Preparing Career-ready Students by Building Effective Virtual Teamwork Skills

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Conflict of interest statement: The authors declare that there is no conflict of interest.
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Project funding source: This project was supported by the 2021 Faculty Retreat Grant from the University of Illinois at Urbana-Champaign and the 2021 College of Agricultural, Consumer, and Environmental Sciences Teaching Enhancement Grant Program from the University of Illinois at Urbana-Champaign.
Acknowledgments: The authors want to thank Andrea Torres Diaz Deleon for her assistance with the course management system as an undergraduate research assistant.

Abstract

As the food industry becomes globally connected, it is essential to provide Food Science students with experience working in virtual teams before they enter the workforce. Working in teams virtually brings extra challenges due to a lack of face-to-face interactions. FSHN 230, Professional Issues in Food Science (asynchronously online), allowed students to practice virtual teamwork skills. Low, medium, and high-dosage team projects gradually increased the amount of teamwork needed for completion. Team effectiveness (psychological safety, dependability, structure and clarity, meaning, and impact) was closely monitored using team members' evaluations of the team at the middle and end of the semester. Students' perceptions of learning were assessed using a survey at the end of the instructional period. Across all teams, students were most likely to report experiencing psychological safety and dependability in their virtual teams and least likely to report experiencing the work as meaningful. Across all teams, students were most likely to perceive the virtual team project as assisting with learning about food science-related careers. As higher education continues to create real-world simulations to teach skills, such as virtual teamwork, more effort may be needed to help students connect classroom activities and career-ready skills to real-world expectations.

Keywords: virtual team, team effectiveness, career-ready, food science

One of the critical career-ready practices educators should assist students to develop is the skill of working productively in a team (National Association of State Directors of Career Technical Education Consortium/ National Technical Education Foundation, 2012). Not only teamwork, but working in virtual teams is a growing trend in the workforce, including among companies with different locations and within companies housed at various locations, domestically and internationally. Virtual teams and remote workers were on the rise prior to the COVID-19 pandemic (RW3 Culture Wizard, 2018) and are forecast to continue to increase into the future (Jacks, 2021). Even though college-level instruction moved back to face-to-face mode after the pandemic, food science educators should still provide and reinforce the opportunities for students to practice working in virtual teams.

The Importance of Teamwork

Teamwork as a classroom activity fosters student interaction and allows students to exchange ideas (Hiltz & Turoff, 2002). Learning in teams motivates higher-level cognitive thinking skills, as categorized by the Bloom's Taxonomy, as comprehension, analysis, synthesis, and evaluation (Hernandez, 2002). However, teamwork may not achieve its purposes without careful design and implementation. Students are most often upset about unfair contributions to classroom teams. Some high-achieving students may carry out more responsibilities, while others are only willing to put in a minimal amount of work (Artz et al., 2016). In addition, different expectations from team members regarding the progress and quality of work can cause friction (Gikunda et al., 2019). Furthermore, students complained that communication among team members could be time-consuming, especially when the class was offered virtually where students lack face-to-face interactions (Jarvenpaa & Leidner, 1998).

The Importance of Virtual Teamwork

The unique safety requirements required by the COVID-19 pandemic resulted in more opportunities for students to work in virtual teams. Students had the opportunity to develop relationships with each other during team projects, building a supportive community for academic success (Schmidt, 2019). However, virtual teams are not a unique teaching technique resulting from the COVID-19 pandemic; they have been used in classes to allow team members to work together regardless of their physical locations since the 2000s (Robert & You, 2013). Virtual teams have been used in online distance education programs where students work towards team goals from different geographical locations (Williams et al., 2006). For example, global virtual teams were used to train students on cross-cultural and virtual collaboration with increased confidence (Duus & Cooray, 2014).

Virtual teams are also used in corporations because of their convenience and low cost. Companies and businesses are becoming more globally connected, shortening the time allocated for product development, and outsourcing as a more common practice (Clapp, 2021; Jarvenpaa & Leidner, 1998). Specifically for the food industry, all sectors, from production to consumers, are connected via the global food supply chain (Webster, 2001). A recent employer survey conducted by the Association of American Colleges and Universities reported that only 37% of the employers agreed that college graduates are well prepared to work with others in teams (Hart Research Association, 2015). In addition, it is consistent across almost all employers (96%) that "all students should have experiences in college that teach them how to solve problems with people whose views are different from their own." (Hart Research Association, 2015, p. 4). Therefore, it is essential to provide our students with experience working with virtual teams before they enter the workforce and become part of the global food supply chain.

