

CHAPTER 3

A Fine Balance

Cultivating Compassion and Leadership through Games

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ABSTRACT:

“Gifted leadership occurs where the head and the heart-feeling and thought meet”[Goleman et al., 2013]

Leadership plays an essential role in systems, organizations, and classrooms. Good leadership strikes a delicate balance between employee well-being and team members’ productivity, further improving trust and loyalty. There has been a paradigm shift in what constitutes “good leadership,” from one based on exerting control and power to one rooted in self-compassion, empathy, and emotional management. Within management systems, compassion helps foster stronger connections between people, reduces burnout rates, and improves staff retention and collaboration. In a mindful leadership approach, self-compassion, empathy, and emotional awareness are first cultivated within the leader and then utilized within situations at the workplace. This evolved definition of leadership is a more expansive and inclusive term that takes a comprehensive and personal view of leadership. Alongside this view of leadership, there are small, daily actions one might take to develop as a leader, which adds value to ourselves and, by extension, to others.

Serious games have effectively cultivated qualities critical to leadership,

such as self-compassion, empathy, and emotional management. This work investigates attempts, approaches, and design principles in serious games that aim to build the above-mentioned competencies essential for leadership. We present game elements, themes, and mechanics that could be further empirically studied and used by serious game designers to produce digital games that cultivate the competencies (self-compassion, empathy, and emotional management) for leadership training.

KEYWORDS:

self-compassion, empathy, emotional management, serious games, digital leadership training

1 INTRODUCTION

Literature has established the relationship between leadership and organizational culture, growth, and firm success (Ciulla, 2020; Sfantou et al., 2017). There is evidence that literature can be fostered and developed with the appropriate training and guidance (Crosby, 2017). Serious games have been critical in developing skills and training across various domains, and the same goes for leadership (Buzady, 2017). Previous studies have shown increased prosocial behavior amongst participants after playing a digital game with embedded compassion training. With the multiple facets essential for good leadership, and the demand for innovative experiences to deliver leadership training implicitly, it becomes imperative for serious game designers to design and develop new games addressing various competencies of serious games to cater to leadership training.

Lanaj et al. (2021) discuss the role of self-compassion in leadership. Their study explores the interconnectedness of qualities of self-kindness, self-care, self-love, self-esteem, self-compassion, and effective leadership. We benchmark our definition of self-compassion from Kristin Neff (2003) as “being open to and moved by one’s suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, non-judgmental attitude toward one’s inadequacies and failures, and recognizing that one’s experience is part of the common human experience”. Shuck et al. (2019) and Bakar et al. (2014) mention the

importance of empathy and self-compassion in delivering quality leadership. Empathy is an affective response that acknowledges and attempts to understand an individual's suffering through emotional resonance (Sinclair et al., 2017). Gardner and Stough (2002) investigate the role of emotional management on leadership and establish a strong positive correlation. Emotional Management is the ability to realize, readily accept, and successfully control feelings in oneself (and sometimes others), which is known as emotional management (Carminati, 2021).

Given the importance of self-compassion, empathy, and emotional management qualities, this paper aims to investigate the game-based techniques that have been used to foster these qualities. Specifically, we will search and identify several games that are publicly available aiming to target these constructs. We acknowledge that multiple other competencies are associated with being labeled a successful leader. For the scope of this paper, we limit ourselves to exploring the role of using serious games to cultivate competencies of self-compassion, empathy, and emotional management for purposes of leadership. We then identify game elements from the selected games and discuss key features of these games that could be used to strengthen leadership skills.

The paper first discusses the definition of selected competencies essential for leadership. Next, we discuss how digital games foster these competencies through the use of affordances, elements, mechanics, and narratives. This is followed by a methodology section discussing a sequential process to arrive at a selected list of games most suited for the exploratory study. The games used for the study are described in the following section. Lastly, the authors discuss the various themes, elements, and mechanics that emerge from the study of the games.

