Team Building that Prepares Students for Teamwork Competence

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Abstract

This paper describes an innovative two-step team building pedagogy applied in multiple management classes. We assessed whether such step-by-step engagement in two active and experiential learning exercises in consecutive class sessions can help students progress toward working competently in teams without instructor directives and advice. In the first step, we assigned students to classroom teams and engaged them in an escape room exercise (ERE) for 45 minutes. In the second step, we provided an agenda through which students worked collaboratively to form their Team Charter (TC) aimed at planning both process and project outcomes. At the end of each activity, students wrote individual reflection reports through which they expressed their learning about effective teamwork, need for change in behavior, and motivation to incorporate and further improve their teamwork competence. Qualitative analysis of students' reports revealed that: (a) the ERE serves to produce cognitive and emotional learning which motivates students to act more competently in teams, and (b) the TC activity provides opportunities to act on their learning, practice new behaviors and incorporate new behavioral intents when working on their team project. This research answers the call for team building through active learning techniques which can be implemented by college professors seeking to help their students' improve teamwork competence in a timely and time efficient manner.

Keywords: team building, team effectiveness, classroom teams, collaboration, experiential learning, higher education.

1. Introduction

Educators, scholars, and hiring managers agree that college students must graduate with knowledge and skills they can integrate into workplace teams (Petkova *et al.*, 2021). College instructors, particularly in business programs, have responded by assigning students to classroom teams, and requiring them to complete collaborative projects (Seow & Shankar,

2018). The purpose is to foster a classroom environment inspired by notions of 'learning by doing.' While such practice is common, it is unhelpful. The literature widely criticizes this approach and contends that it leads students to view teamwork as a "requirement" rather than an opportunity for skill development and that the lack of guidance leaves them feeling confused, stressed and demotivated due to problems such as social loafing and lack of leadership (Aaron *et al.*, 2014; Petkova *et al.*, 2021). Therefore, scholars have called for more instructor interventions and provided advice – yet, employers continue to complain about fresh graduates lacking in teamwork competence (Morgan & Stewart, 2019).

A workplace team is likely to be successful when team members exhibit competence which comprises "the set of knowledge, skills, and attitudes required to work with others and carry out tasks and common goals" (Nadal *et al.*, 2015, p. 355). Teamwork competence refers to a nine-part construct (see Hebles *et al.*, 2022 for review). Members in competent teams: (a) jointly set goals and objectives, define mission, key milestones and resource requirements, (b) plan ahead, organize their contributions, and coordinate individual efforts, (c) engage in constructive conflict to trigger creativity and prevent groupthink, (d) proactively evaluate their team's performance gaps, and adjust when needed, (e) communicate in ways that produce a shared understanding of the situation and problems, (f) exhibit positive attitude towards teamwork and confidence in the team's ability to succeed, evident from enthusiastic participation and perseverance when faced with challenges, (g) monitor other team members' performance, create developmental feedback that improves contribution ad productivity, (h) support other members who need help, and (i) exhibit a learning orientation, remain vigilant, and initiate change in team members' attitudes and skills.

The literature is clear that higher education needs to do more to increase students' preparation for competent teamwork. However, the reliance on instruction that produces adherence rather than learning and commitment that fosters collaboration in classroom teams – seems ill-advised. Ways of producing learning without teamwork instruction deserves fresh attention. Therefore, we report the results of a two-step team building study that found: (a) an escape room exercise (ERE) we implemented in management classes produces cognitive and emotional learning through first-hand experience and reflection rather than instruction, and (b) a follow-up classroom exercise which produces evidence that students can translate their cognitive and emotional learning into behaviors and behavioral intents that signal the emergence of teamwork competencies.