Challenges with Virtual Teamwork

An effective team shares some common characteristics. Team members trust each other, communicate effectively, and complete their work on time and of excellent quality, thus achieving the team's mission (Dennis et al., 2012). The Google re:Work framework identified five of the most important factors that impacted team effectiveness including: psychological safety, dependability, structure and clarity, meaning, and impact (Rozovsky, 2015). Due to the lack of face-to-face interactions, there are concerns about the performance of virtual teams (Handy, 1995). Building trust among virtual team members can be challenging. The concerns are based on the belief that trust is only developed through physical contact (Handy, 1995). Based on the Ecollaboration paradigm (Gignac, 2005), trust and the four domains (Work, Team, Organization, and Technology) affect each other and jointly contribute to team performance.

Communication among virtual team members may be more challenging due to lessened social context cues (Sproull & Kiesler, 1986). Although team members were aware of their own presence and the presence of others, interactions among students, especially members from different teams, can be limited if few community building and sharing information opportunities were offered (Beer et al., 2005). In addition, the virtual environment also reduced opportunities for informal conversations, making it hard for team members to establish a shared meaning (Nunamaker et al., 2009).

Due to the specific challenges associated with working effectively in virtual teams, the competencies required to be a contributing individual team player as part of a successful team are slightly different between virtual and traditional teams. According to Krumm et al. (2016), the skills of "leading and deciding" as well as "analyzing and interpreting" are more critical in virtual teams compared to traditional teams. Virtual teamwork skills, including collaboration and leadership, can be improved by using team projects in virtual instruction (Pienaar et al., 2016). Therefore, well-designed teaching techniques for virtual teams should be used to foster effective teams.

Fostering Effective Virtual Teams

Research has shown that a high-level of trust can be built among team members by certain behaviors, such as fostering social communications in addition to task related communications and encouraging team members to express their positive feelings, including dedication and passion (Watanuki & Moraes, 2022). Effective and efficient communication is the foundation for trust construction (Gignac, 2005).

In addition to trust, the effectiveness of teamwork can be evaluated using overall student learning and team-source learning. Team-source learning occurs when individual team members report that their knowledge and skills are improved after interacting with other team members (Lankau, 1997). Research has shown that positive perceptions toward teamwork, such as the belief that working in teams is essential for learning and the desire to be part of a team, can promote overall student learning and team-source learning in virtual teams (Williams et al., 2006). Therefore, instructors should encourage and facilitate student interactions when working in teams, such as providing students with opportunities to work in self-selected teams, using virtual platforms to foster communications and community building, and highlighting the effectiveness of collaborative learning using research-based evidence.

As a virtual team facilitator, active and intentional support for the team's motivation and collaboration is required because of the unique challenges of the virtual team dynamic. At the beginning of launching virtual teams, facilitators should organize interactive sessions so that team members can get to know each other formally and informally (Gignac, 2005). These sessions are also excellent opportunities for the facilitator to get to know the background, personal and professional values, virtual experiences, and familiarity with technology of all team members. Knowing this information helps the facilitator design communication plans to reduce communication complexity using technology.

The facilitator should also communicate with team members about the learning objectives, expectations, and assessment methods. Team members can develop a mutually agreed-upon team charter, which includes the team mission, deliverables, communication plan, roles and responsibilities, expectations, how to build and sustain trust, how to resolve conflicts, and diversity and inclusion (Wang & Bohn, 2018). During virtual teamwork, the facilitator should continue providing platforms for team members to interact and monitor individual and team participation and performance. It is not the facilitator's role to dominate the leadership of teams, but to ensure the team charter is applied and to provide accessible and appropriate support for teams to be effective (Gignac, 2005).

Objectives

The objectives of this research are to determine (1) the extent to which participants in course-based virtual teams identified the characteristics of effective teams within their virtual teams, and (2) if participants perceive working in virtual teams increases their learning about current topics and professional issues in food science.

