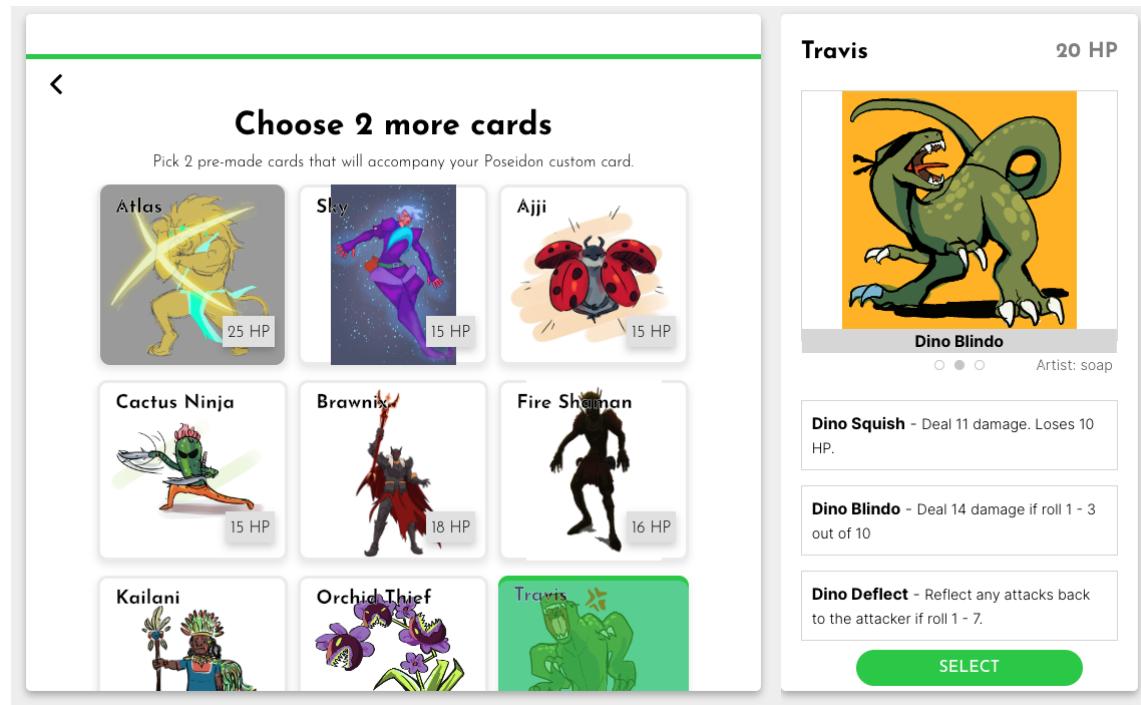


1 Art TCG: Shaping Art Creation with an Artistic Card Game

2
3 ANONYMOUS AUTHOR(S)



30 Fig. 1. Art TCG (“Trading Card Game”) interface of a player’s deck showcasing cards designed and illustrated by previous players
31 who are artists.
32

33 Artists hold high quality standards for their artwork. Their art-making process can take from hours to days, leading some to never
34 finish projects. How can we change how artists approach their workflow and expectations for their results? In this paper, we position
35 art-making as the outgrowth of another activity rather than the central activity itself, embedding art-making into a trading card
36 game called Art TCG. In Art TCG, players design and illustrate trading cards and then play them in a two-player, strategic card game.
37 We performed a five-day playtest of Art TCG with eighteen hobbyist illustrators. Art TCG prompted participants to focus less on
38 their art’s quality, focusing instead on working within design constraints and time limits to create art that they would see live in the
39 game. They adjusted their process to work more loosely and quickly, while ensuring their final results were presentable, readable, and
40 sometimes comedic.
41

42 CCS Concepts: • Human-centered computing → Collaborative and social computing systems and tools.
43

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56
 57
58 1 Introduction
 59

60 The curse of perfectionism can stall the artistic process. Artists ¹ can hold themselves to very high quality standards for
 61 the art that they produce. Surrounded by examples of professional-quality art in online art communities, potentially
 62 facing imposter syndrome, or simply being perfectionists themselves, many artists react to these high standards by
 63 becoming quite methodical and intentional about their art making process. However, high standards can backfire [5],
 64 making the artist feel like nothing is ever good enough, potentially taking a long time to labor over art, or never
 65 finishing what they start as they constantly chase perfection.
 66

67 Online art communities help artists overcome these issues by designing artmaking activities and challenges. These
 68 approaches include events such as Inktober [14] and Art Fight [2], as well as online communities in DeviantArt
 69 or Discord. These communities make art creation the focal element of their activities, an approach we refer to as
 70 *centering* art, as in placing artmaking at the center of the activity. In centering, the insurmountable task—in this case,
 71 high quality art creation—is made the primary focus. Ironically, by centering art, existing online art activities and
 72 challenges can exacerbate perfectionist tendencies—especially in artists who are already predisposed to perfectionism.
 73 This exacerbation arises because many online art activities and challenges are designed to highlight and celebrate
 74 high-quality art creation. This causes perfectionist artists to strive to perform at their utmost best to meet high quality
 75 standards but such productivity quickly transforms into burnout and participation churn.
 76

77 How can we change how artists approach their workflow to improve artists' relationship to their work? In this paper,
 78 we explore an approach to artmaking that decenters art, engaging hobbyists in art creation without making the art the
 79 focus of the experience. We hypothesize that decentering art can help illustrators focus on alternative narratives in their
 80 artmaking, redirecting motivation away from creating high-quality art and thus de-fanging their usual motivational
 81 blocks.
 82

83 We instantiate this concept in an experience that we call Art Trading Card Game, stylized as *Art TCG* for short. Art
 84 TCG² explores how an online art game can change how artists approach their illustration process and outcomes. It is a
 85 two-player card game where artists craft trading cards to use in card battles with each other. Artist design and illustrate
 86 the cover art of a new card to reflect their selected character and its abilities as part of each game.
 87

88 We performed a five-day playtest of 18 hobbyist illustrators who played Art TCG in two-player pairings in the
 89 context of a community Discord³ server. We found that Art TCG encouraged participants to focus less on the quality of
 90 their art and, in some cases, focus more on playing the game. Participants were excited about the role that their artwork
 91 had in the game, and how the art they created would accentuate the gameplay. We found that elements such as time
 92 constraints and social connection affected both the process and outcomes of illustration. Illustrations were approached
 93

94 ¹In this paper, we use the word *artist* to represent a specific type of visual artist, an *illustrator*. Though *artist* is a broad term and may encompass many
 95 fields, the participants in our study, who do illustrative work, refer to themselves as artists. Consequently, they refer to the work they create as art or
 96 artwork, even though it could be specifically classified as illustration. We use the term *art* or *artwork* in our paper to refer to *illustration*.

97 ²TCG, or “Trading Card Game”, is a common abbreviation for two-player strategy card games. Common examples include Magic: The Gathering [21] and
 98 Pokémon TCG.

99 ³A Discord server is an online community platform that allows users to communicate through text, voice, and video channels. It provides a space for
 100 members to interact, share information, and collaborate on various topics.

more loosely and simplistically, and sometimes had a comedic intention to be enjoyed by the other players who would see their final work.

In this paper, we contribute: (1) the design of the Art TCG game, (2) an implementation of the game, and (3) an evaluation of the game with hobbyist illustrators. We will further discuss how Art TCG might inspire other experiences that aim to off-center art and how that might impact illustrators' processes and outcomes.

2 Related Work

2.1 Perfectionism and Motivation literature

Perfectionism is a personality trait "characterized by striving for flawlessness and setting exceedingly high standards for performance accompanied by tendencies for overly critical evaluations [9, 25]" [29]. The outcomes of perfectionism can indicate "psychological maladjustment (e.g., neuroticism, avoidant coping, negative affect)" [18].

"More specific themes of maladaptive perfectionism include unrealistic and inflexible standards of perfection to avoid failure, difficulty separating self-worth from performance outcomes, inability to adjust expectations and goals necessary to satisfactorily complete a task, distress in task completion, and rumination over inevitable shortcomings ([9, 25])" –[18]

The maladaptive outcomes of perfectionism are no stranger to the context of art-making [24]. Perfectionistic artists' attitude toward art-making can be one of neuroticism and avoidance⁴, especially when they feel that their performance and outcomes reflect any perceived inadequacy.

A look into the art-making process itself – with all its numerous, interrelated stages – shows why artists may feel pressured to exceedingly perform well⁵, yet feel simultaneously demotivated. Therefore, for many perfectionist artists, the art-making process can be nerve-wracking and draining⁶, leading to the difficulty in starting and completing artwork.

A common self-directed solution that artists use to alleviate their perfectionism is developing a regular habit [35] of creating smaller, low-stakes pieces of art (such as sketches; doodles; and practice work)⁷. Creating small, low-stakes pieces of art seems consistent with the evidence that shows "that for subjects low in generalized self-esteem, it is better to assign low", conservative rather than high, challenging goals [13]. Low goals seem to "increase the self-perceived task-specific ability of these subjects which relates positively with performance" [13].

