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Leadership learning through games in co-curricular settings

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Abstract
Developing leaders through games in the co-curriculum provides an opportunity for creative and innovative program design across learning taxonomies. Game-based learning provides a value-added experience for busy students who are balancing competing demands on their times. Additionally, co-curricular participants are often more receptive to less-traditional pedagogy incorporating technology, social connections, and fun. This article offers practitioners insight into developing and assessing games for co-curricular experiences.

INTRODUCTION

Games do not have to be limited to mere entertainment – they can be integrated into multiple facets of life. Many games transform an inherently mundane activity, like exercising or going to the post office, into an exciting and fun way to learn transferable skills. Co-curricular experiences are uniquely suited for the use of games to develop leadership skills. It is well documented that out-of-classroom experiences profoundly impact students' leadership growth and development (Kuh, 1995). Involvement in clubs and organizations, fraternity and sorority life, campus recreation, campus employment, and leadership programs all support the acquisition of career-readiness skills, including communication, critical thinking, collaboration, problem-solving, leadership, and many others (Peck, 2017). Furthermore, co-curricular involvement has proven impacts on student retention, success, and engagement (Astin, 1993). Practitioners who develop and lead co-curricular programs have an opportunity to use games to create powerful learning experiences.

Games are an innovative way to integrate leadership learning within the co-curricular realm through play and intentional reflection (Marfisi-Schottman, 2019; Smith, 2019). As presented in earlier articles in this NDSL issue, games rely on experiential components to engage players. Often, game experiences scaffold prior lessons and use tutorials to make sure people learn more about the game as well as strategies that can lead to a successful outcome. It is not uncommon for a game to teach additional skills or allow the development of more powerful abilities later.

In education, constructivism is an approach often associated with a statement like "learning by doing." The central premise of constructivism is that a student should spend time actively working, researching, experiencing, and engaging with the educational content to master it (Piaget, 1973). Playing games allows players to engage in productive inquiry, explore new things, and engage in social interaction while learning new skills. While we contend that the use of games within co-curricular leadership development is common, there is minimal research that points specifically to the value of games within co-curricular collegiate experiences (Forbes, 2021; McRee & Haber-Curran, 2016). One of the challenges is that practitioners who coordinate co-curricular experiences gather assessment data on student learning for primarily internal use and do not publish or widely share their findings (Peck, 2017). For this reason, the understanding of how games are used in collegiate co-curricular settings is informed by research done in curricular and non-academic settings. Many parallels can be drawn between these environments and how co-curricular educators can strategically use games to create meaningful and fun learning environments. This article will briefly introduce the value of incorporating games into the co-curricular setting and provide suggestions for practitioners interested in incorporating game-based learning and assessment into their campus programs.

PLAYING: CO-CURRICULAR LEARNING AND DEVELOPMENT THROUGH GAMES

Games work well in co-curricular settings because they infuse play into the ways students learn and grapple with sometimes complex or challenging leadership topics. Games fall into the category of playful pedagogy, encouraging educators to infuse educational environments with active ways to learn (Whitton & Langan, 2019). Brown (2009), one of the leading play scholars, shares the value of play in its ability to generate low-risk simulations:

> In-play we can imagine and experience situations we have never encountered before and learn from them. We can create possibilities that have never existed but may in the future. We make new cognitive connections that find their way into our everyday lives. Without being directly at risk, we can learn lessons and skills. (p. 34)

Resistance to play in higher education revolves around perceptions of universities being serious spaces with clear expectations of what appropriate rigor and learning look like (James, 2019). Instructors who integrate playful pedagogy into their lessons may surface fears and concerns about being viewed as childish, foolish, or wasting time (Forbes, 2021; James, 2019; Whitton & Langan, 2019). In this sense, the co-curricular space may have more freedom to use games because the out-of-classroom context does not require the use of grades, equips facilitators with different authority than faculty members, and allows for more formatting options (McRee & Haber-Curran, 2016).

As a co-curricular learning tool, games are an engaging way for students to practice leadership skills in lower-risk environments (James, 2019). Games require learners to be active participants in the learning process - students cannot just kick back and take in a lecture; they need to be fully involved in making decisions to move the game forward (Marfisi-Schottman, 2019).

