

The use of a project management tool in distance education to enhance students' engagement in group work

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Abstract

Group work is a widely embraced learning and assessment method that holds considerable importance in both in-person and online settings in higher education. However, group assignments introduce distinctive challenges, including unequal contributions, team conflict and divergent work ethics, leading to a pervasive reluctance among students to engage in university-level group work. Despite these concerns, group work continues to be a vital assessment approach for students, equipping them with essential skills for professional environments that prioritise teamwork and collaboration. In this opinion piece, I explore students' reluctance to engage in group work and introduce strategies and tools to transform unproductive group work into a collaborative learning experience. The discussion outlines implications for academics and learning developers, contributing to the ongoing discourse on collaborative tools in higher education assessments. With a primary focus on the challenges faced by distance-learning students, the opinion piece delves into the potential of Trello, a collaborative project management tool, to address these challenges and enhance collaborative learning in distance education. Its purpose is threefold: (1) enhance academics' understanding of students' reluctance to engage in group work, (2) enrich the experience of distance-learning students by highlighting the multifaceted benefits of collaborative learning in their educational journey that extend beyond traditional classroom boundaries and (3) propose innovative solutions to educators for fostering a culture of collaboration for more effective group work.

Keywords: distance education; collaborative learning; Trello; group work; student engagement; online learning; higher education.

Introduction

Group work is widely employed in higher education assessment and is regarded as an effective learning tool (Slavin, 1980; Springer et al. 1999; Jaques, 2000; Johnson and Johnson, 2009). Its inclusion in instructional design has been associated with a range of benefits, including enhanced academic performance (Chiriac, 2014), improved comprehension (Bouton and Garth, 1983), development of interpersonal skills (Mendo-Lázaro et al., 2018) and increased student satisfaction (Burke, 2011).

Some scholars contend that online group work is as effective as traditional in-person collaboration (Smith et al., 2011). Conversely, others emphasise challenges stemming from delayed feedback and potential miscommunications due to the absence or limited availability of visual cues in online interactions (Chang and Kang, 2016). These hurdles in the online environment may negatively affect individual motivation to engage in online courses, potentially diminishing collaborative efforts compared to traditional educational settings (Smith et al., 2011). Therefore, educators are faced with a need to explore innovative solutions and introduce interactive and social elements into instructional design – particularly in online contexts – and to address the obstacles to group work, enrich the student experience and promote effective collaborative learning. In this opinion piece, I argue that such tools exist and propose the implementation of Trello as a solution for effective collaborative group work. After addressing the challenges and benefits associated with group work in the context of students' learning experiences, I offer valuable recommendations for educators who wish to integrate Trello into online group work in higher education.

Understanding student reluctance to engage in group work

Student reluctance to engage in group work in university-level settings is influenced by several key factors. Among these, challenges in maintaining productive meetings, difficulties in reaching consensus and ensuring effective communication are particularly noteworthy (Smith et al., 2011; Chang and Kang, 2016). Additionally, there are coordination costs associated with group work that individual work does not entail,

including the time spent coordinating schedules, arranging meetings, corresponding, making collective decisions and integrating each member's contributions. Group formation strategies play a significant role in shaping students' perceptions, with many students favouring autonomy in selecting their group members (Chapman et al., 2006; Hilton and Phillips, 2010; Russell, 2010).

Concerns about workload equity, driven by unequal contributions, often lead to frustration among students (Pauli et al., 2008). One effective approach to mitigating conflicts and addressing group members who neglect their responsibilities is that of maintaining a small group size. In a small group, it becomes challenging to be a 'loafer' or a 'slacker' (Davis, 1993). Additionally, assigning roles and responsibilities within the group makes it significantly harder to be a slacker as goals are clearly outlined for each member.