Theoretical Framework

To guide this study, we adapted the Google re:Work framework as the context for understanding team effectiveness (Rozovky, 2015). The Google re:Work team effectiveness framework was developed from a large-scale analysis of team dynamics across both virtual and in-person teams (Duhigg, 2016). This framework has been cited among reviews of evidence-based team development competency frameworks (Hall et al., 2018; Lacerenza et al., 2018). The framework includes five concepts, or group norms, that are most important to the success of teams. These include (1) psychological safety, (2) dependability, (3) structure and clarity, (4) meaning, and (5) impact (Rozovsky, 2015). As defined by Google, psychological safety refers to each individual team member's perception of the team environment to take risks, such as asking questions, offering ideas or admitting errors. Dependability describes how the team perceives their members to complete their assigned tasks on time and with high quality. Structure and clarity describe how well the individual team members understand the goals and responsibilities of both the team and themselves as individual members of the team. Meaning refers to an individual's understanding of the team's purpose. An individual team member's judgement that the team's work is making a difference is described as Impact in the model.

Google's final report includes a discussion guide with questions about the five concepts of teamwork to use as improvement indicators or guiding questions for teams. Google also offers customizable templates with actual tasks that managers can use to increase the five concepts within their teams. Important to the current study, Google's work with teams used to develop this framework found that the colocation of teammates, or teams that met in the same location, was not connected to team effectiveness (Rozovsky, 2015). Therefore, using the five concepts of team effectiveness should be equally relevant to in-person teams and virtual teams.

Methods

Course Implementation

The course, FSHN 230 Professional Issues in Food Science, was offered as an asynchronous, online course for students majoring in Food Science in Fall 2021 at the University of Illinois at Urbana-Champaign. Students receive one credit hour for the course. Most students enroll in this class during their sophomore year and it is mandatory for graduation in Food Science. Even though the course was offered virtually, most undergraduate students taking the course lived in the campus community.

The course objectives were to discuss current topics in food science and professional issues, including internships, study abroad, leadership development, career options, undergraduate research, and graduate school options.

The course content was designed to scaffold team projects by gradually increasing the amount of teamwork needed to complete the course assignments. The scaffolded assignments were designed around the concept of low, medium, and high dosage team projects explained by Langlais (2018) and initially used for a family science collegiate-level course.

Professional Issues in Food Science began with a low dosage team project that included an ice breaker activity lasting two weeks. During the first week of class, the students chose one of the six teams to join after reviewing the introduction videos of their classmates. The sign-up was implemented using the Join Group self-sign-up function of the Canvas learning management system. Final teams included three to four members. After forming teams, each team met to get to know each other in the same team. Teams came up with a team name and explained why they chose their name. Teams also had to report two unique aspects of each team member and two common aspects among all team members. Lastly, they worked as a team to develop a travel plan, including the travel destination, transportation, lodging, activities, and food. This set of activities served as an ice breaker for team members to know each other and work as a team in low impact but entertaining assignments.

The medium dosage team project included several assignments with peer evaluations lasting four weeks. The first assignment utilized LinkedIn profiles. Students created their own LinkedIn profiles after attending a workshop, Building Your Powerful LinkedIn Profile, offered by the University of Illinois Career Center. Then students performed a peer review of the LinkedIn profiles for their team members. Students also had to respond to the feedback they received and revise the profiles accordingly. The second assignment involved interview skills. Individually, students practiced with the Mock Interview service offered by the University of Illinois Career Center. Working in teams, students developed a one-pager flyer on interview tips, including suggestions for before the interview, during the interview, and after the interview. Lastly, student teams drafted a diversity statement for their team using resources from the Illinois Writers Workshop on how to develop diversity statements and from the Illinois Institute for Inclusion, Diversity, Equity, and Access on racial injustice and systemic racism.

The final eight weeks of the course included a high dosage team project involving an informational interview with an industry professional. Each student selected a professional in the food industry from a list, prepared for and conducted a 30-minute interview to learn about their careers. After the interview, each student reflected on their own performance as part of the team. Based on what they learned in the informational interview, students developed a 5-minute presentation individually on what they learned from the interview and how they planned to utilize the information. Students then reviewed their teammates' presentations, synthesized information from these presentations, and worked together to develop one 5-minute presentation reporting the key findings from all team members to the whole class. Rather than students individually presenting what they learned from the informational interviews to the whole class, the team-based presentation approach was more effective in communicating the various career paths that each student learned from their interviews. Additionally, students had the opportunity to share their interview experiences with each other and work together as teams to reflect on what they have learned from this learning activity.

The class met synchronously over Zoom only once, near the end of the semester. During this session, four graduate students were invited to share their graduate school experience. Students in FSHN 230 had opportunities to interact with the graduate students and ask questions. The course learning management system included all assignments, video lectures, and instructions for team projects. Each team had to determine their own methods for communicating and meeting as well as roles for working together and completing projects.