Although low goals are achievable, they stunt performance. Literature shows that that specific, challenging goals lead more often to higher performance than easy goals, 'do your best' goals, or no goals [19]. For artists suffering from perfectionism, this low-goal approach of creating small, low-stakes pieces of art may lead artists to get stuck in a

⁴"Whenever I encounter an obstacle, my first reaction is to immediately shut off and never return for days or weeks on end (only for it to turn out to be massively easy in hindsight). I'm constantly finding mistakes in everything I do, keep making touch-ups in the sketch process, and just imagining how some people may react negatively to it. It basically feels like I have an overly-critical art teacher or YouTube audience hovering over my shoulder at all times" –r/ArtistLounge Reddit User 1 [27]

⁵"Drawing is not a walk in the park, its so stressful and takes a ton of brain power between composition, line quality, color, subject matter and everything else. I graduated with a bachelors in Fine Art a couple years ago and fell flat on my face without a syllabus or professors pushing me." – r/ArtistLounge Reddit User 2 [27]

⁶"For me, drawing has always been a really painful and stressful experience, and I have to physically force myself to try to finish it if at all. Which is why I haven't drawn anything in like, ever" – r/ArtistLounge Reddit User 3 [27]

⁷"A big part of practice (for me) are small figures, stick figures, thumbnails, and rapid repetition of the same sketches as planification for a serious drawing." – r/ArtistLounge Reddit User 4 [27]

¹⁵⁷ comfort zone⁸ and eventually become detrimental given the lack of progression to higher goals like completing an
¹⁵⁸ artwork of satisfactory or high quality.
¹⁵⁹

¹⁶⁰ High art goals tend to pose the problem of *centering* the art-making process. Goals like completing artwork to
¹⁶¹ post on social media or to compete in an online art challenge can put too much focus on artists trying to achieve
¹⁶² high quality results, triggering the perfectionist cycle. In our work, we introduce and evaluate an alternative solution
¹⁶³ to artist perfectionism, *decentering* art, inspired by temptation bundling [20]. Temptation bundling is a method for
¹⁶⁴ simultaneously tackling two types of self-control problems by harnessing consumption complementarities. It involves
¹⁶⁵ "coupling of instantly gratifying "want" activities (e.g., watching the next episode of a habit-forming television show,
¹⁶⁶ checking Facebook, receiving a pedicure, eating an indulgent meal) with engagement in a "should" behavior that
¹⁶⁷ provides long-term benefits but requires the exertion of willpower (e.g., exercising at the gym, completing a paper
¹⁶⁸ review, spending time with a difficult relative)" [20]. Our application of temptation bundling involves coupling playing a
¹⁶⁹ strategic, fun card game – the instantly gratifying "want" activity – with an art-marking activity – the "should" behavior.
¹⁷⁰
¹⁷¹

¹⁷² 2.2 Timed or Quick Sketching Exercises

¹⁷³ Art TCG references the traditional art practice of timed, warm-up sketching exercises given in art classrooms [4]. A
¹⁷⁴ sketch is a "rough or unfinished drawing" that gives "a brief account or general outline of something ([10, 11])" [33]. In
¹⁷⁵ the field of product design and architecture, sketching is taught to help designers learn how to quickly visually
¹⁷⁶ communicate their ideas in the simplest, yet clearest way possible [6]. In fine art exercises, like gesture drawing,
¹⁷⁷ students can even have a shorter amount of time, 30 seconds, to draw, with charcoal or pencil, a live human model before
¹⁷⁸ the model changes pose [26]. These exercises help loosen up artists so that they can focus on the most important and
¹⁷⁹ general characteristics of a subject, rather than becoming bogged by details. We employ the same principles of sketching
¹⁸⁰ – quick, rough, unfinished yet legible – except for illustration, which can involve multiple stages (idea generation,
¹⁸¹ linework, coloring, clean up) so that artists can learn to work more efficiently and create something presentable and
¹⁸² legible in a shorter time frame.
¹⁸³
¹⁸⁴

¹⁸⁵ 2.3 Art Party Games

¹⁸⁶ Our work draws inspiration from art party games such as Gartic Phone [23] and Pictionary, which put time constraints
¹⁸⁷ on a group art activity. Time constraints in games are used to develop a sense of urgency and challenge players' abilities
¹⁸⁸ to respond under pressure. In Pictionary-esque games, the artwork is discarded each round, encouraging less effort and
¹⁸⁹ lower quality artwork more akin to doodles or quick sketches. Our design goal in Art TCG is to straddle a design space
¹⁹⁰ between unconstrained, untimed illustration⁹ and rapid throwaway art, creating a middle ground that encourages
¹⁹¹ art but rules out perfectionism. Art TCG artwork is also designed to be relatively longer lasting—an illustration for a
¹⁹² trading card—and this also encourages participants to put in more effort to produce more fleshed out illustrations than
¹⁹³ a doodle.
¹⁹⁴
¹⁹⁵

¹⁹⁶ 2.4 Inktober: Month-long art challenges

¹⁹⁷ Inktober is a month-long online art challenge wherein artists must create one ink illustration per day for the month of
¹⁹⁸ October. To make the art challenge achievable, Inktober employs structured deadlines, defines themed daily prompts,
¹⁹⁹

²⁰⁰⁸"I have been doing daily gesture drawing and looks at anatomy and shape exercises and such, and I've been struggling a lot for end results that are
²⁰¹ basically blank stick figures. Should I only be doing these kinds of practices and then start drawing actual pictures when I'm good enough? I've been ...
²⁰² doing nothing but faceless blank figures day in day out is kind of soulless and demotivating." – r/ArtistLounge Reddit User 5 [28]

²⁰³⁹In general, artists spend several hours or days completing a typical illustration.
²⁰⁴
²⁰⁵

and promotes a sense of community and camaraderie amongst participants. In Art TCG, we employ a similar idea of prompts—we provide a variety of rich character descriptions to choose from, giving players the inspiration, excitement, and freedom to bring that idea to life on (digital) paper. However, unlike Inktober, we do not make Art TCG a daily challenge. Like many online art challenges, many participants start strong in the beginning and fall off.¹⁰ This dropoff is likely due to the implicit expectation of creating high-quality work every day, a goal that is simply not sustainable for most hobbyist illustrators. More pressure is added given that artists are strongly encouraged to share their daily drawings, even if they are not pleased with the results.

2.5 Art Fight: Gamifying art trades

Another approach involves trading art with other people online. Art Fight [2] is a characteristic example: the competition makes a simple social game out of “art trading” original character (OC) designs. In Art Fight, players create a character as their own avatar, then play a series of games against other artist. In each game, players draw their own versions of their opponents’ characters. Points are awarded based on complexity and execution. On its own, art trading is a huge motivator for getting illustrators to create via experiences such as Art Fight. It is validating to have another illustrator choose to create your character and put the time and effort to do so. However, burnout again is a major challenge with Art Fight, because Art Fight incentivizes illustrators to create high-quality artworks in a relatively short amount of time.¹¹ In contrast, in Art TCG we explore the idea of illustrators creating low- to moderate-quality artwork in the midst of a similarly social atmosphere as Art Fight. Without a backlog of art trades that artists encounter in Art Fight, and by instead allowing illustrators to join the game whenever they have a few minutes and want to draw, our goal is to reduce the pressure artists feel so they can create art more sustainably.

2.6 Trading Card Games: Commissioned Professional Card Cover Art

Art TCG takes inspiration in its card game mechanics from traditional card games like Magic: the Gathering (MTG) and Pokemon Trading Card Game (Pokemon TCG). In these games, card artwork and abilities are designed by a set of commissioned, professional artists and game designers. Our card game relegates that task to the players of the game, giving them some sense of “stakes” in the process. Art TCG players know that their artwork will be used as the cover art for the cards in Art TCG; our design goal is to leverage that opportunity for motivation and excitement compared to their traditional art making process. Artwork aside, Art TCG aims to create a similar strategic card game battle stage as MTG and Pokemon TCG.

2.7 Games Literature and Psychological Outcomes

Previous research has explored the psychological outcomes of game mechanics, particularly how games can foster empathy [16, 17], emotional regulation [32], and social learning [15]. Our work builds on these themes, contributing game mechanics that address a particular form of anxiety—perfectionism—in the context of art-making. While prior research has advanced our understanding of designing games for diverse communities and their specific needs ([12], [30]), we focus on how to effectively design games for artists and explore game mechanics that support them in managing perfectionism, anxiety, and burnout.

¹⁰For example: <https://www.patriciapedroso.com/things-nobody-says-about-inktober/>

¹¹For example: <https://sfw.furaffinity.net/journal/10261042>

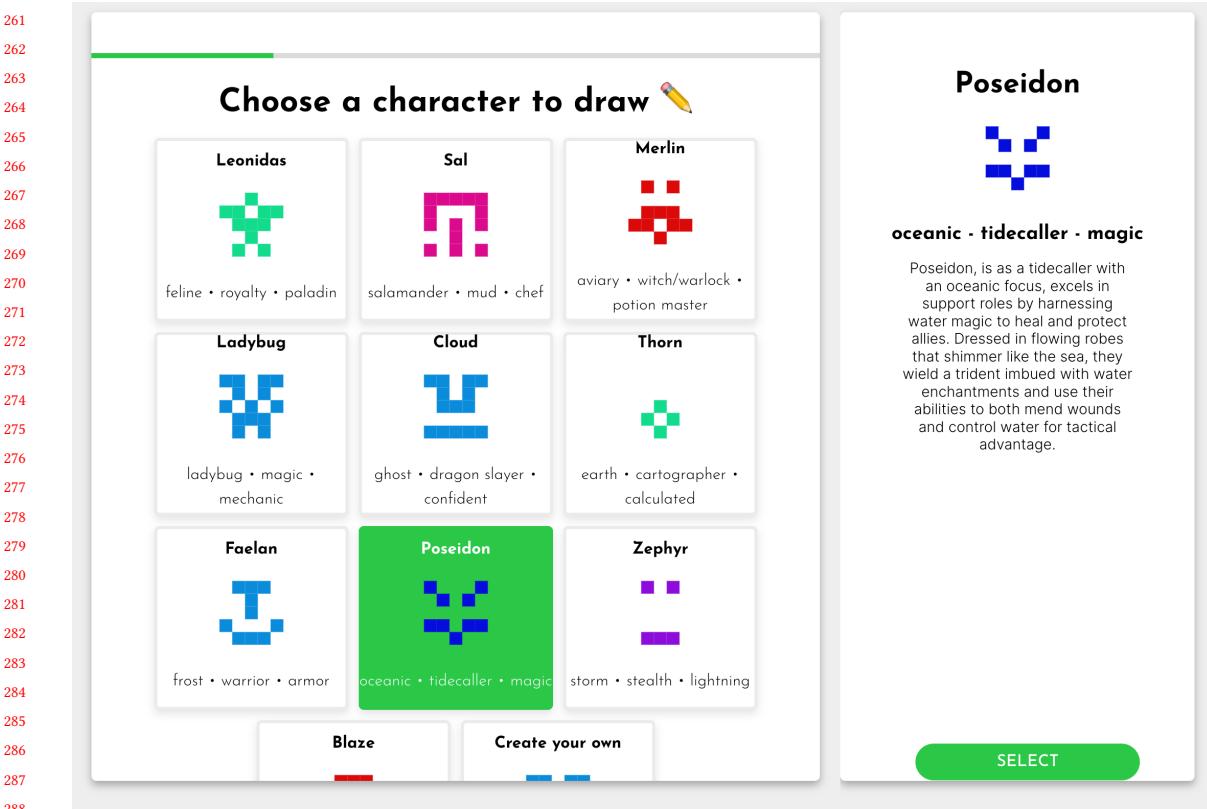


Fig. 2. The character selection screen is the first step in Art TCG. The screen lists 10 predefined character design prompts and 1 option to create your own character (last option on list). Each character prompt has a character name, 3 descriptive keywords (e.g. oceanic, tidecaller, magic), and backstory. Artists will use the character design prompt as the basis for illustrating their custom card cover art.