The effective use of games in the co-curriculum rests on an educator's ability to facilitate a gaming experience with students effectively. McRee and Haber-Curran (2016) outline

nine qualities that effective facilitators in multi-day co-curricular leadership experiences exhibit, including creating conducive learning environments, having enthusiasm and passion, bringing energy, and displaying humor. In other words, effective co-curricular facilitators must infuse their experiences with playfulness to generate engaging and meaningful learning (Forbes, 2021; Whitton & Langan, 2019).

Finally, the co-curricular space frequently mirrors efforts used within business organizations to create dynamic leadership development programs. The use of games and play within industry leadership development programs has been gaining momentum for the past decade (Kark, 2011). Forty-nine percent of corporations use game-based strategies for employee training, 4% for new employee onboarding, and 34% for talent development programs (Groome, 2015). As a training tool, play and games can create a space where employees feel safe to develop their leadership skills, gain better knowledge of their team, and work within their organizational setting (Kark, 2011). Co-curricular leadership educators should share how the presented activities are used within workforce settings to prepare employees with in-demand career skills.

MECHANICS: GAME DESIGN AND IMPLEMENTATION

Ferguson (2012) found that games are an essential tool for achieving desirable behaviors and emphasized the emergent interest in gamified programs as behavior promotion tools. These behaviors can include social integration, healthy lifestyle habits, relational behavior concepts, self-care, and motivating and supporting physical activity. Researchers found that not only could games increase activity in players and better decision-making regarding nutrition, but also that by employing a story in the game to which the player could relate, participants were significantly more likely to exhibit these positive changes in behavior (Baranowski et al., 2008). This research implied that there must be a narrative around the concept related to behavioral change. Students must know the purpose of the gamified experience and have a narrative to follow throughout. However, like any learning experience, designing the pedagogy of games should be an intentional activity based on the participants and outcomes. This concept is essential as educators work to design co-curricular games. There is abundant research on why people play games and which game-based strategies engage a user best in a gaming environment as it relates to the specific outcomes a participant should achieve (Hamari et al., 2014; Kasumovic et al., 2015; Yee, 2006).

Outcomes-based

As noted in the first article in this issue, this practice exemplifies that programmatic activities should be chosen and implemented in a way that complements and supports outcomes. When designing games, it is vital to properly identify the intended outcomes and competencies. For example, Seemiller's (2016) leadership competencies identify several domains (identified initially as four dimensions: knowledge, value, ability, and behavior) of any particular competency (Seemiller, 2016). Not only are these important in the design of a game, they will also be important later as educators assess outcomes. Thus, while we will use the leadership competencies as an outcome model throughout this article, any variation of outcomes would apply, including the Council for the Advancement of Standards in Higher Education, the National Association of Colleges and Employers, or campus-specific outcomes.

Sustaining engagement

When designing games, it is essential to understand how game-based strategies impact behaviors and engagement. Hoffman and Nadelson (2010) discovered three main reasons to consider when engaging in gaming: escapism and fun, social connectivity, and achievement of task-related goals. The majority of their participants (84%) indicated they played to have fun and escape from their daily routine; however, part of that fun was being challenged by the game itself. In addition to thinking critically about how a student would be engaged in the game, designers must also consider the participant, outcomes, and the desired level and length of engagement. The personal connection of participants to their game is vital. Engaging students at all levels means connecting the game activities to their current and future interests. Implementing too many game-based strategies without enough attention focused on the game's content or how it relates to the individual will yield lower retention rates and lower satisfaction of the gaming experience (Hamari et al., 2014; Przybylski et al., 2010; Yee, 2006). It is important to note that the style of the game is significant. The research found *a challenge* to be the top-rated reason college students played games and found positive associations with mood and well-being if the games also incorporated fun social connections and stress-relief opportunities (Boyle et al., 2012).