Data Collection and Analysis

The use of human subjects in this study was designated exempt by the Office for the Protection of Research Subjects at our institution (Institutional Research Ethics Board Protocol Number 21873). Our study used an embedded mixed methods design (Creswell & Clark, 2017). To collect data on the perceptions of teamwork in virtual teams, data was analyzed from team members' evaluations of their teams midway through the semester and a survey at the end of the instructional period about the students' perceptions of teamwork in their teams and perceptions of learning in this course. The team evaluations and survey included quantitative, Likert-scale questions, as well as quantitative, open-ended questions. The imbedded qualitative data allows for further understanding of the answers to the quantitative survey questions.

The team evaluations included a five-point Likert scale question about each of the five concepts in the Google re:Work framework (Rozovsky, 2015). After each question, the student was given the option to elaborate on their answers, replying to the prompt "Why did you answer the way that you did?". At the end of the course, students completed a final survey with team evaluation questions developed from the Google re: Work team effectiveness discussion guide using a ten-point Likert scale. The final survey also asked students to self-evaluate to what extent they believe working on a virtual team improved their overall learning, interpersonal skills, and understanding of possible food science-related careers using the same ten-point Likert scale. Additionally, the survey included open-ended questions asking participants to explain a time when their team worked well together (specifically, "Can you describe a time when your FSHN 230 team worked well together?"), and when their team had a conflict they had to handle (specifically, "Can you describe a time when your FSHN 230 team had a conflict and how you handled the conflict?).

Following the imbedded design, data from the quantitative questions were analyzed first. Data from the qualitative questions was used to further understand the quantitative answers.

Results

A total of 23 students registered for the food science course. Students were divided into six teams with three or four members in each team. Of the registered students, 21 (91%) consented to use their class materials for this project. However, not all students completed the team evaluation and the final survey. Demographics of the students who completed this information on the final survey are included in Table 1.

Table 1.

Demographics of Research Participants from the Food Science Course

Categories	Number of students (percentage)
Year in School (n=15)	
Sophomore	9 (60%)
Junior	5 (33%)
Senior	1 (7%)
Race/Ethnicity (n=15)[1]	
Asian or Pacific Islander	3 (20%)
Hispanic or Latino	2 (13%)
White or European American	11 (73%)
Gender (n=15)	
Female	10 (67%)
Male	5 (33%)

Note. [1]Students could check as many as applied; one respondent chose more than one.

Characteristics of Effective Teams

The team evaluations allowed students to report to what extent their team met the description of the five concepts of the re:Work framework for effective teams. Table 2 shares the description for each concept, the mean score for each team, and the sample as a whole. A total of 18 students responded in both team evaluations. A one-way ANOVA revealed no significant differences between teams, which is not included in the table.

While there were no significant differences between teams, the class as a whole reported the highest mean response for both Psychologically Safety and Dependable concepts. They reported the lowest mean response for Meaning. When the data were analyzed by class team, not all teams rated meaning lowest. Team 2 ranked meaning as one of the most present concepts in their team.

Psychologically Safety is considered one of the most essential concepts in the framework (Duhigg, 2016). Participants explained their answers for this concept to reinforce the higher ranking listed. Some positive responses included:

"My team is fantastic. We get along very well, and we respect one another." (Team 5, Psychologically Safety ranking: 5).

"The group is very understanding, and we are all able to share our ideas and interact comfortably." (Team 2, Psychologically Safety ranking: 5).

However, not all participants felt psychologically safety in their group.

"I feel safe enough to take risks for the team. But I don't feel comfortable being vulnerable with my teammates because I do not know them well." (Team 1, Psychologically Safety ranking: 2).

Overall, Team 6 seemed to have the lowest mean responses for many of the items reported. They also had relatively high standard deviations, especially for the concepts of Meaning and Impact, indicating members perceived the team experience differently. One member of Team 6 who ranked their Impact as a 1 explained:

"I answered this way because our teamwork has been mostly just done by myself or rushed. It is hard to have an aim towards a goal when there is not a full team effort put in." (Team 6, Impact ranking: 1).

In comparison, another member of Team 6 explained Impact for their team differently:

"They produce meaningful projects." (Team 6, Impact ranking: 4).

Students' Perceptions of Learning

The end-of-semester survey asked participants to report if working on a virtual team improved their learning, interpersonal skills, and understanding of possible food science-related careers. Results are listed below in Table 3. A total of 14 students responded in the final survey. A one-way ANOVA revealed no significant differences between teams. Therefore, this information is not included.