3 Art TCG

Given that *centering* or positioning art-making as the primary focus can ignite perfectionist tendencies amongst artists, in this paper, we focus on a mechanism of *decentering* to art-making to construct a game. We position art-making as the outgrowth of another activity rather than the central activity, embedding art-making into an online trading card game that we call Art TCG. Art TCG is an online art game, specifically a two-player online card game. In Art TCG, illustrators craft trading cards to use in card battles with each other. Illustrators are expected to design and illustrate the cover art of a new card for each game, selected to reflect a character and its abilities, under a time constraint. In this section, we describe how Art TCG is designed to help decenter the art-making process and redirect illustrators' focus away from creating high-quality art.

3.1 Design of Art TCG

3.1.1 Integrating art-making in a card game. In Art TCG, we situate the art-making process within the broader goal of creating a functional card to be used in a card battle. Rather than focusing solely on creating a standalone piece of art, the primary objective is for artists to design a card that integrates both art and gameplay strategy. The card creation

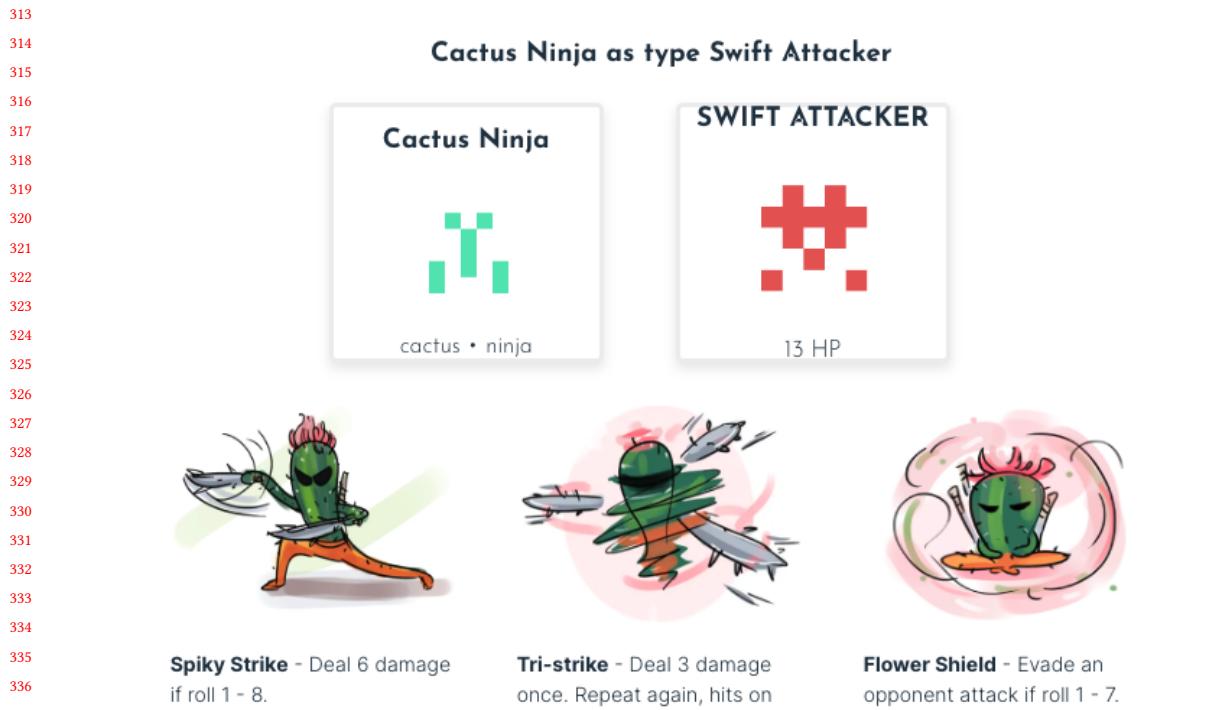


Fig. 3. An instructional example shown to players in Art TCG's interface, illustrating how to draw a character based on an attack style. The artwork was produced by a paid Upwork artist during a user test of an early Art TCG prototype. The artist chose the character "Cactus Ninja" and the "Swift Attacker" type during the card customization process. They then selected three moves from the Swift Attacker move list, that the artist later named as Spiky Strike, Tri-Strike, and Flower Shield. For each move, the artist drew Cactus Ninja in a pose that visually depicts the chosen attack. The card artwork for Spiky Strike was completed in 20-25 minutes (before round 1 of the card battle), Tri-Strike in 8-10 minutes (before round 2), and Flower Shield in 8 minutes (before round 3). Note that earlier prototypes of Art TCG had multiple rounds (up to 3).

process is divided into multiple steps: artists first choose a character for the card (Figure 2), followed by the card's attack style (e.g., fight, defend, dodge), and then select specific moves based on that style (e.g., a fighter card might have a move to 'Deal 5 damage on a dice roll of 1-4 on a 10-sided die'). After making these choices, artists illustrate the card's artwork to reflect their decisions (Figure 3). Although the art-making is one part of this larger process, it plays a functional role, serving as a visual component that complements the card's strategic elements.

Many popular card games centrally feature art like Art TCG—just with pre-drawn art, not art created as part of the game. In these games, the artwork similarly enhances the immersion and depth of the game. For example, in Pok  mon TCG or Magic: The Gathering (MTG), the cover art is not just decorative but can inform a player's strategy by hinting at the card's capabilities. An aggressive, tough-looking Pok  mon might signal strong offensive abilities, while in MTG, a card featuring a serene, glowing figure surrounded by water imagery suggests healing or protective powers. We apply this principle in Art TCG by encouraging artists to visually reflect the strengths and abilities of their chosen attack style, giving them a clear artistic objective tied to gameplay.

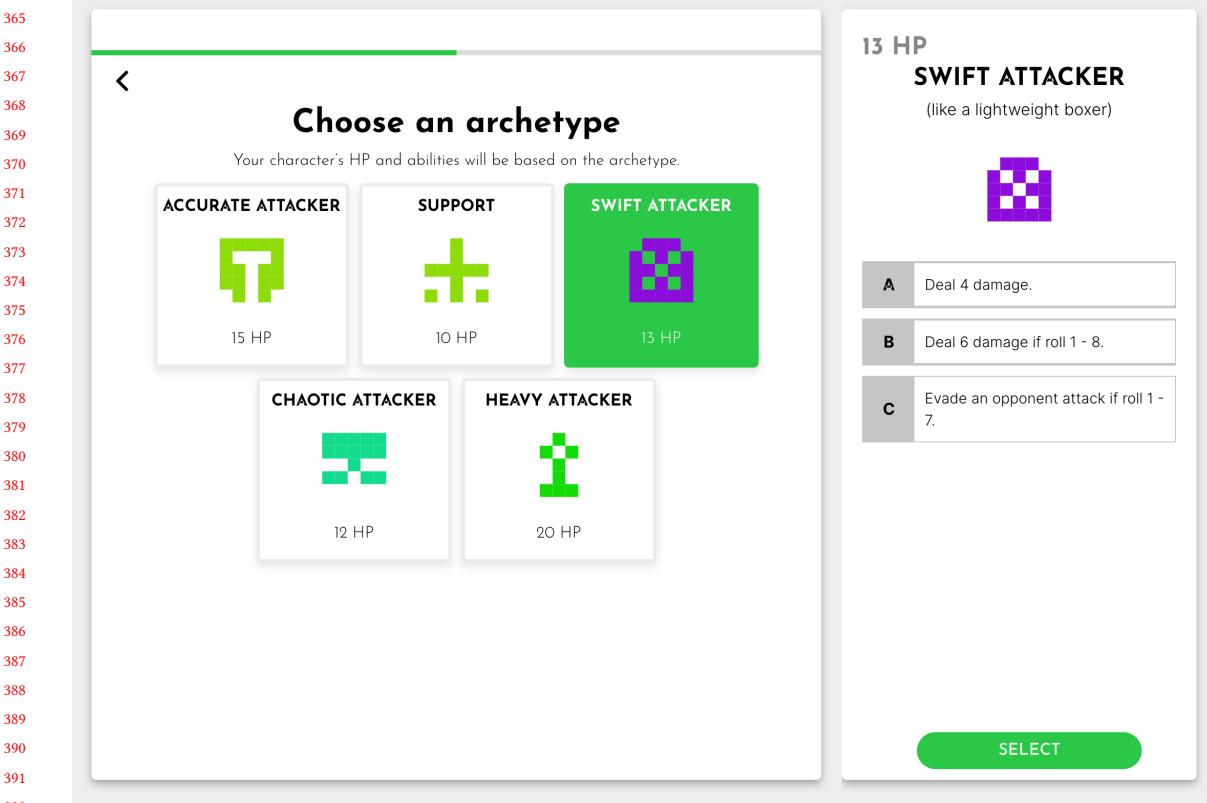


Fig. 4. The Choose an Archetype screen appears after players choose a character (see Figure 2). The term archetype refers to an attack style that will dictate the custom cards abilities or "moves", as they are called in the game.

In Art TCG, the artist must draw the character in a pose to reflect the move chosen (Figure 3) of that attack style. This design choice draws inspiration from player-vs-player fighting games like Super Smash Bros. (SSB) [31], where characters animate and change instantaneously to reflect the moves players select. For example, Kirby, a small, pink spherical character in SSB, can use a move called 'Stone,' where he turns into a stone and drops from above, or 'Fireball,' where he propels himself as a fiery rocket towards an opponent [8]. Similarly, we want to incorporate this link between move selection and artwork such that when artists are choosing which card move to play during the card game, they should see a corresponding illustration reflecting that move (Figure 3).

In this way, the gameplay drives the art-making direction since the move chosen (game driven choice) will influence the artists' interpretation and pose the artist will draw their character. Because each attack style lists multiple moves for artists to choose from (Figure 4), players can select new moves for their card at the start of each battle round, up to 3 rounds (total of 3 moves) per game session. Artists strategically choose these moves to enhance their custom card's effectiveness and adapt to their opponent's strategy and available cards each round. The implementation of Art TCG that we evaluated only includes one round of card battle, and therefore, allows artists to choose one move and thus, have one piece of artwork.

Finally, we provide artists with a wide range of character design prompts (Figure 2) to choose from, similar to the diverse character selection screens found in popular games like Super Smash Bros. [34], where each character has a distinct design and persona. These prompts serve to guide and creatively constrain the artists in their design process. Much like art challenges such as Inktober, which offers daily single-word prompts, or Artstation's Neo Tokyo Challenge [3], which provides a single detailed design brief, our character prompts include 3 descriptive keywords (e.g. oceanic, tidecaller, magic), the character's name, and a character backstory to inspire and focus the artists' card art design (Figure 2). We specifically narrow the prompts to that of character designs – rather than props, weapons, or environments - because characters are a popular subject matter for artists [1, 7].