2 SELF-COMPASSION, EMPATHY, AND EMOTIONAL MANAGEMENT IN DIGITAL GAMES

Studies have shown that curated mobile applications and digital games can improve self-compassion amongst late adolescents and emerging adults, which results in an enhanced sense of well-being (Rodgers et al., 2018). Most conventional tools of self-compassion interventions include the

following three parts: (1) psychoeducation, providing the reason and science behind self-compassion, (2) mindfulness and acceptance exercises; and (3) practicing compassion towards others (Kirby, 2017). The third one is remarkable: practicing compassion towards others enhances self-compassion. Self-compassionate tasks of gratitude journaling, emotional recognition, and reflective writing have been shown to promote emotional regulation, acceptance, and openness towards both positive and negative affect (Oudou & Brinker, 2015). A previous study has demonstrated that self-compassionate exercises using visualization techniques increase positive emotions, mindfulness, and feelings of purpose in life (Fredrickson et al., 2008).

Digital interventions for mental health provide another layer of safety due to their anonymity, accessibility, and flexibility (Chew-Graham et al., 2003). Digital games inherently promote autonomy and the mastery of goals and skills (Erhel & Jamet, 2016). These skills, when practiced regularly with the help of games, can help individuals broaden their attention, cognition, and action, enabling them to thrive and flourish through all life experiences, whether they be positive or negative.

Serious games (Flanagan & Nissenbaum, 2014) can promote empathy as a value in a variety of ways, such as their premise, characters, player choices, and context of play. In a comparative study of the game, *Darfur is Dying*—a serious game about the Haitian earthquake crisis—players were more willing to help in the crisis than those who read an informational text and those who observed the game as an animation. In narrative-driven role-playing games, the player experiences embodied cognition, which simulates empathy for the characters in the game (Shin, 2018). In another study, in-game empathy emerged as a strong predictor of commitment toward learning skills and adopting prosocial actions and attitudes (Bachen et al., 2016). In some games, empathy in the player may be evoked when players take agency over choices and then experience the consequences of their actions (Isbister, 2016). However, sometimes, games might employ subversive game design techniques to convey the limitation of options available to a particular character due to systemic challenges such as racism, sexism, classism, etc. In such situations, players

may experience feelings of hopelessness and frustration due to the lack of control over their life decisions and outcomes (Schrier & Farber, 2021).

Cooperative gameplay, role-play, collaborative games, small group activities, and discussions have been conventionally used in classrooms to cultivate emotional management skills (Hromek & Roffey, 2009). In-game interventions to further strengthen these skills include active listening, emotional identification, rational analysis, problem-solving, anticipating, evaluating, and accepting responses. There is limited research on the use of such games within workplaces and their impact on leadership skills and the organizational climate. The interactional nature of games makes them most suited to social-emotional learning skills such as emotional management using dialogue and problem-solving in the context of a dilemma (Hromek & Roffey, 2009). Players manage feelings of frustration and delayed gratification to play with others and move towards their goals. Games provide a playground to try out various actions and evaluate responses multiple times with a lower fear of failure as opposed to the urgency of real-life situations.

Filtration Step	Self-Compassion Games	Empathy Games	Emotional Management Games
<p>Initially, a set of 32 games were identified. There were 4 duplicates. Removing 4 duplicates (marked with *) N = 28</p>	<ol style="list-style-type: none"> 1. Kinder World 2. #SelfCare 3. Everybody's Sad (VR only) 4. A Show of Kindness (VR only) 	<ol style="list-style-type: none"> 1. Dot's Home 2. Kind Words* 3. Please Knock on My Door 4. <u>SweetxHeart</u> 5. Unpacking 6. Stanley Parable 7. <u>Spiritfarer</u> 8. Gris 9. A Normal Lost Phone 10. Elude 11. The Cat in the Hijab 12. What Remains of Edith Finch 13. Bury Me, My Love* 14. Florence 15. Change 	<ol style="list-style-type: none"> 1. This War of Mine 2. SuperBetter* 3. Zoo U* 4. The Guardians 5. Amaru: The Self-Care Virtual Pet 6. WorryDolls 7. Potential Project App (private) 8. MY CHILD LEBENSBORN 9. Don't Starve