2. How Team Building Helps and Where It Falls Short

Scholars advise instructors to go beyond simply assigning team projects and expecting teamwork competence will follow (Schartel-Dunn et al., 2021). Instead, many advise college professors to conduct *team building* which refers to providing instruction, guidelines, and

opportunities for interaction among members that result in improved communication and coordination of individual efforts and ultimately lead to successful team-produced outcomes (Kuznetsova et al, 2023). For instance, the literature suggests that instructors: (a) use lecture and class discussion at the start to highlight the benefits of teamwork, educate students on the stages of team development, and conflict resolution methods (Seow & Shankar, 2018), (b) encourage reflection and discussion on best and worst team experiences to serve as cautions and guide current classroom teamwork (Bacon et al., 1999), (c) assign student teams to produce a charter for defining rules of engagement to serve as guardrails for contributions and aid accountability (Hunsaker et al., 2011; Aaron et al., 2014), and (d) require mid-project formative and post-project summative peer feedback and evaluations (Jassawalla & Sashittal, 2017). The weakness in these suggestions is that they translate largely into instruction and guidelines given to students whereas the literature contends that if students know, it does not mean they can also do (see Ginting et al., 2020). When team building consists of passive learning strategies, it evokes at best cognitive awareness, and short-term adherence but not long-term teamwork competence (Huang et al, 2023; Hunsaker et al., 2011). The state of the art points to the need for designing active learning exercises and engaging students through them in early team building that produces cognitive, emotional, and behavioral learning about teamwork – *without any instruction* about "follow the rules."

3. An Innovative Two-Step Team Building Process to Instill Teamwork Competence

We incorporated team building at the beginning of the term with two classroom activities implemented in two consecutive 75-minute class sessions. The objective was to develop students' teamwork competence which they could practice throughout the term while working on their team project.

Step 1. Inspired by the principles and benefits of active learning (Huang et al., 2023), we utilized an escape room exercise (ERE) designed by a co-author. The purpose was to engage learners in interaction and guided reflection through which students generate their own cognitive and emotional learning about teamwork *without* instruction. We had 137 students working in 36 teams (3 to 5 members per team) and enrolled in eight classes over three semesters (6 undergraduate Organizational Behavior and 2 graduate Leadership in Organizations classes; 36% female, 64% male; 85% undergraduate, 15% graduate students). The participation was managed and monitored by two of the co-authors. To escape the room, student teams were required to complete seven consecutive puzzles, each one different from the others. For details of the ERE puzzles see https://bit.ly/InternOpDB

While each class received broad guidelines for participating in the ERE, no instruction about teamwork was provided. The engagement was competitive; all teams were challenged to escape

the room in 45 minutes. Only a few teams succeeded (7 out of 36 teams finished the challenge with only 4 out of 8 classes in which a team finished first and "won" the competition). Upon completion of the ERE, each student was asked to reflect upon and document their experience-based learning. Their written reports were content analyzed and provided evidence that participation in the ERE:

A. Led students to actively produce cognitive and emotional learning about how and why: (a) working on complex projects is better as a team than individually, i.e., individuals cannot achieve complex objectives alone nor by simply combining individually completed tasks, (b) defining a game plan as an initiating task can dramatically improve contribution, cooperation and coordination, (c) teams without leaders can meander off track, grow frustrated, and give up, and (d) teams afraid of constructive conflict can fall victim to groupthink. The triggering of negative emotionality from failure to escape the room transformed ways of thinking and frames of reference in ways that produce improved teamwork without instruction.

B. As a result of cognitive and emotional learning, students rapidly identified new behavioral intents related to: (a) communicating more openly and frequently with others to generate better solutions more efficiently, (b) developing a charter to guide contributions and serve as guardrails, (c) lead the team, and (d) initiate constructive conflict – also without any instruction about teamwork.