3.1.2 Pre-made card deck. In the spirit of trading card games, we provide players with a pre-made card deck (Figure 9) to kickstart the game and choose cards from. This was meant to help artists calibrate what to expect of artwork. These include artwork created by other artists who played earlier versions of Art TCG. The quality of the artwork may vary – some artists were given 45 minutes to an hour to create their work and others given 20-25 minutes. Nevertheless, we want to use custom art made from artists rather than stock images, AI generated art, or professional art so that future players of Art TCG can have quality bar or range and what types of styles and elements are appropriate for Art TCG. Notably, all artwork are digitally painting and are rendered, colored illustrations of varying quality rather than sketches or doodles to set the tone of what mediums. When artists are working at their highest quality these are the tools (if digital: Photoshop, Procreate) used and outputs (colored illustration) produced, so we want artists within ArtTCG to have a similar experience and be in the right environment for practicing and creating a more efficient workflow.

3.1.3 Time constraints impact on illustration quality. Another element we consider in designing Art TCG is the appropriate time constraints for art completion and related, setting the expected art quality. Generally, the less time artists have to complete artwork, the more rushed and incomplete artists may feel about their work, especially when high quality is expected of them. On the contrary, too much time can lead artists to aspire to produce grand masterpieces, causing them to fixate on unnecessary details, to work beyond the point of completion, and to sometimes never finish due to lack of time management. In Art TCG, we want artists to apply their quick-thinking and problem-solving skills that are demanded in short time frames (8 to 30 minutes) while aiming for the quality one might achieve in a longer period (hours to days). This preference for shorter time frames would be suitable, if not absolutely necessary, in a game settings like Art TCG, where generally activities occur at a faster pace.

During early prototypes and user tests of Art TCG with 4 paid Upwork artists as playtesters, we experimented with different time frames for art completion based on a character prompt: 90, 60, 45, 30, 25, 20, 15, 10, and 8 minutes. Initially, the Upworkers expressed a preference for a longer time frame like 45 - 60 minutes so they could work comfortably. However, as the time limits shortened, we observed that the artists adjusted their art process to meet the constraints, becoming more efficient and confident in their process to deliver satisfactory results as the time frames became tighter. Figure 3 shows art produced under these short time constraints (8 - 25 minutes) from an Upworker during an early user test. In 20-25 minutes, the Upworkers generally followed a similar workflow: a brief brainstorming phase to decide on the design, followed by constructing the character's key pose (usually with linework or color blocking), and finally adding color. Upworkers were comfortable with even less time (8 - 10 minutes) if it was preceded by a 20-25 session where they had already drawn the character and established the core design. With repeated short sessions, the Upworkers became more comfortable with delivering the core, essential elements of the character, often referring to any unfinished areas as "details" they could refine if given more time. In fact, within hours or days of some of the user

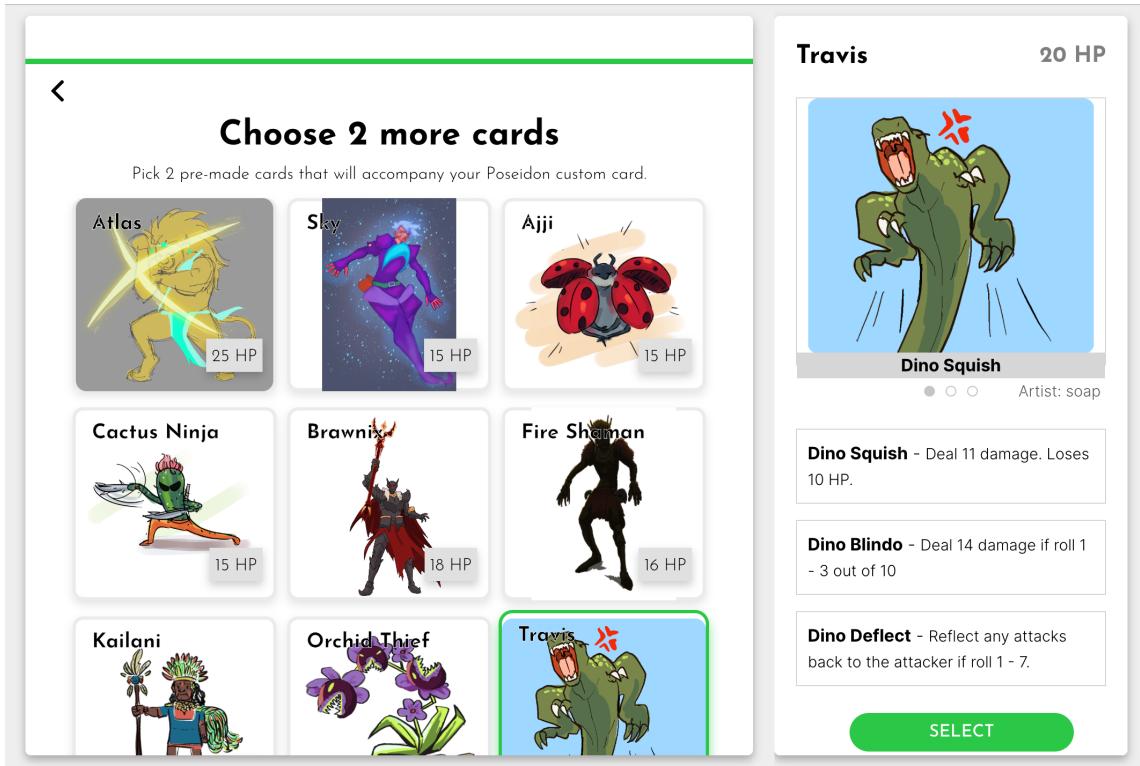


Fig. 5. This screen displays Art TCG's built-in deck of pre-made cards. Players must choose two pre-made that will accompany the player's custom card during the upcoming card battle. Each pre-made card includes artwork designed by artists who played earlier versions of Art TCG.

test, one Upworker shared with us artwork that they had continued to refine, indicating that they felt some attachment to the user test art tasks.

From these preliminary user tests, we decided on 20-minutes as the time frame for artists in the final version of Art TCG that we evaluated. Though we would not expect artists to achieve high quality results as they would with more time, twenty minutes can be enough time for artists to complete the core design work for a character prompt while encouraging them to think decisively and focus on the essential aspects of the artwork.

3.1.4 Social connection. One of the key decentering elements we aimed to incorporate into Art TCG is fostering social connection between artists. Art-making is traditionally a solitary activity, but there's significant anecdotal evidence suggesting that co-creating with others is more enjoyable and less isolating. In many areas beyond art, such as exercise, studies show that people are more motivated when engaging in activities with others, viewing it as a social activity outdoors rather than exercise (an application of decentering). While social connection is not the central focus of Art TCG, we believed it should be an essential component. For this reason, we designed Art TCG as a two-player game, where artists collaborate synchronously.

To facilitate real-time communication and connection, we decided to use Discord as the platform to host Art TCG. Discord is already a popular space for artist communities. We envisioned the game being played over voice chat,

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521 allowing artists to interact and bond while playing. Similar to other successful Discord-based art games like Gartic
522 Phone, which involve multiple users participating in a voice channel to play Gartic, we aimed to recreate that dynamic,
523 shared experience with Art TCG.

525
526 *3.1.5 Alternative narrative-based game formats.* Before settling on the card game design approach for Art TCG, we
527 explored other game formats as potential decentering mechanisms to observe their impact on artists' workflows and
528 outcomes. We describe these alternative formats to provide context on why we ultimately chose a card game and the
529 limitations we encountered with other formats. Many of our initial game formats were narrative-based, as we believed
530 grounding the art-making process in a story could be a powerful source of inspiration for artists [22].

532 In our early playtests, which involved 2-4 participants—usually university students or artist friends—we tested
533 multiplayer role-playing games (RPGs) where each player received a unique text description of their role and an
534 art-related task within an imaginary world. Completing the task would put the player in a "win" state or unlock
535 additional quests, all tied to creating artwork. One approach we experimented with was a variation of the telephone
536 art game, where illustrations were passed from person to person, each adding their contribution. In another variation,
537 players worked synchronously on a shared canvas or panels in a comic strip.

539 While these narrative-driven formats succeeded in decentering the art-making process, they ultimately led to a sense
540 of dissatisfaction among the artists. Many felt a lack of ownership over the final piece, especially in the shared projects,
541 where the quality of the output varied. Additionally, many artists expressed a strong desire for more time to polish their
542 contributions, particularly in collaborative formats like the shared canvas or comic strip, which resulted in long play
543 sessions (3-5 hours). After these sessions, artists felt not only tired but frustrated, as the mixed quality of collaborative
544 work made the pieces feel like throwaways and wasted effort.

546 By contrast, the card game format allows artists to start fresh with a new, quick character design each game session.
547 While the artwork isn't necessarily a throwaway, artists felt a sense of ownership over their creations without becoming
548 overly attached to perfection. Like a narrative, the card game has room for progression, as players can accumulate
549 cards in their deck from their custom card creations or, in future iterations, trade custom cards with others. This format
550 strikes a satisfying balance between individual contribution, broader strategic engagement, and decentering art-making
551 mechanisms. Of all the formats we tested, the card game consistently generated the most excitement and engagement,
552 offering a sustainable, repeatable structure (with shorter sessions of 1 to 1.5 hours) that artists enjoyed and found
553 meaningful.

557
558 *3.1.6 No built-in drawing interface.* Art TCG does not include a built-in drawing or digital painting interface because we
559 do not want to interfere with the artists' usual workflow and tools nor constrain the type of output/artwork produced.
560 Our objective is to evaluate how Art TCG affects artists' current workflow and output.