<p>Removing 2 VR-based games. N = 26</p>	<p>1. Kinder World 2. #SelfCare</p>	<p>1. Dot’s Home 2. Kind Words* 3. Please Knock on My Door 4. <u>SweetxHeart</u> 5. Unpacking 6. Stanley Parable 7. <u>Spiritfarer</u> 8. Gris 9. A Normal Lost Phone 10. Elude 11. The Cat in the Hijab 12. What Remains of Edith Finch 13. Bury Me, My Love* 14. Florence 15 .Change</p>	<p>1. This War of Mine 2. SuperBetter* 3. Zoo U* 4. The Guardians 5. Amaru: The Self-Care Virtual Pet 6. WorryDolls, 7. Potential Project App (private) 8. MY CHILD LEBENSBORN 9. Don’t Starve</p>
<p>Removing games with private access N = 25</p>	<p>1. Kinder World 2. #SelfCare</p>	<p>1. Dot’s Home 2. Kind Words* 3. Please Knock on My Door 4. <u>SweetxHeart</u> 5. Unpacking 6. Stanley Parable 7. <u>Spiritfarer</u> 8. Gris 9. A Normal Lost Phone 10. Elude 11. The Cat in the Hijab 12. What Remains of Edith Finch 13. Bury Me, My Love* 14. Florence 15 .Change</p>	<p>1. This War of Mine 2. SuperBetter* 3. Zoo U* 4. The Guardians 5. Amaru: The Self-Care Virtual Pet 6. WorryDolls 7. Potential Project App (private) 8. MY CHILD LEBENSBORN</p>

Removing games with similar mechanics. Identified after playing/ watching N = 8	1. Kinder World 2. #SelfCare	1. Dot's Home 2. Kind Words*	1. This War of Mine 2. SuperBetter* 3. Zoo U* 4. The Guardians
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Table 1. Step-wise filtering to arrive at the final set of games for studying.

3 METHODS

We use the PRISMA framework to establish a set of games to study and understand game mechanics associated with SEL competencies and leadership. The PRISMA framework is a four-step process used to develop an archive of literature to review and synthesize findings (Shamseer et al., 2015). Among many competencies essential for leadership, we investigate three core competencies of self-compassion (Lanaj et al., 2021), empathy (Shuck et al., 2019), and emotional management (Gardner & Stough, 2002). With these keywords established we have selected several distribution and publishing outlets for identifying games. Specifically, STEAM—a popular game hosting service, the Games for Change catalog, and Academic digital libraries, which include Springer and ACM databases. We limit our search to games published in the last 10 years, that is, between 2012-2022.

Given these search terms and publishing outlets, we found a set of 32 games (n=32). In the screening process, we identified and removed four duplicates (n=28). From the set of 28 games, the authors further identified two games that were only available in VR (n=26). Further, the authors identified one game with restricted access intended for industrial training (n=25). From the 25 games, the authors went ahead to play the games (17 games) they had access to (free, already purchased). For those they did not have access to they went ahead to watch comprehensive YouTube playthroughs of the gameplay. The authors identified 15 games with common mechanics of branching narrative-driven role-playing characters. Similarly, three games were gamification-based behavior change/ habit formation mobile games. Another three games were time-constrained resource management games. The authors chose one representative game

from each of these three categories. The elimination of these 17 games resulted in a list of eight games the authors planned to investigate in detail. The process of arriving at a final set of game titles to explore is also illustrated in Table 1.

This study is not meant to be exhaustive and uses the case study methodology to arrive at common elements and themes that could be further empirically studied. We acknowledge bias in our sampling and curation, as most of the games studied were produced in the United States by English-speaking design teams. For the scope of this study, the researchers limited the case studies to digital games that could be played on either mobile phones or desktops. Physical games, augmented reality games and virtual reality games were excluded from the scope of this study. The two researchers split the games amongst themselves and evaluated each of the eight games together. Most of the games took about two to six hours of gameplay except for three games aimed at behavior change through procedural learning (*SuperBetter*, *#SelfCare*, *Kinder World*, and *The Guardians*), which were played for five consecutive days in order to unlock more features and elements on the application. The researchers separately took notes and recorded memos on each game, and analyzed each of them thematically. Additionally, data from online artifacts such as game reviews and research papers were sourced to provide a more complete picture of the games studied.

4 FINDINGS

This section shares findings, which are descriptive in nature and presented separately. Each case study of a game is descriptive and illustrative of the mechanics, narratives, and elements of the game. The thematic analysis of the games is shared in the Discussion section. In Table 2, we deconstruct the game mechanics offered by each game and the genres they address.