C. **Step 2**. In the next class, we added a second team building exercise to gather evidence of behavioral learning; i.e., did students do what they said they had learned in Step 1? A major theme in students' post-ERE reflection reports was their felt need for, and the strong intent to devise an initiating game plan to guide their team. Hence, in Step 2, we provided an agenda for each student team to produce a guiding team charter (TC). Based on the literature advocating for the TC (e.g. Aaron et al., 2014; Hunsaker et al, 2011), students completed the agenda by: (a) assigning roles to each member (leader, note-taker, manager, coach), (b) deriving ground rules in terms of 5 do's and 5 don'ts for future team meetings based on their learning from the ERE, (c) reviewing the team project expectations and developing consensus on the team's mission and milestones (interim tasks and deadlines) for successful and efficient project completion. For the next homework assignment, each student submitted a written report of the changes in their beliefs and attitudes about teamwork after the ERE, how those changes impacted their behavior during the charter-creation and led to behavioral intents noted in terms of specific items in their TC.

4. Students' Learning about Teamwork Competence

The 137 individual homework reports written by students at the end of the two-step team building process were content analyzed and served as a basis for our exploratory findings. This

process of two consecutive team building activities, each followed by reflection reports, produced evidence that students demonstrate the capacity to translate their cognitive and emotional learning into actions and make progress toward developing teamwork competencies. We summarize our key findings here which illustrate the linkages between: (a) five elements of teamwork competence aligned with students newly learned teamwork behavior in Step 2 (based on Hebles et al, 2022), (b) the changed beliefs and attitudes about effective teamwork due to experience in the ERE, (c) changed behavior and increased motivation for teamwork competence during the TC activity, and (d) representative quote from students' reports.

4.1. Planning and Coordination

This dimension of teamwork competence arose from the following changes: Students' old belief about teamwork was that it is best to dive into the project and divide tasks among team members to finish more efficiently. Based on the ERE, they formed a new conviction that the team is more efficient when members first draw a game plan for working together and achieving shared goals. As one student wrote: *"After the exercise, it became clear to me that in order to work effectively in teams, we need to set clear goals from the start and micro goals to accomplish said end goal. It will help everyone get on the same page and work progressively towards the answer."* As a result of this cognitive and emotional learning from Step 1 of team building, students expressed change in their own behavior and behavioral intents in Step 2 as follows: Conversation is more open and honest about distribution of work. Team members work enthusiastically on their TC. Behavioral intent was indicated in a new ground rule in the TC: Each member must complete tasks assigned to them and work equally.

4.2. Communication

This element of teamwork competence resulted from the following changes in students' beliefs, attitudes and behavior: Their old assumptions about working in teams consisted of working separately on their assigned task and communicating only when they complete it; expressing their idea or opinion only when they feel 100% sure it is right. After the ERE, they learned that the team works better when they freely and frequently discuss ideas, ask questions, express confusion, request help when unable to progress. A student remarked: *"Typically in groups I tend to do my individual part of the work and not discuss much with other members. I realized after doing this exercise that collaboration is a key aspect of group work. The groups that were the most connected, finished the fastest due to the different perspectives and ideas of different collaborators."* Another student added: *"I also learned that no communication within the group will lead to dead-ends, ultimately leading to low morale as a team, making them give up. Communication tremendously impacted our team charter for the better."* The resulting behavioral changes in Step 2 included notably more animated discussions with members sharing ideas and opinions more openly and honestly, raising questions and confusion quickly. Intent

for future expected behavior was encapsulated in the ground rule: Each member must make explicit what they have in mind, ask questions and clear up confusion immediately.

4.3. Performance Management

This aspect of working effectively in teams flowed from students articulating their recognition of the following: Old assumption that everyone knows how to work in teams, therefore there is no need for a leader. The ERE lead them to change this and gain a new appreciation for having a strong leader to ensure equitable contribution and engagement, keep the team on track - evident from the following student comment: *"Another change in my thinking was the (old) idea that no one had to speak up and take the role of a leader. In our group (in ERE) no one stepped up to be a leader and therefore we were moving at a slower pace. I have a new belief that one member needs to be the leader. Having one person step up and taking control is what will lead the team to achieve goals and keep progressing. (In the TC meeting) I stepped up as a leader during this task as I learned the importance of this in the earlier exercise."* Thus, the behavioral change in Step 2 included many students taking the team leader role immediately, working to avoid distractions, digressions, and ensure equitable contribution and engagement. The ground rule encapsulating intent for future behavior on this teamwork competency is: Team members will understand the multiple roles necessary for effective teamwork and take on the responsibilities and functions as needed.