563 3.2 Art TCG Gameplay

564 In this section, we describe Art TCG's gameplay – any necessary setup to play Art TCG as well how to play Art TCG.

566
567 *3.2.1 Setup.* Art TCG is a live, synchronous two-player game. Both players must be present during the entire game
568 session and may communicate with each other at anytime throughout the game. Originally, Art TCG was built as a
569 Discord Activity that could be launched and played by two players on Discord. To play the Discord Activity, first both
570 players must be present in the same Discord voice channel. Then one player will launch the Art TCG Discord Activity

573 from the Discord Activity panel. Afterwards, the second player will join that launched activity instance so that both
574 players are in the same game session.
575

576 Given that Art TCG Discord Activity's implementation is based on a web-infrastructure, Art TCG is now a standalone
577 website. To play the web version, similarly a pair of players begin by first joining same Discord voice channel. Then
578 each player in the pair would access the Art TCG web applications separately in their respective web browsers outside
579 of the Discord platform. For a player pairing to join the same game session of Art TCG and be able to play against each
580 other, Art TCG generates a room code ¹² for the session that one player can share, usually direct message over Discord,
581 to the second player.
582

583 In both the Art TCG Discord Activity and the website, the system records the player's Discord username to define a
584 new or existing user of Art TCG. For the web version, in the beginning of the game, both players manually input their
585 Discord username into a textfield.
586

587

588 3.2.2 *Game Structure.* Art TCG has two parts – the first part is preparing and selecting a set of 3 cards – including
589 designing and illustrating a custom card – and the second part is playing a card game, where they use their 3 cards
590 against an opponent who followed the same process in Part One. Art TCG takes about 45 minutes to play, including a
591 minute or two to setup Art TCG.
592

- 593 (1) **Part One:** Card selections and Illustration (*Total: 30 minutes*)
 - 594 (a) Select 3 cards (*5 - 10 minutes*)
 - 595 (i) Select criteria for custom card (Figure 8)
 - 596 (A) Choose the character of the card
 - 597 (B) Choose the attack style of the card
 - 598 (C) Choose 1 move from the list of attacks of the selected attack style
 - 599 (ii) Choose 2 additional pre-made cards to accompany the custom card
 - 600 (b) Illustrate the cover art for the custom card (*20 minutes*)
- 601 (2) **Part Two:** Card game (*Total: 10 minutes*)
 - 602 (a) Play the card game with the 3 cards chosen against the opponent's 3 cards

603 Though the pair of players are in the same game session, they cannot see each other's choices made in Part One in
604 the Art TCG interface. Meaning, they do not know the 3 cards that their opponent picked. Players can talk to each
605 other about their choices in Part One, but this is not encouraged. In Part Two, the players' choices will be revealed in
606 the interface gradually as they play the card game.
607

608 3.2.3 *Card Character Design Prompt.* Players begin Part One of Art TCG by selecting a character design prompt (Figure
609 6) that will serve as the inspiration and main subject for the cover art on the card. Art TCG contains 10 predefined
610 character descriptions and 1 option to create your own character. Each character prompt has a character name, 3
611 descriptive keywords (e.g. oceanic, tidecaller, magic), and backstory.
612

613 614 615 616 617 618 619 620 621 622 623 624 ¹²A room code in a game is a short, typically alphanumeric, unique identifier that players use to join a specific multiplayer game session or room. It's commonly used in online or local multiplayer games where a host creates a game session, and other players join by entering the code. This method helps ensure only invited or known players can enter the room.

⁶²⁵ 3.2.4 *Card Attack Style.* An attack style gives a sense of how defensive or offensive a card is that is represented by
⁶²⁶ two pieces of information: the number of health points (HP) ¹³ and the kinds of card moves ¹⁴. For example in Art TCG,
⁶²⁷ the attack style "Heavy Attacker" is predominantly offensive, both powerful in dealing damage and difficult to defeat.
⁶²⁸ Heavy Attacker has the highest health points (HP) of all the attack styles and has card moves that can deal significant
⁶²⁹ damage to other card's HP. However, those card moves have a higher HP cost ¹⁵, which may quickly drain the Heavy
⁶³⁰ Attacker's HP. In the Art TCG interface, we use the term *archetype* to refer to attack style. There are 5 archetypes, and
⁶³¹ each one comes with the number of HP and list of predefined card moves.
⁶³²

⁶³³ During the Select 3 cards phase (1a.) in Part One, players must decide the attack style of their custom card from the 5
⁶³⁴ archetype options (Figure 7). The selected attack style will determine the custom card's HP and set of possible moves. In
⁶³⁵ the Art TCG version used during our Evaluation, we only required players to select 1 card move from the attack style.
⁶³⁶

⁶³⁷ 3.2.5 *Card deck.* After a player has solidified their custom card's attacks style, they must select 2 additional pre-made
⁶³⁸ cards from a built-in card deck (Figure 9) to accompany the custom card during the card battle. These 3 cards will form
⁶³⁹ the player's hand¹⁶ (Figure 10). Art TCG's card deck consists of 12 pre-made cards that all players will choose from; all
⁶⁴⁰ players see the same cards. However, a player's card deck grows whenever they create a custom card and the current
⁶⁴¹ game session ends. The custom card is only added to its creator's card deck.
⁶⁴²

⁶⁴³ Each pre-made card contains the following information: an HP number, a list of 1 - 3 card moves, cover art, and the
⁶⁴⁴ name of the artist who illustrated the cover art. Players may use this information to decide whether to select pre-made
⁶⁴⁵ card. Since the two pre-made cards will accompany the custom card during the card gameplay in Part Two, players
⁶⁴⁶ may consider how these three cards work together. This may mean focusing on selecting cards with adequate HP and
⁶⁴⁷ card moves that complement other cards, a mixture of defensive and offensive moves depending on any formulating
⁶⁴⁸ strategy done by the player. Like in existing trading card games, players can simply choose cards because they like the
⁶⁴⁹ art on the card.
⁶⁵⁰

⁶⁵¹ 3.2.6 *Card Cover Art.* After players have selected their three cards, Art TCG kicks off a 20-minute timer for players to
⁶⁵² illustrate the cover art of the custom card based on their chosen character's description/backstory and attack style. In
⁶⁵³ particular, players must draw the character in a pose that reflects the single move chosen from that attack style. Players
⁶⁵⁴ must use their own illustration software and tools to create artwork. If the player is working digitally, an example is a
⁶⁵⁵ digital painting software like Procreate used on a tool like an iPad. If the player is working with traditional mediums,
⁶⁵⁶ this could be paper, pen, paints, and/or colored markers and pencils.
⁶⁵⁷

⁶⁵⁸ During the cover art illustration phase, Art TCG interface displays the 20-minute timer decrementing. Once the
⁶⁵⁹ timer ends, players must upload an image of their completed artwork into the Art TCG interface. If a player finishes
⁶⁶⁰ their artwork early, they are able to upload their artwork prior to the timer ending.
⁶⁶¹

⁶⁶² Players are allowed to talk with each other during this time. However, players must work separately on their
⁶⁶³ illustrations rather than collaboratively and are not encouraged to share their artwork with each other at this stage.
⁶⁶⁴

⁶⁶⁵¹³In a game, HP stands for Health Points (or sometimes Hit Points). It represents the amount of health or life a player or character has. As a character takes damage in a game, their HP decreases. If the HP reaches zero, the character is typically knocked out, defeated, or dies.

⁶⁶⁶¹⁴Card moves refer to specific actions that a card can take during a player's turn. These moves often deal damage, apply status effects, or provide some strategic advantage.

⁶⁶⁷¹⁵An HP cost for a card refers to a mechanic where a player must sacrifice or reduce a card's health points in order to perform a specific action or move. Essentially, to activate a card's ability, the player must pay by deducting HP from that card.

⁶⁶⁸¹⁶A hand in a card game refers to the set of cards that a player holds and has immediate access to during gameplay, a card game in our case. These cards are typically drawn from a deck and are kept private from other players. The player can use cards from their hand to perform actions, play moves, or make strategic decisions.

677 The players' artwork will become visible to each other throughout the card game as cover art on a card and visible later
678 again, when the game ends as standalone illustrations.
679

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686
687 3.2.7 *Card Game Rules & Mechanics.* The objective of the Art TCG card game is to defeat all 3 of the opponent's cards.
688 A card is defeated when its HP is reduced to zero or less. Players take turns playing card moves towards their opponent
689 to reach this objective. The game can end in a tie if all player's card's die or if the players reach a stalemate in the turn
690 taking (e.g. all remaining alive cards cannot deal any HP damage).
691

692 At the start of each turn, players must plan their attacks. Players start an attack plan by clicking 1 of the 3 slots on
693 the card battlefield (Figure 11) to either introduce and play new cards or to play existing cards. By clicking on an empty
694 slot, the player intends to play a new card in that position. If the slot already has an alive card, the player intends to
695 play one of the card's move. Slots can only be clicked from left-to-right order; for example, the second slot cannot be
696 clicked unless a card in the first slot is present. Players can play any number of cards during a turn, but once a card is
697 played, it stays on the slot and cannot be played in a different slot.
698

699
700 When an empty slot is clicked, a selection window (Figure 12) opens to setup an attack plan, which is three steps. In
701 this window, players will first select which card to play in the slot, then which move to play, and finally which opponent
702 slot on that battlefield that the move will target. If the opponent has played a card in that slot, that card will appear in
703 the selection window. Otherwise, it is an empty slot.
704

705 If a player has already placed a card in that slot from a previous turn, then the attack plan in the selection window
706 requires only the last two steps of choosing the move and the target opponent slot. The player must make at least one
707 attack plan (i.e. by clicking on at least one slot) each turn. If a card is in a slot, but it is dead, then no attack plan can be
708 created in that slot.
709

710 A turn ends once both players have confirmed and submitted their attack plans. At which point the Art TCG system
711 visually reveals the players' attack plans to each other (Figure 14). Simultaneously, the system executes those plans and
712 explains the results. For instance, the system could show that one player's card attacked the opponent's first slot, but
713 the opponent was able to dodge the attack. Also, any HP lost on cards is automatically reflected; for example, if a card
714 was 20 HP, but lost 5 HP during the exchange, the card would now show 15 HP at the end of the turn. If a card died, it
715 turns gray.
716

717 After a player is satisfied reading the results of the turn, they can click "Start next turn", which clears the results and
718 begins the attack planning process. Players can strategise their plans based on the current state of the living cards (HP
719 > 0) on the card battlefield.
720

721 When the game ends due to either a win/loss or a tie, a screen is displayed indicating the winning outcomes (Figure
722 15). This screen highlights both players' illustration images for their custom card and encourages them to share the
723 images in the Discord channel as a part of the Evaluation of Art TCG.
724