The questions were presented on a scale from 1 to 10. The mean answers for all three questions were around 6, suggesting that participants did not disagree that virtual teams improved their skills, but were not in complete agreement. Even though the differences were not significantly different, Team 5 mean scores were highest for all three questions.

Participants had the option to share other thoughts about their virtual team experience in the course through an open-ended question response. The students that chose to respond (n=5) mentioned their indifference to virtual teams and a preference for in-person work.

"Wasn't good nor bad but sometimes I would wonder why some things would be done in a team setting." (Team 4 participant).

"I wish that the class was in person where I could meet with my teammates in person where I could communicate with them more effectively." (Team 1 participant).

The survey included an open-ended question asking about a time when their team had a conflict. Of the thirteen responses to the question, five (38.5%) said they did not have a conflict in their team. Seven participants (53.8%) described their conflict as related to communication and scheduling. As mentioned earlier, even though the course was asynchronous virtual, all the students were on campus.

Table 2.

Mean Responses to the Five Concepts of Effective Teams by Course Teams

Concepts	Team Responses Mean (Standard Deviation)						
	Team 1 n=2	Team 2 n=3	Team 3 n=2	Team 4 n=3	Team 5 n=4	Team 6 n=4	Class as a Whole n=18
Psychologically Safety *Do you feel safe to take risks and be vulnerable in front of your team members?*	3.50 (2.12)	5.00 (.00)	4.50 (.71)	3.67 (.58)	4.75 (.50)	4.75 (.50)	4.44 (.86)
Dependable *Do you and your team members get things done on time and meet the course expectations and each other's expectations?*	5.00 (.00)	4.67 (.58)	4.50 (.71)	4.33 (.58)	4.75 (.50)	3.75 (.50)	4.44 (.62)
Structure and Clarity *Do you and your team members have clear goals, plans, and roles related to team projects?*	4.50 (.00)	4.67 (.58)	4.00 (1.41)	4.33 (1.16)	4.00 (.50)	3.75 (.96)	4.28 (.83)
Meaning *Is the work personally important to you and your team members?*	3.50 (2.12)	5.00 (.00)	3.00* (NA)	3.33 (.58)	3.50 (1.29)	3.75 (1.26)	3.76 (1.15)
Impact *Do you and your team members feel your projects are important and impactful to your learning goals?*	4.50 (.71)	4.33 (1.16)	4.50 (.71)	4.00 (.00)	4.00 (.00)	3.50 (1.73)	4.06 (.94)

Note. Answers were on a scale of 1-5, with 1=Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Somewhat Agree, and 5=Strongly Agree.
* n=1 for this answer only

Table 3.

Mean Student Perceptions of Learning from Working in Virtual Teams

Statements	Team Responses Mean (Standard Deviation)						
	Team 1 n=2	Team 2 n=2	Team 3 n=3	Team 4 n=2	Team 5 n=3	Team 6 n=2	Class as a Whole n=14
Working on a virtual team improved my learning.	5.50 (6.36)	6.00 (5.66)	6.33 (4.73)	5.00 (1.41)	7.33 (.58)	3.50 (.71)	5.79 (3.29)
Working on a virtual team improved my interpersonal skills.	4.50 (4.95)	6.00 (5.66)	5.67 (4.51)	4.51 (.71)	8.67 (.58)	4.00 (4.24)	5.79 (3.45)
Working on a virtual team improved my understanding of possible food science related careers.	5.50 (6.36)	7.00 (4.24)	6.00 (4.58)	5.50 (2.12)	7.67 (1.16)	5.50 (.71)	6.29 (3.02)

Note. Answers were on a scale of 1-10, with 1=Strongly Disagree and 10=Strongly Agree. The response choices between the two ends were labeled with the numbers 2 through 9.

Therefore, some participants talked about meeting in person with their teams. In contrast, other participants spoke about coming up with timetables to allow everyone to do their work on their own schedules.

"Our biggest conflict in our group was communication where there was a lack of responses. But we were able to meet up and complete our projects on time." (Team 1 participant).

"Towards the beginning, we had communication issues because it was all virtual, but we fixed it by creating a GroupMe." (Team 6 participant).

We have had trouble finding a time that is convenient for all of us to meet. we handled this by setting a plan for group assignments that is flexible. We agreed to work on tasks before meeting so that our meetings would not take up too much time." (Team 5 participant).