#SelfCare (TruLuv, 2018) is a mobile-based game that aims to develop rituals that deepen care and compassion for the player. Developed by the studio TruLuv, the game leverages minigames on well-being, reflected journaling, virtual petting, and breathing exercises to help the player find a sense of calm and comfort. Stepping away from high-pressure game

mechanics and gamification models, the game eliminates all elements of scoring, streak mechanisms, and competitiveness. The premise of the game is that the player wakes up in their virtual bedroom and stays in bed for the whole day, occupying themselves with rest, and routine tasks, such as picking up laundry, tending to a plant, drawing tarot cards, or interactive breathing exercises. Most of the objects in the room are clickable and point the player to specific mini-games: (i) The cat in the room leads you to a mini-game that allows you to stroke your virtual pet. (ii) The books lead you to a game where you have to fill in the letters of a word that completes a positive affirmation or a self-care word. (iii) A flowering plant in the room redirects the player to a few guided breathing exercises with controls for the pacing of the breath and shapes. (iv) The laundry game directs you to a tile-matching puzzle game. (v) A coloring game allows the user to color a sphere. (vi) An orb in the room directs the player to a lunar reading. There are no intrusive notifications, no levels, no inherent risks or rewards, and no win/loss state in any of the games. The game mechanics do not follow the linear progression of becoming more difficult as time passes. The more time that the user spends on the minigame, the easier it starts to get. The game designer on the project, Brie Code, defines the mechanics as being based on the “tend and befriend” response, which is a completely different stress response than the adrenaline/dopamine model (Takahashi, 2019).



Image 1: Screenshots from the game #SelfCare

Instead of being driven by fear, the players are motivated by care and connection. They find joy in solving problems so that everyone benefits.

Kinder World (Kinder World, 2021) is a simulation game where the player takes care of their plants by taking care of themselves via journaling activities, acts of kindness, gratitude practices, emotional check-ins, and compassionate practices. The game utilizes evidence-based well-being exercises such as daily gratitude and emotional recognition, which are designed to improve the mental health of players. The visuals of the game are calming and atmospheric, with soft ambient music and a focus on creating one's own cozy space with pets and plants. The game mechanics are slow, non-intrusive, and non-competitive. Lauren Clinnick, Co-Founder of the studio, says in an interview (SIFTER, 2021) that the game is designed for players who are motivated by connection, care, and emotional expression and not by mastery or competition. She continues to say that their design is directed towards people who look for a “utilitarian value,” that of mindfulness, educational benefits, or a feel-good experience in games over hyper-casual games.

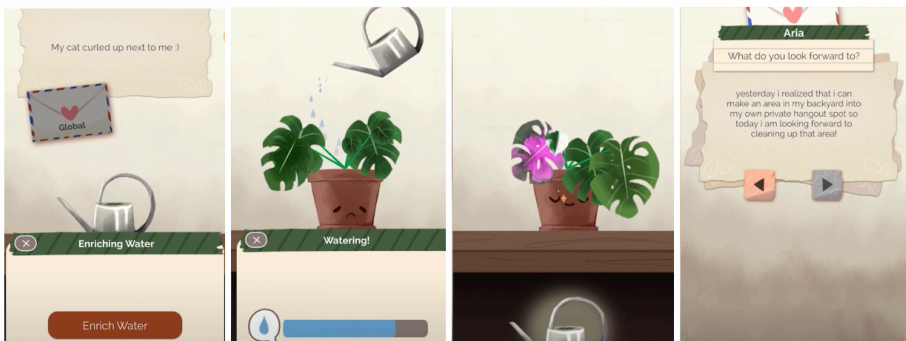


Image 2: Screenshots from Kinder World.

There are no risks or punishments in the game. For instance, unlike in real life, plants do not die in the game if they're not tended to. Lauren talks about minimizing the anxiety inherent within the game design. Apart from self-compassion activities, there are also activities to be compassionate towards others, such as sending notes of appreciation and positive affirmations to other players. In the upcoming updates of the game, there are also plans to integrate a feature that allows players to build a community garden with other players.

Dot's Home (Rise-Home Stories Project, 2022) is a single-player, 2D, choice-based visual novel whose protagonist, Dot, is a young black woman who lives in her grandmother's home. She travels through time to relive moments in her family's history and learns about race, home, migration, and discrimination while helping her family make choices. Her decisions make her understand how the past affects the future. As the role-playing character, the game aims to cultivate empathy towards the experience of housing inequality amongst BIPOC who have migrated from their home countries. Although the game consists of branching narratives, the storyline hinges on the illusion of choice (Morris, 2022), which means that there is no right choice that would lead to the most successful outcome, reflecting the lived experience of many marginalized communities. The game is rigged against the player's favor, since the system does not account for the needs of specific communities, leaving Dot with very less control of the outcomes of her decisions, which may impact generations to come.