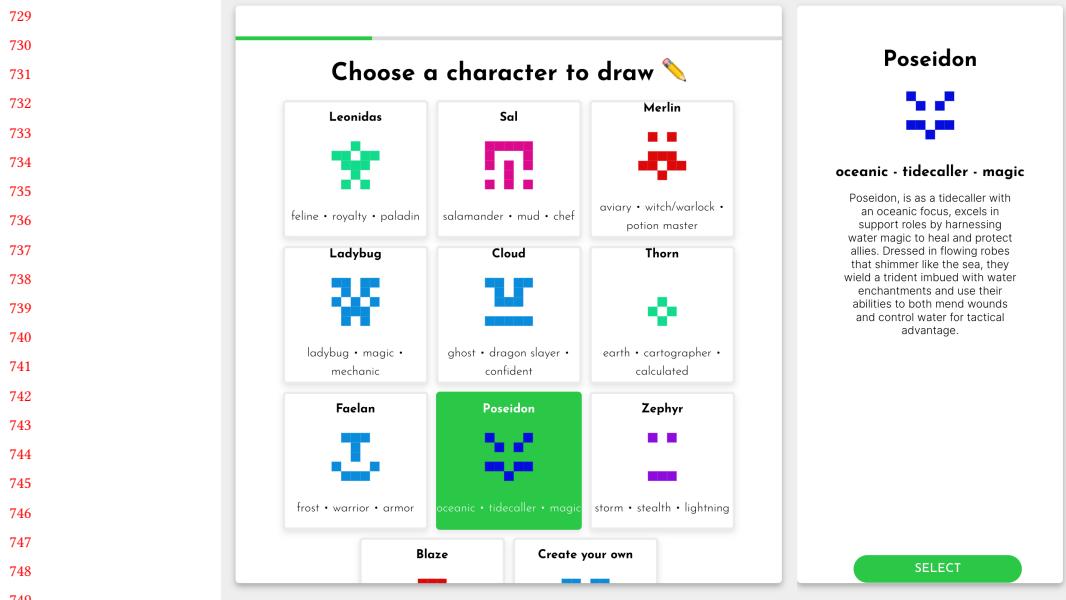


Fig. 6. The character selection screen is the first step in Art TCG. The screen lists 10 predefined character design prompts and 1 option to create your own character (last option on list). Each character prompt has a character name, 3 descriptive keywords (e.g. oceanic, tidecaller, magic), and backstory. Artists will use the character design prompt as the basis for illustrating their custom card cover art.

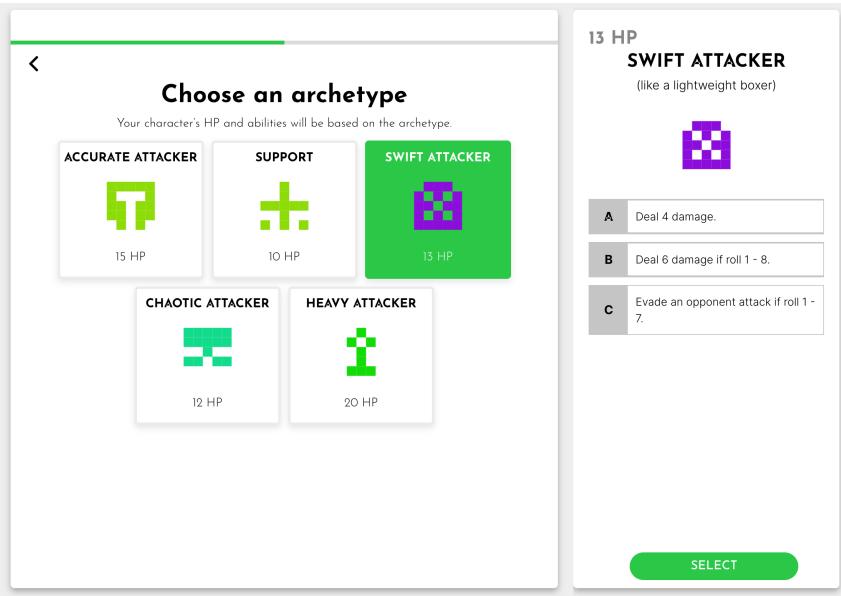


Fig. 7. The Choose an archetype screen appears after players choose a character (see Figure 2). The term archetype refers to an attack style that will dictate the custom cards abilities or "moves", as they are called in the game.

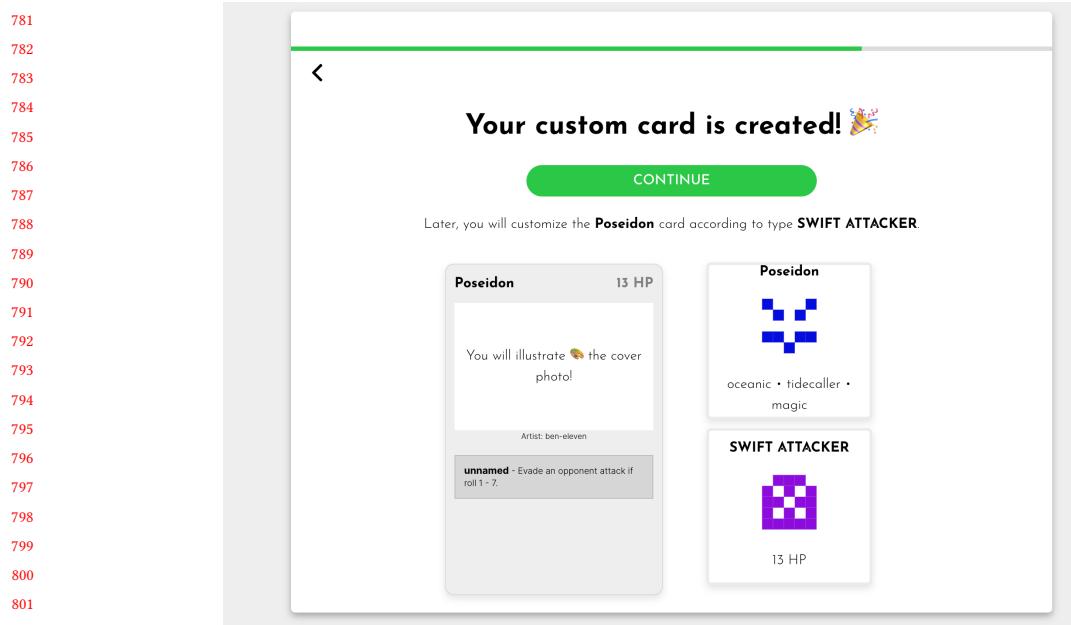


Fig. 8. A screen confirming the player's selected information about their custom card. The selected information includes the character name, attack style, and one move from the attack style. This screen informs the user that they will later be illustrating the cover art for the card.

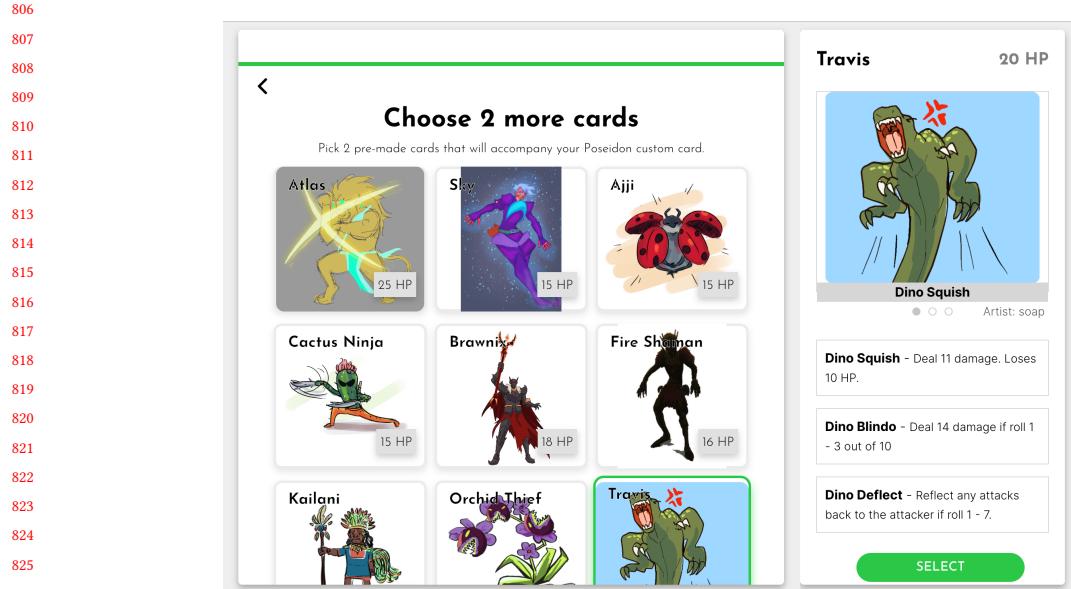


Fig. 9. A screen displaying Art TCG's built-in deck of pre-made cards. Players must choose two pre-made that will accompany the player's custom card during the upcoming card battle. Each pre-made card includes artwork designed by artists who played earlier versions of Art TCG.

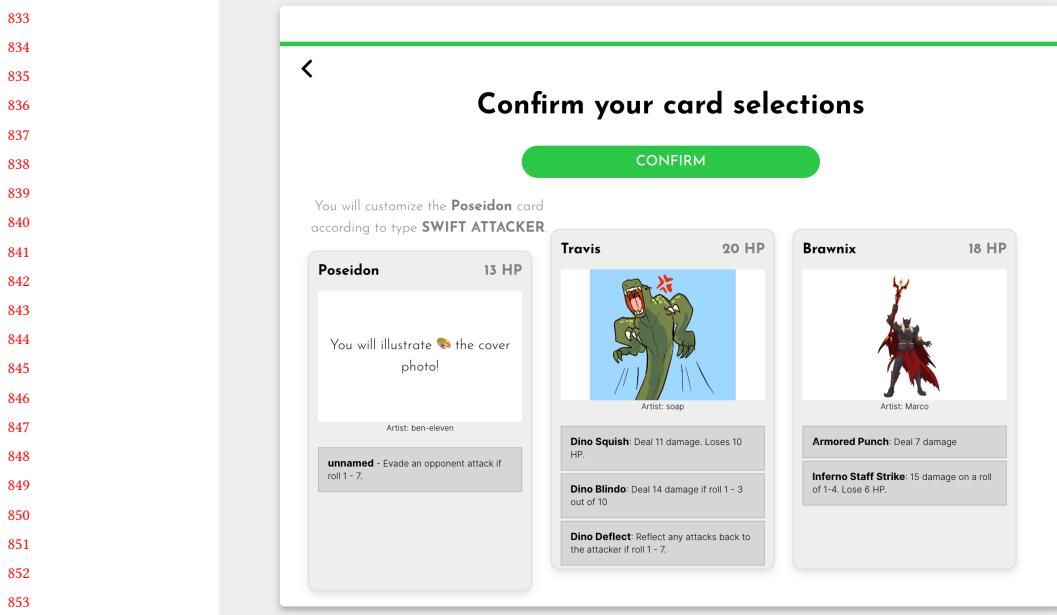


Fig. 10. A screen confirming the 3 cards the player has chosen: the one custom card and the 2 pre-made cards from the Art TCG built-in card deck.