4.4. Supportive Behavior

We identified this component of teamwork competence based on the following shifts in beliefs, attitudes and behavior students reported: Prior to the ERE, students believed that it is important to focus on their assigned task, not important to listen to others or help them. Their new conviction from their ERE experience is that listening has a key role in effective teamwork to ensure everyone is on the same page, build on each other's ideas and help each other to reach solutions efficiently. A student explained: *"Prior to this exercise, I did not truly consider the role that listening has in groupwork but this exercise made me realize the power of giving your full attention to someone when they are speaking. It not only speeds up all work processes but can lead to breakthroughs that may not have occurred without the thoughts and ideas of multiple people. Given that every member has a distinct perspective and thought process, it is vital that each member listen as well or as much as they speak in order for the group to reach peak efficiency."* As a result, in Step 2 students report that they often *listen* more, pay attention to others' ideas and views, ensure all voices are heard. The conviction was strong enough to include in a new ground rule for what was expected in future team meetings: Team members will listen actively, utilize different ideas and perspectives, provide their own to build better and quicker solutions.

4.5. Conflict Management

We find that students gain this insight best through their experiential learning and reflecting on changes needed in their prior beliefs about teamwork. Students admit that they previously believed that the team works best when members are like-minded and very agreeable. Based on their ERE experience, for many the disappointment of not winning or completing the series of puzzles, led to a new conviction: the team works best when members bring different ideas and opinions to the table, openly discuss, and respectfully disagree and question ideas when needed. A student admitted: *"Before this exercise (ERE), I found myself often trying to avoid any sort of conflict within a team setting. However, after this exercise I switched this opinion and believe constructive conflict is an important aspect to an effective team. It generated creativity in the problem-solving process, and allowed us to talk openly and respectfully through certain opinions and disagreements to come up with the best possible decision."* Therefore, in Step 2 of team building, many students report freely expressing difference of opinions, frequently challenging each other's views and welcoming others' suggestions for change. The new ground rule incorporated from this learning: Constructive conflict is necessary to avoid groupthink. Team members should not hesitate to question and challenge ideas, opinions, or decisions in the team.

5. Conclusion

We asked all participants, prior to their engagement in team building, about their previous experiences with teamwork. *All* reported prior experience working in teams, many reported extensive experience – 77% said they had previously worked in over 10 teams. However, based on the ERE in Step 1 of team building, it appears that previous team experience led to teamwork *incompetence*, e.g. dividing up tasks and working separately, whitholding ideas and diverse opinions, and giving up rather than admitting confusion or critiquing others' ideas. Our finding lends support to the notion that assigning students to teams without engaging them in early activities designed to improve their teamwork competence often leads to detrimental results. Our two-step team building could help avoid these problems. After Step 1, given that most teams did not complete all the puzzles in the ERE, participants reported a felt need to change their thinking and actions, set aside their social anxieties in favor of interacting with others who could help and support them in accomplishing shared goals. To instructors who continue to exhibit faith in the notion that simply assigning students to classroom teams and, at best lecturing them about best practices, can produce teamwork competencies, our study produces sobering evidence to the contrary. A careful engagement of students in exercises and activities designed to produce the important cognitive and emotional learning seems essential, followed by exercises that require students to translate their learning into actions. Future research could expand on our study with quantitative measures to confirm our findings as well as test the impact of this two-step team building on the longer term collaboration achieved by student teams

working throughout the term on their team project. A comparison could also be drawn between teams that experienced this two-step team building and those that did not, students' satisfaction levels after working in a classroom team with this two-step team building approach compared to teams that only apply the team charter activity. Finally, this two-step team building could be examined in classes in other disciplines since working in teams is an ability valued in various fields including health care and information systems.

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