Kind Words (Popcannibal, 2019) is a game that allows the player to write letters of appreciation and encouragement to strangers who might be struggling. The player can also, in turn, request a letter of comfort and inspiration. The gameplay relies on building a positive community on the internet. The experience is also gamified since each letter that is sent comes with a sticker, and upon receiving a letter, the stickers can be redeemed to decorate your bedroom. The music is calming, and a new song is added each time the player sends a letter. The mascot of the game, a female mail delivery deer, prompts players to ask for help or write a letter, such as, "What are you worried about? Maybe someone else is too." If a user writes about a particularly distressing time, the deer prompts the user with hotline services as well as mental health resources.

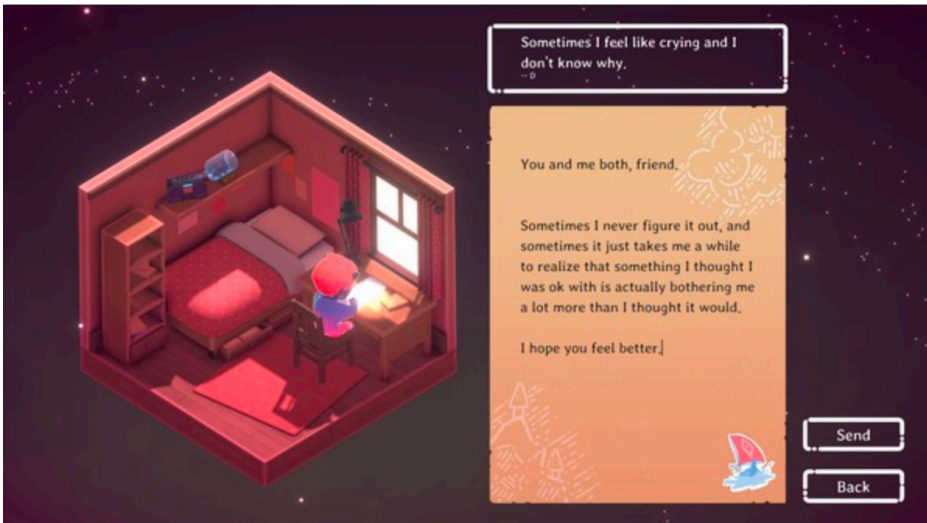


Image 3: Screenshot from Kind Words

SuperBetter (SuperBetter LLC, 2012) is a mobile-based game that aims to enhance the resilience of people by cultivating skills of social-emotional learning. Players have to choose a particular goal for themselves, such as overcoming depression, improving self-esteem, procrastination, etc. Then, they have to take recommended steps toward this goal, which are known as 'quests'. Each quest has associated mood-boosting activities in the form of power-ups. They also have to directly address specific obstacles which are known as "battle bad guys," and enlist social support if desired signified as 'invite allies.' In a randomized control trial with 283 players, the game has shown to improve symptoms of depression (Roepke et al., 2015). One of the game's objectives was that the actions play out through real-life activities and interactions, with allies in the form of support systems such as friends, family, counselors, therapists, and doctors, who help the players achieve their wellness goals. A key feature of SuperBetter is the inclusion of customized resources and practical tips that are created in partnership with different organizations on particular themes, such as Full Diet, Stanford's Center for Compassion and Altruism Research and Education (CCARE), University of California, Berkeley's The Greater Good Science Center and more.