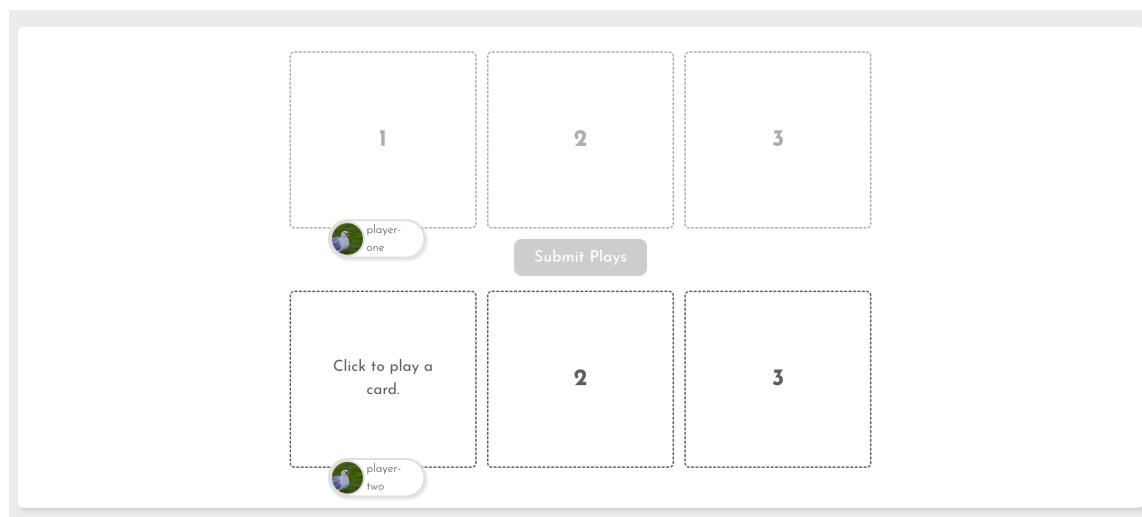
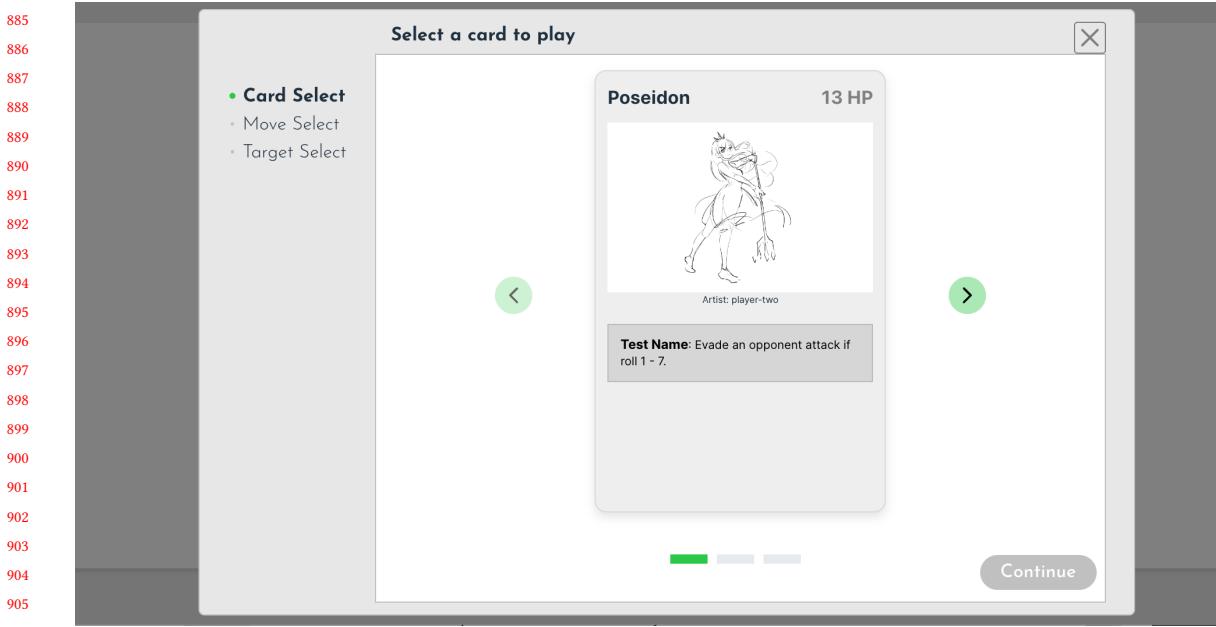
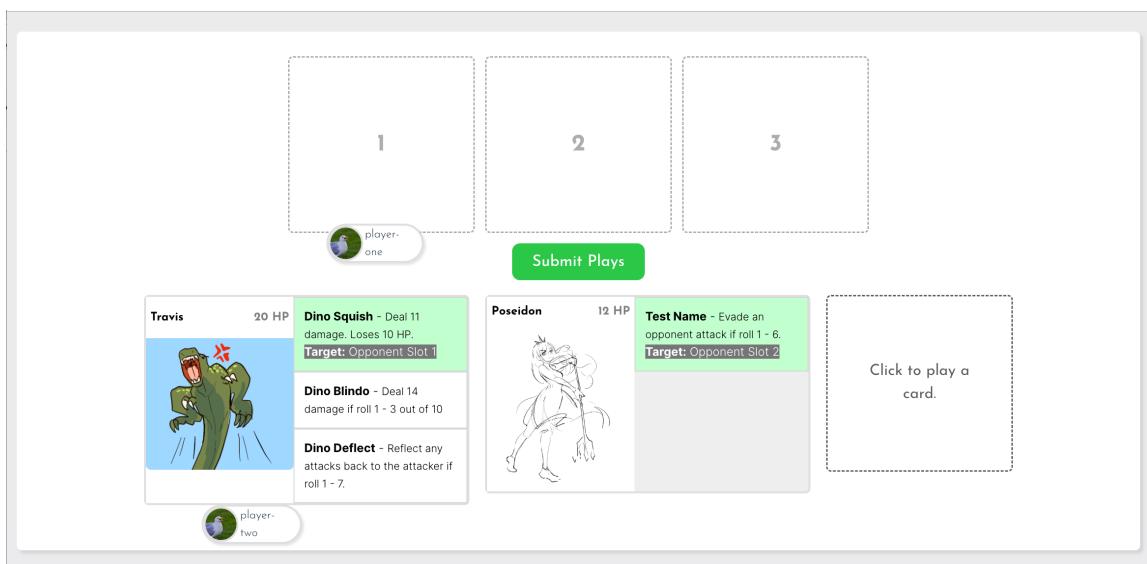


Fig. 11. The empty card battlefield that initializes the card game. The battlefield is divided in a top-half and bottom-half sections. The top-half section is where the opponent, indicated by the Discord username ("player-one" in the example), will play their cards. The bottom-half section is where the active player, indicated by their respective Discord username ("player-two" in the example), will play their cards. Currently, the battlefield is empty, but once the player clicks the first slot in the bottom half, they will activate an attack plan (Figure 12) as a part of the player's turn.



907 Fig. 12. When a player clicks on an empty slot, a window opens, walking players through three-steps to setup an attack plan, which
908 is three steps. First, players select which card to play in the slot, then which move to play, and finally which opponent slot on
909 that battlefield that the move will target. Notice here on the "Card Select" tab, the player's custom card is shown along with their
910 illustration image.



932 Fig. 13. An example card battlefield setup on the start of the active player's first turn. It shows that the active player has setup two
933 attack plans (Figure 12), choosing to play two of their three cards. The card Travis will use the move "Dino Squish", highlighted in
934 green, against the card that the opponent will play in slot one. The player placed their custom card, Poseidon, in slot two to attack
935 the second opponent's slot. If the player is done making attack plans, they can click "Submit Plays".

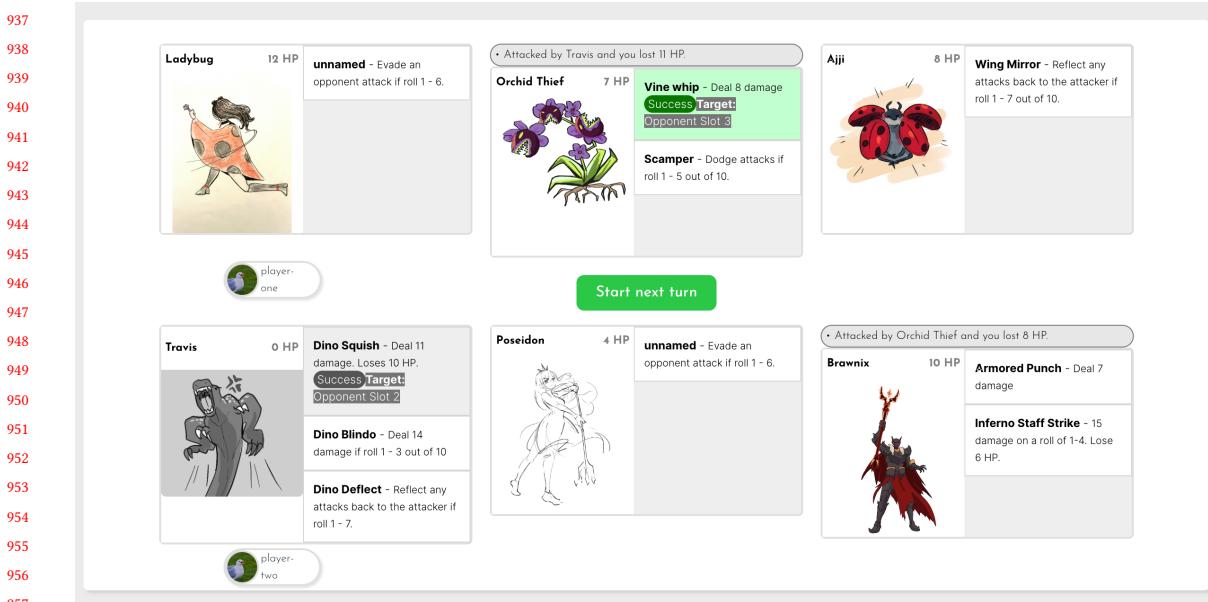


Fig. 14. The results screen where the Art TCG system visually reveals the players' attack plans to each other and the results of those plans. In this example screen, Travis successfully attacked Orchid Thief, who lost HP. Consequently, Travis died from playing Dino Squish which cost 10 HP to play. Meanwhile, Orchid Thief attacked Brawnix. When the player is done taking in the results, they can click "Start next turn" to clear the results and begin their next attack planning.