Resources

Resources for games can refer to program funding, the expertise of professionals, pedagogical tools, technology implementation, and other time-intensive work to make the game a meaningful learning experience. The idea of resource allocation for games has been loosely adapted from the non-higher education literature, where resource constraints tend to be less of a challenge. The gaming world is transparent in that developing games require resources and funding that effort is essential to their work because it is a product. Conversely, higher education often views co-curricular programming money as superfluous and a lower priority. Co-curricular programs across all educational landscapes consistently receive declining funding in the wake of financial crises for institutions, so they must be creative in funding their programs and how much they stretch a dollar (Hecht et al., 2014). Program resources for games are essential to creating successful learning experiences. Little can be done that costs nothing; everything will require some resource effort, whether operating dollars or time, energy, or expertise from a staff or faculty member.

CUSTOMIZATION: TYPES OF GAMES IN THE CO-CURRICULAR SETTING

There are many games available for the co-curricular leadership educator's toolbox. What follows is a non-exhaustive list of the types of games that can be embedded into co-curricular experiences. Examples of how these games can be used are pulled from the University of Arizona's Blue Chip Leadership Experience, which uses games throughout the First-Year Experience (FYE) to introduce students to foundational leadership skills.

Role-playing games

Role-playing games are an experiential way for students to test out new identities and engage in collaborative exercises. The resurgent popularity of role-playing games such as

Dungeons and Dragons (Wizards of the Coast, 2022) showcases how leadership lessons such as empathy, communication, collaboration, and problem-solving can be practiced (Chan, 2018; Guthrie & Jenkins, 2020). In these games, participants can assume a persona that will determine how they approach a situation in a co-curricular setting. Role-play scenarios can be placed within their real-world context (e.g., student government leaders) or in external conditions (e.g., neighborhood associations). Players can use their persona's knowledge and skills to approach a problem as facilitators guide the group through the scenario. Connecting role-play to a leadership concept such as situational leadership or conflict resolution can help facilitators draw lessons about how players make decisions in the game that will resonate in their post-game lives (Guthrie & Jenkins, 2020).

Simulations

Simulation games allow players to make decisions and problem solve within an environment that replicates or mirrors a real-life situation (Guthrie & Jenkins, 2020). Similar to role-playing games, facilitators drive the game's action in simulations, placing players into situations that test their leadership abilities. In addition, simulations can help students apply concepts that might take substantial time from start to finish. For example, Seidl (2019) shares how an egg drop simulation, generally used in STEM education, is used to demonstrate project management techniques. Students are given the task of initiating the project, planning it, executing it, and reflecting on how they can use their new knowledge outside of the simulation.

Other popular leadership education simulations can help facilitators introduce complex or challenging social justice concepts. Classic simulations in this realm include *StarPower* (Simulation Training Systems, n.d.), which helps understand societal power and privilege through a trading game, and *Archie Bunker's Neighborhood* (Byrd, 2021) (sometimes also called the Construction Paper City) which can help students understand how systems of oppression perpetuate racist and classist structures. Leadership educators make these classic simulations relevant to today's age by bringing in current events and drawing parallels between the game and examples of these same dynamics in contemporary society.

Profile: Blue Chip Leadership simulations

Experiential and playful learning is at the foundation of the University of Arizona Blue Chip Leadership's pedagogy where activities are used throughout the weekly curriculum. Short simulation games typically take about 30 minutes to complete and are connected to a more extensive discussion about the topic at hand. For example, in a week focusing on collaboration and strengths, students work on a *Bank Robbery* puzzle in which teams are tasked with solving a fictitious bank robbery (MacGregor, 2008). Each team member is given different clues to help solve the crime, requiring each student to share their knowledge and contribute to the solution. Another game called the *LEGO Simulation* (University of Arizona, n.d.) allows students to explore privilege, oppression, and barriers to equity. In this simulation, the team is divided into three smaller groups, with each group receiving a LEGO kit and being told to create the correct object. The first kit is complete with the instructions and box cover, the second kit has only the picture from the box, and the final box contains only the LEGOs. After the game concludes, participants find out that each group received different resources. Facilitators connect the activity to ways in which systems such as education provide inequitable resources to members of society based on marginalized identities.