Vance et al. (2015) found that online students had more negative attitudes towards group work compared to in-person students. Factors associated with dissatisfaction in online group work include lack of communication, low individual accountability and questionable behaviours by group members (Tseng and Yeh, 2013). Boling et al. (2012) concluded that group work did not enhance the sense of community in online units. To tackle these concerns, it is imperative to cultivate dynamic and socially interactive group work formats that foster a sense of community and belonging within virtual classrooms. The integration of interactive tools into instructional design can significantly enhance the student experience and facilitate effective collaborative learning. For example, the platform Teams can be used to create a sense of community, to ensure steady online group interactions and to ensure equal participation by assigning roles to group members (Jones, 2021).

The importance of collaborative skills in higher education

Despite the challenges observed in online group work, as highlighted by Vance et al. (2015) and others, the general benefits of group work in various educational settings have been well documented. Research indicates that group work can positively impact academic performance, comprehension, interpersonal skills and student satisfaction (Slavin, 1980; Johnson and Johnson, 2009; Gaudet et al., 2010; Burke, 2011; Chiriac,

2014). Group work is also recognised for its potential to enhance communication, mutual understanding and wellbeing (Chanda-Gool and Mamas, 2017). This collaborative approach encourages a sense of belonging and satisfaction among students, driving active engagement in their educational journey and reducing procrastination in schoolwork (Jaques, 2000; Wentzel and Watkins, 2002; Koppenborg and Klingsieck, 2022). Beyond these academic achievements, group work not only equips students with valuable leadership and teamwork skills highly valued by prospective employers (Blowers, 2000) but also promotes social learning and the acquisition of transferable workplace skills (Fearon et al., 2012).

Collaborative learning, as defined by Salmons (2019), involves the meaningful engagement of two or more learners in constructing knowledge, negotiating meaning and solving problems. Collaboration goes beyond cooperation by emphasising interactive and coordinated efforts, shared decision-making and engagement. While cooperation involves individuals working together, often by dividing tasks among participants, collaboration, on the other hand, is a more interactive and mutually engaged process (Salmons, 2019). Unlike a teacher-centred approach, collaborative learning places the student at the centre, affording them a sense of autonomy over their educational journey. These skills, nurtured through collaborative activities, extend their influence far beyond the classroom, empowering individuals to actively co-construct knowledge, connect, elaborate on class materials and provide alternative viewpoints (Bouton and Garth, 1983; Jorczak, 2011). Teachers can facilitate online collaborative learning by providing tools like Zoom, Teams, Moodle, Google Apps for Education (GAfE) and Trello to support student and teacher collaboration through discussions, group work, and shared resources (Corradi, 2021).

Despite their benefits, collaborative endeavours often involve navigating the discomfort arising from diverse viewpoints. Arao and Clemens (2013) argue that striving for a completely safe space may inadvertently maintain existing power dynamics. Instead, they advocate for the concept of a 'brave space'. Educators play a pivotal role in creating environments where students engage in constructive conversations, express opinions freely, and develop social and emotional skills. Embracing the idea of 'brave spaces' aligns with the evolving landscape of higher education distance learning, promoting a more

profound exploration of diverse perspectives (Arao and Clemens, 2013). This shift reflects the dynamic nature of genuine dialogue, fostering transformative learning experiences and a collective commitment to understanding and addressing social inequalities.

To effectively tackle the complexities of group work in online education, I explore the application of Trello in this section. Trello, a web-based tool designed for project management, offers a straightforward platform that aids in structuring tasks, clarifying roles, and fostering better communication and responsibility within group projects. The following tips aim to illustrate the practical ways in which Trello can be leveraged to enhance collaborative processes, ultimately boosting student participation and efficiency in group assignments:

1. **Small group formation:** Create Trello boards for smaller groups, ensuring each group consists of a manageable number of members for efficient collaboration.
2. **Defined roles:** Ensure that each group member on Trello has a clearly defined role and responsibilities, which can be documented on the board. Clear role definitions promote accountability.
3. **Scheduled virtual meetings:** Utilise Trello to schedule and document virtual group meetings. Encourage students to set regular meeting times to discuss progress updates, sharing of insights and addressing challenges.
4. **Digital collaboration:** Emphasise the use of Trello's digital tools for remote meetings, including task assignment, file sharing and commenting features.
5. **Time management:** Use Trello to help students plan and track time-consuming stages, ensuring they are aware of project milestones and deadlines.
6. **Communication skills:** Encourage students to enhance their communication and conflict resolution skills by using Trello's commenting and discussion features for productive interactions.
7. **Project integration:** Allocate a section on the Trello board for integrating various parts of the project, helping students see the bigger picture. Emulating real world practice helps develop students' transferrable skills.
8. **Accountability and evaluation:** Combine group assessments with individual assessments on Trello to promote individual accountability within the group

context. Implement process reports on the Trello board, where students periodically reflect on their collaborative efforts and teamwork. Use peer evaluations for insights.

9. **Project understanding:** Verify that all students comprehensively understand the project's objectives and expectations. Trello can serve as a repository for project-related documents and instructions.
10. **AI-powered insights:** Consider integrating AI features or tools that provide data-driven insights into the Trello boards. These insights can help students identify patterns in the group's collaboration, such as which tasks take longer to complete, where bottlenecks occur, or which team members might require additional support. AI can analyse the data within Trello and offer suggestions for improving efficiency and productivity, making the collaborative process even smoother.

As we explore the integration of Trello in distance education, careful consideration must be given to the balance between technological affordances and pedagogical goals. Kirkwood and Price's (2014) research prompts a critical reflection on whether the focus should solely be on the technology itself or on how the technology enables effective teaching and learning. For instance, when recommending the use of Trello, it is essential to shift the emphasis from the tool itself to the educational objectives it supports. Rather than asking: 'What can I use Trello for?', educators should ask: 'How can Trello enable students to achieve the desired learning outcomes?' Moreover, Kirkwood and Price's (2014) point about technology being secondary to the educational purpose aligns with the need to view tools like Trello as facilitators rather than as drivers of educational goals. In the context of online group work, Trello serves as a means of streamlining collaboration, but its effectiveness lies in how well it supports the overarching educational objectives—fostering teamwork, communication skills and project management proficiency. When exploring and implementing collaborative tools like Trello, educators should be guided by a clear understanding of the educational goals they aim to achieve. This perspective ensures that technology remains a supportive element in the service of effective teaching and learning rather than an end in itself.

In addition to these tips, it is crucial to acknowledge that, while Trello offers a user-friendly platform, implementing it may pose challenges. Some potential cons include a learning curve for students unfamiliar with the platform, potential technical glitches and the need for consistent internet connectivity. Educators should be prepared to provide guidance and support during the initial phases of implementation. Trello has proven particularly effective in fields requiring project management, such as business studies or computer science. Its visual interface facilitates task tracking and collaboration, making it well-suited for projects with clear milestones. As education embraces digital platforms, Trello emerges as a promising tool for enhancing collaborative learning in the distance education landscape.

Conclusion

In summary, this opinion piece highlights the challenges faced by students in group projects. By recognising these challenges, educators can utilise Trello to mitigate coordination costs, facilitate effective group formation strategies and address concerns related to workload equity.

I highlight the pivotal role of collaborative skills in preparing students for their future careers. Embracing innovative technologies, such as collaborative tools like Trello, is essential to bridge the gap between student reluctance and the growing demand for collaborative skills in the modern professional world. Asynchronous communication on Trello accommodates varied schedules, promoting a rich diversity of thought and experiences among distance education participants. In essence, Trello serves as a dynamic platform that harmonises with the principles of 'brave spaces', enhancing collaborative and inclusive learning environments in the digital landscape.

I advocate for a shift in how academics approach group work, particularly in the realm of online education. Equipping faculty members with the skills to create a supportive online environment where students feel confident and motivated to engage in group activities is crucial. Moreover, the evolving role of AI in higher education, especially in distance learning scenarios, should be considered. By leveraging AI features in conjunction with Trello, students can effectively manage their group projects, improve collaboration and

predict and address potential challenges, thereby enhancing the overall group work experience. This forward-looking approach is essential for meeting the demands of an interconnected and digitally driven future.

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