Discussion

While participants in virtual teams during the food science course reported that their teams included the various aspects necessary to virtual teams, many still shared a preference for in-person teams. During 2021, students were still in the midst of pandemic protocols and slowly returning to face-to-face courses after a completely virtual experience in the Spring of 2020. As we develop

a “new normal” after the pandemic, it will be important to monitor students’ preference for virtual or in-person teams, and continue to provide the skills for positive interactions in virtual teams, as the concept is still relevant in the work place.

The primary conflict reported by participants involved communication. This is a common conflict in virtual teams (Garro-Abarca et al., 2021; Wildman et al., 2021). Communication is part of the second concept of the re:Work framework – Dependability (Rozovsky, 2015). Participants felt that it was harder to communicate given the asynchronous and virtual nature of the course.

If teaching this course again with virtual teams, it may help the process to provide participants with training on how to work effectively and communicate in virtual environments (Nunamaker et al., 2009). The instructor used an experiential design for the virtual teams, allowing the students to learn from their experience and develop their skills in virtual teamwork as they worked in virtual teams. Different teams reported different ways of solving their communication conflicts, such as using GroupMe to communicate or working individually without group meetings. However, it could have been beneficial for the instructor to provide these options, among others, for the group to reference when they began their team projects—for example, using a learning management system message platform or university email to contact team members. Hence, students knew where to expect to receive communication. This strategy will help students communicate more effectively by initiating discussions among team members on choosing the communication platform and increasing their virtual presence.

In addition, the various important concepts related to virtual teamwork were not covered in the course material, just used for the research portion of the course. If this course is taught again using virtual teams, we would add a module that allowed the students to describe and discuss the aspects of virtual teamwork in general before applying to their own experiences. We would make education on virtual teams part of the curriculum in addition to the food science content in hopes of scaffolding the students’ understanding of what to look for in their virtual team and how to act as a productive and empathetic team member.

The small, medium, and high dosage team projects, as introduced by Langlais (2018), did not seem to elicit much impact on the participants. As this was a built-in feature of the course and not part of the course evaluation, proper methods to analyze the effect of scaffolding team projects were not included in the research design. Nevertheless, none of the participants answering open-ended questions mentioned or implied that the lower dosage project helped build a psychologically safe environment for teamwork. However, some participants expressed that knowing members of their groups before the course helped build teamwork.

As with all surveys that utilize Likert scales, our Likert scale survey instruments used in this virtual team analysis allowed for variation in individual interpretation (Eutsler & Lang, 2015; Nadler et al., 2015). One cannot with certainty know that what one person deems a three on a Likert scale is the same definition another person gives for the same response. The open-ended answers allow for more interpretation of the answers but interpreting the respondent's perception to a Likert scale is a challenge with this data collection method.

Our study’s generalizability is limited by the small sample size. The course only included 23 participants. Even though 91% consented to participation in the study, not all students completed all the various measures used in the analysis. Using a mixed methods approach and imbedded design, we used the answers to the open-ended questions to further understand and explain the survey quantitative data. Our approach allowed us to compare the students’ explanation of their answers to the statistical results, increasing the validity of the findings (Creswell & Clark, 2017; Onwuegbuzie & Collins, 2007). However, further studies should continue this work for an improved understanding of the benefits and challenges relating to teaching with virtual teamwork components.

Summary

Overall, participants in virtual teams agreed that their teams were effective, but many teams found it was challenging to find the importance of the work to themselves and to the team members. In addition, students did not disagree that the experience of working in virtual teams improved their learning, interpersonal skills, and understanding of the food science related careers, but they were not in complete agreement

Participants in general prefer in-person teamwork to virtual teamwork. However, due to the small sample size of this course, further research on this topic is needed. This response could also be related to where students are emotionally in relation to courses and online learning. Many studies reported that undergraduate students were involved in so much virtual learning that they failed to see the benefits (Wildman et al., 2021).

Repeating this course, it might be helpful for students if one early session met synchronously or in-person to allow students to connect (Nunamaker et al., 2009) or if the course included a shared and expected method of communication. Alternatively, the instructor could designate one team member to start the team communication or provide suggested roles for the team to use when dividing up responsibilities, including scheduling team meetings.

This course took place in Fall 2021 when many courses were moving back to face-to-face. Although most of the courses are offered in-person now, to prepare students for a global workforce in the food industry, we need to continue to teach students the skills necessary to work in virtual teams. Future coursework could include more discussion on the use of virtual teams in the global workforce to help students see the benefit of virtual team learning during college.

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