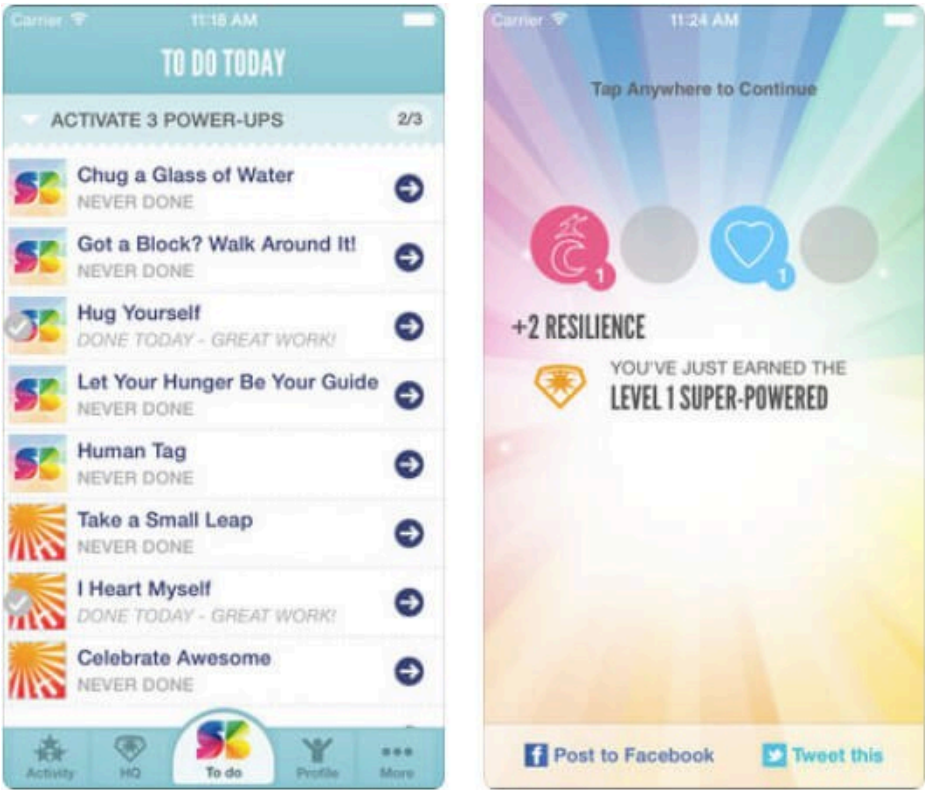


Image 4: Screenshots from SuperBetter

Zoo U (ZooU, 2017) is an evidence-backed game-based SEL performance assessment game for students in grades 2-4. Funded by the US Department of Education, the game was created to fill the need for a reliable, affordable, efficient, and effective alternative to traditional self-reported SEL assessments. Through choice-based storytelling as well as informational pop-ups, the game aims to positively reinforce social-emotional learning skills. The game targets six core areas of emotional management, mainly, (i) impulse control (ii) emotional regulation (iii) communication (iv) cooperation (v) empathy and (vi) initiation. The players create their avatars and make decisions in each of these six game-based scenarios. Embedded audio ensures that not only the stimulus in the conversation with intonation is received but also that before responding,

players can hear the tone of the verbal response and make an appropriate choice.



Image 5: Choosing responses in the game ZooU

The game encourages the player to master the skill of social-emotional learning since the player can replay each situation and test the consequences of their actions. Once a scene is completed, Professor Wild delivers constructive feedback on their choices. The game is equipped with lesson plans and an SEL curriculum with educators' access to student data for assessments. In a sample size of 50 children, it was shown that children who had played the game showed enhanced social skills in the areas of impulse control, emotion regulation, and initiation (DeRosier & Thomas, 2018).

This War of Mine (This War of Mine, 2014) is a unique war survival simulation game set in the fictional city of Pogoren, Graznavia. The player is the leader of a group of war-stricken civilian survivors in this single-player strategy game. The player must ensure that the characters maintain their health, food resources, and mood levels until the declaration of a ceasefire. Through empathic storytelling, the game puts the player's risk-taking, decision-making, and conflict management abilities to test. Each game session is randomized and is of indefinite length depending on the

choices made by the player as well as the civilians. The player can control the actions of a few civilians at a time. During the daytime, the objective is to maintain your hideout. At night, the player ventures outside with the civilians to scavenge for resources that are needed for survival. By making the player accountable for the survival of other civilians and exposing the player to the discomfort of grief, loneliness, poverty, depression, and fear of death, the game indulges in transgressive realism (Karlsen & Jørgensen, 2018), wherein instead of graphic violence, the game experiences create disturbing and transgressive scenarios. Through dialogue and events, the game makes emotions like guilt, grief, trauma, loss, and hope tangible. In-game prompts and character responses compel the player to reflect upon their actions in the face of ethical dilemmas. No matter what the consequences are, the player is complicit in the war through their actions.