Problem solving games

Games that require teams to solve problems collaboratively are ideal in the co-curricular setting and are easily integrated into co-curricular settings to help students apply newly acquired skills or knowledge. For example, students who take behavior or personality assessments such as CliftonStrengths (Clifton et al., 2002) or the Myers Briggs Type Indicator (Myers, 1962) can be given a logic problem to see how their unique leadership qualities are used in a group setting.

Escape rooms are a more complex version of collaborative problem-solving games that have become increasingly popular over the past decade (Duggins, 2019). Escape rooms require participants to use critical thinking, collaboration, creativity, and communication skills to solve small puzzles and win the game (Duggins, 2019). Facilitators are active observers of groups and provide hints or suggestions as requested by the groups and facilitate a post-game reflection. The popularity of escape rooms has led to a proliferation of escape room venues reserved by co-curricular educators. However, the cost and logistics of planning this sort of experience might be a barrier for some. In this case, educators can create their games using resources, such as BreakoutEDU (BreakoutEdu, n.d.) or consulting online resources such as those from the College of Charleston (Seay, 2022) to develop games. Escape rooms can also be conducted virtually with groups working through virtual puzzles together. During the COVID19 pandemic, many libraries created and curated virtual escape rooms, incorporated into co-curricular programs (Madison County Public Library, n.d.).

Blue Chip Leadership escape room

The escape room used by the Blue Chip FYE was developed in consultation with a local escape room business. Professional game masters helped Leadership Programs staff members design and implement a narrative and corresponding puzzles. In the escape room, students enter a simulated camping experience that requires them to save their peer mentor from a rattlesnake bite before getting swept away in a flash flood. Working collaboratively, students become comfortable communicating, sharing information, and testing ideas to solve the many puzzles. The escape room takes about one hour to complete, and facilitators debrief the experience by asking students to share their insights about collaboration, problem-solving, conflict, and communication. During the pandemic, a virtual escape room was created using resources found on the internet. Participants logged into a virtual meeting program and worked through word puzzles, logic problems, and ciphers to win the game.

Theater games

Improvisational theater games have become an increasingly popular way to develop employee's innovation, creativity, collaboration, and even customer service skills within the corporate world and are now gaining traction within higher education (Dufresne, 2020). Research on the use of improv within higher education pointed to several studies where improvisation was successfully used to teach essential skills such as helping nursing and pharmacy students practice effective patient communication (Boesen et al., 2009; Higgins & Nesbitt, 2021). Leadership educators can incorporate improv theater games to help students get out of their comfort zones, practice adaptability, and become more confident acting in uncertain situations (Dufresne, 2020). A recommendation for those unfamiliar

with improv games is to collaborate with a campus or community improv troupe to bring in an increased level of credibility and comfort to participants (Dufresne, 2020).

Profile: Theater games: Blue Chip Leadership Blue Sync and theater sports

Blue Chip's FYE has long incorporated theater games into the program. Blue Sync is a lip sync battle where teams select a song and prepare a short performance for their peers. This activity requires collaboration and project management skills. While the performances used to be live, the pandemic pushed this event into the virtual world, requiring students to activate additional technological creativity skills. Blue Chip students also participate in the Theater Sports improv event. This event is rooted in the ComedySportz tradition, where teams compete in improv games to advance to the next level, although our more recent iterations of this event have removed the competitive element to just focus on teamwork and learning through play. During the event, students learn the basic tenets of improve comedy including deep listening, viewing mistakes as opportunities, and the improv golden rule of "yes, and" in which you affirm your partners' contributions and build upon them. Students participate in a number of warm up exercises and then play common improv games like "Freeze," "Conducted Story," and "New Choice" (Paradis, 2019.). In the end, students reflect on what they learned in relation to the outcomes of creativity, confidence, and communication.

