0.41, p ≤ 0.001

*Note:* Items 5 and 6 were scored on a scale of 1-5 (1= strongly disagree, 5 = strongly agree)

**Table 2.** Faculty Observer Questionnaire

Item (scale)	Mean ± SD	median	ρ
1. The audio for the session was (1-10)	6.7 ± 1.0	7	
2. The breakout team stayed on task and students were focused. (1-5)	2.1 ± 1.4	2	-.325
3. The breakout team divided responsibilities. (1-5)	1.9 ± 0.7	2	-.326
4. Most of the team communicated in a way that supported a team approach. (1-5)	2.1 ± 1.3	2	.093
5. Most students contributed to the group assignment. (1-5)	1.7 ± 0.5	2	.154
6. There were many students who did not participate in the assignment. (1-5)	4.6 ± 0.5	5	.375

7. Overall, I would rate this educational experience. (1-5)	3.9 ± 0.9	4
8. I would recommend this or a similar experience to my students again. (1-5)	3.9 ± 0.9	4

### References

- AACN 2021. The Essentials: Core Competencies for Professional Nursing Education. *In: AMERICAN ASSOCIATION OF COLLEGES OF NURSING* (ed.).
- AHA, A. H. A. 2019. TeamSTEPPS Pocket Guide. *U.S. Department of Health and Human Services - AHRQ*.
- GIDDENS, J., DOUGLAS, J. P. & CONROY, S. 2022. The Revised AACN Essentials: Implications for Nursing Regulation. *Journal of Nursing Regulation*, 12, 16-22.
- HEALTH PROFESSIONS ACCREDITORS COLLABORATIVE 2019. Guidance on developing quality interprofessional education for the health professions. Chicago, IL: Health Professions Accreditors Collaborative.
- INSTITUTE OF MEDICINE COMMITTEE ON THE ROBERT WOOD JOHNSON FOUNDATION INITIATIVE ON THE FUTURE OF NURSING, A. T. I. O. M. 2011. *The Future of Nursing: Leading Change, Advancing Health*. Washington (DC): National Academies Press (US)
- Copyright 2011 by the National Academy of Sciences. All rights reserved.
- IPEC 2016. Core Competencies for Interprofessional Collaborative Practice: 2016 Update. *In: WASHINGTON, D. I. E. C.* (ed.).
- LEE, J.-S. 2014. The Relationship Between Student Engagement and Academic Performance: Is It a Myth or Reality? *The Journal of Educational Research*, 107, 177-185.
- LYONS, K. J., GIORDANO, C., SPEAKMAN, E., SMITH, K. & HOROWITZ, J. A. 2016. Jefferson Teamwork Observation Guide (JTOG): An instrument to observe teamwork behaviors. *Journal of allied health*, 45, 49-53C.
- MCKINLAY, E., BANKS, D., COLEMAN, K., DARLOW, B., DUNGEY, G., FARR, T., FYFE, R., GRAY, B., KEMP, L., MITCHELL, M., MORRIS, C., MYERS, J., NESER, H., PERRY, M., PRICE, R., THOMPSON, W., WESTENRA, B. & PULLON, S. 2021. Keeping it going: the importance of delivering interprofessional education during the COVID-19 pandemic. *Journal of Primary Health Care*, 13, 359-369.
- MERRIAM, S. B. & BAUMGARTNER, L. M. 2020. *Learning in adulthood: A comprehensive guide*, John Wiley & Sons.
- POWER, A., PALAPAL SY, M., HUTCHINGS, M., COLEMAN, T., EL-AWAISI, A., FISTON KITEMA, G., GALLAGHER, J., HERATH, C., MCLARNON, N., NAGRAJ, S., O'CARROLL, V., OWENS, M., PARK, V., POPE, E., WETZLMAIR, L.-C., GREAVES, P. J. & ANDERSON, E. S. 2021. Learning in lockdown: exploring the impact of COVID-19 on interprofessional education. *British Journal of Midwifery*, 29, 648-652.
- RAJABALEE, B. Y., SANTALLY, M. I. & RENNIE, F. 2020. A study of the relationship between students' engagement and their academic

- performances in an eLearning environment. *E-Learning and Digital Media*, 17, 1-20.
- ROSEN, M. A., DIAZGRANADOS, D., DIETZ, A. S., BENISHEK, L. E., THOMPSON, D., PRONOVOST, P. J. & WEAVER, S. J. 2018. Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*, 73, 433-450.
- SCHOT, E., TUMMERS, L. & NOORDEGRAAF, M. 2020. Working on working together. A systematic review on how healthcare professionals contribute to interprofessional collaboration. *Journal of Interprofessional Care*, 34, 332-342.
- WETZLMAIR, L.-C., KITEMA, G. F., O'CARROLL, V., EL-AWAISI, A., POWER, A., OWENS, M., PARK, V., MCKINLEY, M., ANDERSON, E. S. & LODER-FINK, B. 2021. The impact of COVID-19 on the delivery of interprofessional education: it's not all bad news. *British Journal of Midwifery*, 29, 699-705.
- ZUBER-SKERRITT, O., WOOD, L. & KEARNEY, J. 2020. The transformative potential of action learning in community-based research for social action. *Action Learning: Research and Practice*, 17, 34-47.