The Guardians (MIT Media Lab, 2022) is a free-to-play mobile game developed by MIT Media Lab that aims to motivate players digitally when they successfully achieve healthy real-world tasks. The framework for the game is informed by behavioral activation (Ferguson et al., 2021) which encourages individuals to engage in pleasant, adaptive, and engaging behaviors. Each successful real-world task is rewarded with pets—characters that complete in-game adventures—and experience points that are gained from adventures. Players can progress in the game using the points and unlock more of its features. Each time players level up, the pets are sent on a mission to free each realm's Guardian from evil characters called *Scorians*. Simultaneously, players can go on their selected adventures, which range from categorized options under "Art," "Basic," "Fitness," "Fun," "Social," or other custom options.

Each activity ranges from three to 60 minutes. The aim is to form a habit of carrying out these self-care tasks to foster competencies of self-efficacy (Gardner et al., 2012), which is positively related to self-compassion (Iskender, 2009). Upon completing each task, players are to reflect on how the activity made them feel on a 5-point scale ranging from "Worse" to "Much Better". Then, players immediately receive the awards, which are redeemed within the game. The game aims at evoking eudaimonic feelings of productivity, motivation, and inspiration. The game is divided into three realms, each of which unlocks after 21 days, regardless of

player progress, to bring back lapsed players. Each realm contains unique gameplay mechanics and missions that their pets must go on so that the players progress.

5 DISCUSSION

In this section, we explore six of the themes that emerged from our analysis of the eight games, including (1) Eudaimonic Game Design, (2) In-Game Reflection, (3) Non-competitive Gameplay, (4) Limited Agency and Forced Failure, (5) Digital Companion, and (6) Dialogue-based Responses. We also consider how, with these elements, the skills of empathy, self-compassion, and emotional management might be cultivated, and how these may be utilized to foster compassionate leadership skills, leading to improved well-being at work.

Game Name	Genre	Associated Tag	Player-Mode	Gameplay and Mechanics
#SelfCare	Simulation; Idle; Digital Companion	self-compassion	Single-player	<ul style="list-style-type: none"> ● Non-competitive ● Endless game ● Positive Reinforcements
Kinder World	Simulation; Idle; Digital Companion	self-compassion	Single-player	<ul style="list-style-type: none"> ● Non-competitive ● Endless game ● Positive Reinforcements
Dot's Home	Narrative; Role-Play; Simulation; Adventure; Visual Novel	empathy	Single-player	<ul style="list-style-type: none"> ● Choice-based decision-making ● Alternate endings based on previous actions with "good," "bad," and neutral endings ● Limited Agency ● Forced Failure
Kind Words	Casual	empathy	Single-player and Online Multi-player mode	<ul style="list-style-type: none"> ● Non-competitive ● Endless game ● Positive Reinforcements
SuperBetter	Self-Help; Mental Health	emotional management	Single-player	<ul style="list-style-type: none"> ● Non-competitive ● Endless game ● Positive Reinforcements ● Prosocial habit formation ● Goal orientation
Zoo U	Simulation; Educational; Narrative; Role-play; Visual Novel	emotional management	Single-player	<ul style="list-style-type: none"> ● Non-competitive ● Choice-based decision-making and responses to NPCs ● Voice-based dialogue with NPCs to perceive intonation

This War of Mine	Narrative, Role-Play, Simulation; Survival and Strategy	emotional management	Single-player	<ul style="list-style-type: none"> ● Choice-based decision-making ● Alternate endings based on previous actions ● Limited Agency ● Forced Failure
The Guardians	Simulation; Digital Companion	emotional management	Single-player	<ul style="list-style-type: none"> ● Non-competitive ● Endless game ● Positive Reinforcements ● Prosocial habit formation ● Goal orientation

Table 2: Breakdown of Selected Games with their themes and offered Mechanics

5.1 EUDAIMONIC GAME DESIGN

Several studies have explored the connection between eudaimonia and the concept of flow within game design. Eudaimonia is a feeling that enables players to constructively cope with negative events and find enjoyment in overcoming them in the pursuit of a goal (Torsi et al., 2020). The state of eudaimonia promotes overall well-being, adaptation, self-acceptance, and positivity toward others and toward life in general (Deci & Ryan, 2008). Both eudaimonia and flow are positive emotions that enable the player to persist through the challenges by providing appropriate positive and negative reinforcements (Torsi et al., 2020). The integration of these elements into game design ensures an emphasis on control, feedback, fun, incremental goals, and progressive difficulties. Six of the eight games studied by the two researchers exhibit eudaimonic game design elements. The goals in each of them may be perceived as too difficult, whether it be getting out of bed in *#SelfCare*, or it could be maintaining a streak on a new habit in *SuperBetter*, or taking a self-compassion break in *Kinder World*. Each goal is rewarded within the game with extrinsic (power-ups, progression, currency) or intrinsic rewards (receiving a letter of appreciation from a stranger on *Kind Words*).