WINNING: ASSESSING GAMES IN ACTION FOR CO-CURRICULAR LEADERSHIP LEARNING

Choosing the suitable game relies on an educator's awareness of the learning objective, comfort with the game format, and ability to effectively facilitate the game experience, including the essential post-game reflection. While the enjoyment and engagement of participants should be one of the priorities, they should be learning something while engaging in gameplay. As accountability continues to be woven into all fabrics of education at all levels, it is crucial to ensure that learning outcomes are met, and designers should think about assessment efforts throughout the design process. Although there is a wealth of literature on assessing student learning outcomes, there is less research on the unique experience of participants in games. While games can address serious skill-building for specific leadership competencies, many researchers believe games to be trivial and liken them to simply being icebreakers or fluffy time fillers. However, games are perfect learning scenarios to teach many skills critical to leadership development, such as reflection, self-efficacy, autonomy, and other interpersonal skills allowing individuals to work better with teams, negotiate, and communicate (Dondlinger, 2007). While they are conducive for learning, games are more challenging than typical pedagogical tools to assess because they are often fluid, live-action experiences without an inherent or traditional assessment mechanism.

Assessing games

One of the significant benefits of games is that they are an experience or activity, and facilitators can directly assess student growth and development of leadership competencies because they can see it happen. Direct observation also means students can be assessed on all four dimensions of a particular leadership competency. An easy way for educators to

complete the assessment during the activity is by having a rubric for each participant, identifying when they see particular behaviors or knowledge applied, and taking observational notes (Roberts, 2014). Post-activity, they can summarize their notes and observations to complete their assessment of student growth and development.

The significant part about simulation and problem-solving games is that often the assessment is built into the experience itself. Typically, simulations, whether physical activities or virtual, make clear the success of participants because the simulation frequently involves some sort of "win" metric showing participants they completed the objective or followed the correct path. Simulations without concrete storylines or journey paths can be more challenging to assess because there is less structure for an activity, and it becomes harder to ensure the scenarios have the appropriate milestones to measure learning against. In other words, if there are no specific signposts with outcomes association, completely free-form experiences can be challenging to assess meaningfully. Chin et al. (2009) refer to this problem as structure versus agency and identify the challenges provided when structure decreases and agency increases. They posit the most successful simulations try to structure much of the non-participant activity—including those of other players and guides.

An inherent risk within games is that because it is an artificial activity set up within a predominantly structured environment, there is the possibility that demonstrated learning may not apply to real life. This is less of a concern for some dimensions of competencies (like knowledge) because the environment does not change the fact that a participant learned a cognitive concept or strategy. However, delving into higher levels of learning with the ability to apply leadership competencies, whether the student will be able and willing to apply the particular competency in a real-world setting may be questioned. While this can be true for many types of structured learning activities, it is particularly salient for game-based environments because participants are highly attuned to the artificial nature of the activity. Nonetheless, this risk does not devalue games as learning tools; in fact, one could argue it provides a safer space to fail as students are on their development journey. It falls to the co-curricular educator to draw salient connections between the game and real-life scenarios to deepen the learning. It is recommended that educators using games to reinforce leadership outcomes allow for sufficient time to debrief using an experiential approach that identifies what happened during the game, why those observations were significant or important, and how students can carry that learning outside the game setting (Eng, 2022). Game facilitators should have a thorough understanding of not only the game, but also have detailed observations of the participants through the experience in order to point out dynamics that students may not have even noticed (Eng, 2022). The role of the game facilitator is especially important if the game is being used to showcase social justice concepts. For example, highlighting moments in a social justice simulation where game players assigned a privileged role exhibited the types of power dynamics observed in society can help elevate the value of a game. Reflection allows for the deeper integration of learning as it can provide an opportunity for a participant to more meaningfully relate to the outcomes. Finally, co-curricular educators using games to distill learning should complement game-based learning by including other learning tools such as case study discussions, individual and group reflections, and relevant situational examples to showcase how the game's concepts show up in other contexts.

CONCLUSION

The co-curricular setting provides unique challenges to measuring leadership learning through games due to the potentially less-structured environments, resource constraints,

and misconceptions about a lack of seriousness in both games and the co-curricular space. However, it also provides fantastic opportunities for learning through more organic programs, unlimited potential for combining fun and various pedagogical approaches, and an ability to be nimble in program delivery. As previously discussed, it is imperative to design games with the end in mind to ensure that participants are developing the leadership competencies intended and to engage students in meaningful games intentionally. While games are practical tools for leadership development, there is still much research to be done. The recommendations and best practices articulated in this article only scratch the surface of the learning potential for games in the co-curricular setting.

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