5.2 IN-GAME REFLECTION

Previous studies have shown that providing a moment of reflection to players gives them a chance to experience empathy (Kors et al., 2016). The mundaneness of certain slow activities that may seem meaningless (Kors et al., 2016; Marsh, 2016), such as doing the laundry in the *#SelfCare* game or waiting for your virtual pet to return from their mission in *The Guardian*, or waiting for your plant to grow in a day allows for mindful moments of downtime. It is reported in literature too that slower moments in the game contribute to mental rest as well as opportunities for reflection (Chittaro & Sioni, 2018). For instance, in *The Guardian*, the player engagement in a personal adventure is limited to one per hour. The gameplay is designed to favor delayed gratification over fast-paced engagement to facilitate meaningful play (Crookall, 2010). These moments may provide for introspection and may also hold an appreciation for the slowness of growth. These pause points allow for a “positive serious experience,” helping in balancing out attention-demanding storylines on social issues. Such a pause point can also be found in the game *Dot's Home* when the protagonist shuttles between the past and the present, while physically walking through a portal for a minute. None of the eight discussed games are timed in nature, lending them to the use of reflective gameplay, which could be used for the purposes of capacity-building.

5.3 NON-COMPETITIVE AND INFINITE GAMEPLAY

Digital learning effectiveness is significantly higher in non-competitive individualistic contexts than in competitive contexts (Zaphiris et al., 2007). All of the selected games fall under the category of non-competitive, single-player games. There is a huge advantage of using such a game for psychoeducation. Educator guides, discussion, and reflection prompts could be provided in hybrid contexts to test the games in future empirical studies. This allows for the game to be used for skill-building purposes, where learning could be largely self-paced. An infinite game is one wherein there is no win or lose state. Such a game reinforces the progression of activities to reach mastery over skills, goals, and growth. Five of the eight games are infinite. The remaining three are untimed narrative games with

a plot structure and a subsequent ending. Games such as *Kind Words* and *#SelfCare* provide an atmospheric space to practice self-compassion, and a player can return to them at any point in time.

5.4 LIMITED AGENCY AND FORCED FAILURE

Two of the games, *This War of Mine* and *Dot's Home*, provided limited agency to the player to control the outcome of the game. For instance, *This War of Mine* provides the illusion of choice through dialogue actions. The game's motive may be to evoke empathy for a civilian surviving in war, which forces the player to come to terms with surprising actions and captures the complexity of difficult choices. Providing limited agency shakes the assumptions and belief systems of players. By being forced to deal with failure, the player has to navigate contradictory emotions to succeed in such a game. Both the games share themes about life situations spiraling out of one's control under overwhelming

life circumstances. *Dot's Home* presents limited choices because the goal is for players to use different strategies, see a different point of view, and try out a sequence of events that may not have been apparent to the player. The loss of agency helps focus on self-acceptance rather than the exertion of control over a certain situation, which is a core tenet of self-compassion (Dryden, 2013).

5.5 DIGITAL COMPANION

Digital companions come in various forms within the eight games, whether it be the pet dog in *Kinder World*, the reindeer in *Kind Words*, the cat in *#SelfCare*, or multiple pets in *The Guardian*. The presence of digital companions has been known to boost learning and retention of knowledge (Rehm & Jensen, 2015). The game mechanics related to the digital companion are often related to caretaking qualities such as feeding the companion, petting it, and providing it with clothing and shelter. The act of being compassionate toward a virtual being might help evoke feelings of compassion toward one's self, as discussed previously (Kirby, 2017).

5.6 DIALOGUE-BASED RESPONSES

In conventional in-person teaching methods, dialogic reading has been known to promote social-emotional learning amongst children (Rehm & Jensen, 2015). *Zoo U*, *Dot's Home*, and *This War of Mine* use dialogues to further decision-making. *Zoo U* in particular provides voice-based feedback with intonation to let the player know in advance what a response may sound like. The three games focus on problem-solving certain situations by taking actions and conversing with various non-playing characters (NPCs). Such dialogue-based responses assess the skills of communication, cooperation, and social initiation (Kirby, 2017).

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