Fig. 15. The final screen in Art TCG announcing that the game is over. The game over screen displays the winning outcomes of the card game. In this case, the Discord user with username "player-one" won. Additionally, this screen highlights both players' illustration images for their custom card with an instruction to share the images in the Discord channel as a part of the Evaluation of Art TCG.

989 4 Evaluation

990
 991 We ran a five-day playtest study to evaluate Art TCG. We aimed to recruit hobbyist illustrators who were also active
 992 Discord users. We recruited participants from university art club that are active on Discord, university mailing lists for
 993 students majoring or interested in illustration, social media posts made on art-showcasing platforms like Instagram, and
 994 university alumni groups centered on arts and entertainment. We accepted sign-ups from everyone, but we wanted to
 995 target the online illustration community whom tend to be active on online platforms like Discord. Some of the hobbyist
 996 illustrators we recruited were active university students. All recruits were 18+ years of age.
 997

998 We asked participants to complete an initial screening survey to gather some demographic data, such as their
 999 experience with Discord and hobby illustration. Thirty-one people signed up on the survey and were contacted via
 1000 email and invited to a Discord server that we used to coordinate the study. Of the 31, 8 did not respond to the email and
 1001 did not join the Discord server. Of the 31, the remaining 23 respondents joined the Discord server via an invite link that
 1002 we provided. Respondents joined the Discord on a rolling basis over the course of five days of the study, rather than all
 1003 at once in the beginning. Of the 23, 18 fully participated in the Art TCG study.
 1004

1005 Participants were paid an \$80 Amazon gift card for their participation in the five day study. Participants were
 1006 informed that they would receive the \$80 under the conditions that they: join the Discord server, complete at least 1 day
 1007 in the 5-day study (which equates to one 45-minute game session with a partner also in the same Discord server), fill
 1008 out the post-survey questionnaire at the end of the five days, and agree to be available for a semi-structured interview
 1009 after the study.
 1010

1011 At the beginning of the study, we asked participants to play our online game, Art TCG, every day. Since Art TCG is a
 1012 two-player game, participants were asked to find a playing partner by posting their timezone and availability in the
 1013 #find-game-partners channel on the server. Once participants found a partner match, the pairing played an Art TCG
 1014 game session which lasted between 45 minutes and 1 hour.
 1015

1016 We were interested to understand how much voluntary usage Art TCG would get. To that end, we only required
 1017 that participants complete at least one day of Art TCG usage. So, we wanted to understand how many participants
 1018 would enjoy the experience enough to keep playing the game. Our \$80 compensation was designed to be compensating
 1019 participants for this full five day participation, though we knew that not everyone would play all five days.
 1020

1021 The game was played live in pairs over voice chat in Discord. No video camera nor screen sharing was required.
 1022 They only needed to communicate through audio and/or text chat. For the first two days of the study, participants both
 1023 viewed and interacted with our game on a UI interface (called a Discord Activity) built into Discord. However, Discord
 1024 pushed a platform API update on the evening of the second day that broke Art TCG. Therefore, we skipped the third
 1025 day, ported Art TCG off of the Discord platform and into a standalone website, and the experiment resumed on the
 1026 fourth day (and was extended to run to a sixth day instead of the initial five). The interface of the standalone version of
 1027 Art TCG was identical, just not integrated into Discord.
 1028

1029 The card game started with a few UI screens asking participants to design a single card (e.g. card name, illustration
 1030 image, card moves) and then let them play that card in a card battle with the other paired participant who followed the
 1031 same process. The card's illustration image was drawn/illustrated by the participant. After the game ended, participants
 1032 were reminded to post their complete image to the #share-your-art channel. Participants were told that they could
 1033 make changes to their image, but must share both the before-and-after images. Participants were individually asked by
 1034 the research study moderators to share their art if they did not do so themselves, but by the fourth day, participants
 1035

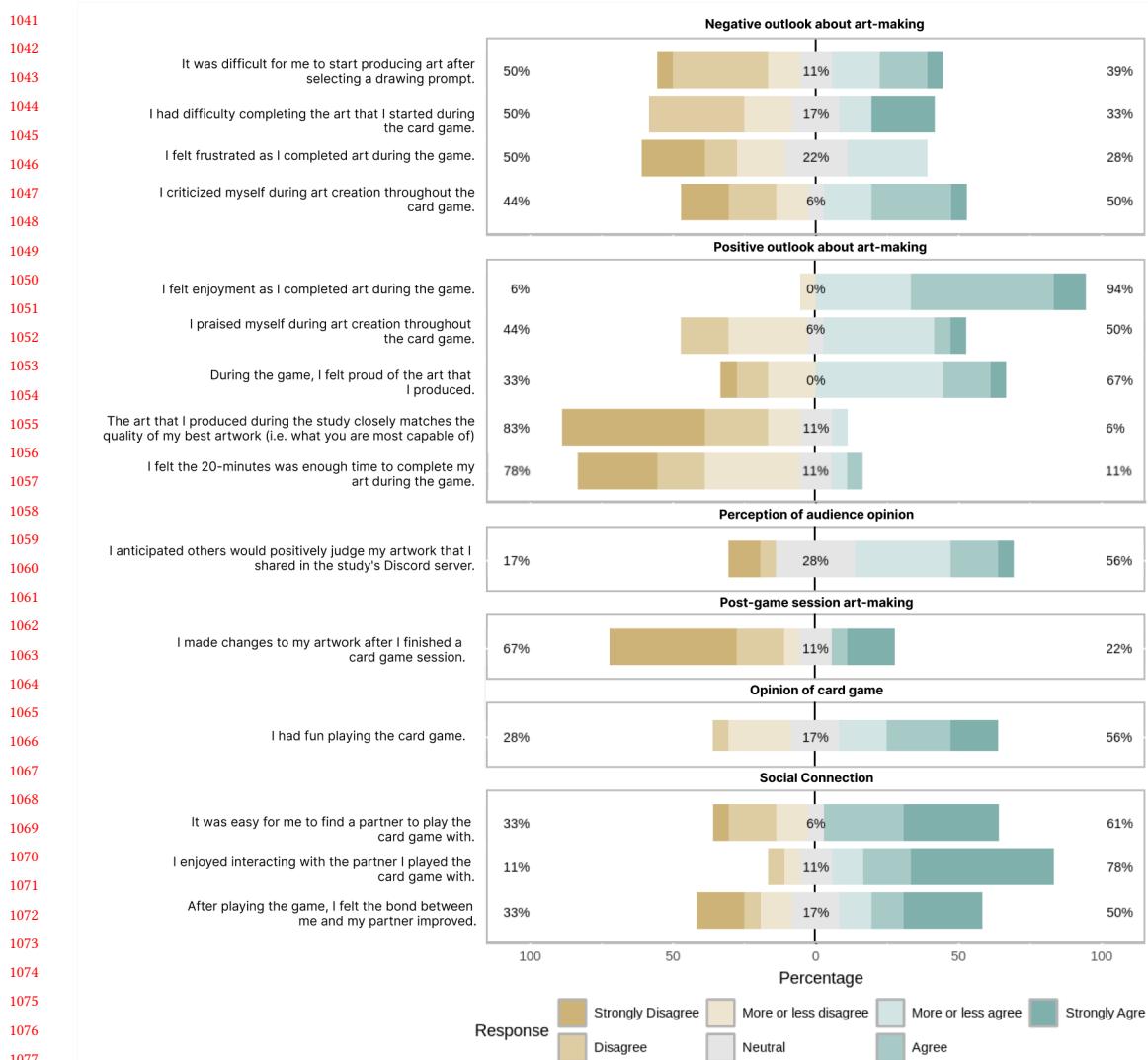


Fig. 16. Post-study survey results from 18 participants after playing at least one session of Art TCG. Participants self-assessed both their art-making process and gameplay experience. The survey featured 7-point Likert scale questions, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

did not need to be reminded to do this and did so on their accord. Participants were aware of the option to share their artwork outside the Discord server with anyone.

5 Results

The results of the Art TCG playtest demonstrated several key findings about how Art TCG influenced participants' art-making workflow and final outcomes, as well as participants' social engagement during the Art TCG session.

Table 1. Participants' illustration process adjustments made to meet the design and time constraints posed by Art TCG.

# of Participants	Category
11 (61%)	Compressed their process to fit in 20-min
6 (33%)	Completed one stage of the process
1 (1%)	N/A

Table 2. Participant's reaction to how the time constraint affected their art-making process and results.

# of Participants	Category
10 (56%)	Positive
5 (28%)	Negative
3 (17%)	Unaffected

Participants adjusted their art-making workflow to meet the design and time constraints, and most reported positive experiences with the process despite the time pressure. Although their illustrations did not always meet their usual quality standards, many participants expressed pride in their final products. Additionally, we observed that social interactions between players were generally formal and polite, with occasional personal connections forming during the gameplay sessions.

5.1 Artists adjusted their workflow to meet the design and time constraints

All participants, except one, adjusted their art-making workflow to meet the design and time constraints posed by Art TCG. Participants took one of two approaches: either compress their workflow, or only complete one step in the workflow (Table 1). Most participants (61%) sped up and compressed their normal art-making workflow, shortening the time spent on each art-making stage. In this compression approach, the artist would follow their usual sequence of steps (e.g. linework, followed by color, concluded with detailing), but worked more quickly and less meticulously in each step (Figure 17).

A smaller portion of artists (33%, 4 participants) chose to complete a single step in their art-making process, usually the first step of linework (Figure 18). Of those 4 participants, 3 of them chose to continue making changes to their work after the game had ended, appearing as if they spent time completing the remaining steps of coloring and detailing (Figure 16, Post-game session art-making). Notably, almost all of the participants who made significant changes to their artwork post-game were those who used the “only complete one step in the workflow” approach.

5.2 Artists responded positively to the art-making process despite time constraints

Despite the challenge of working within a 20-minute time frame, most participants adapted well to the constraint and found enjoyment in the process. A significant majority (94%) felt satisfaction as they created their artwork, with 72% reporting no frustration (50% not frustrated, 22% neutral). Over half of the participants (56%) viewed the time limit positively, as a constructive challenge, either as a source of fulfillment for completing their work within the limits or as a way to push their creativity in a positive direction (Table 2). While 78% of participants acknowledged that 20 minutes was not enough time to complete their artwork, they adjusted their expectations accordingly. Only 28% of participants



Fig. 17. A participant’s rendition of the character Merlin as a Support attack style. A Support style has more defensive, rather than offensive capabilities.

felt negatively about the time constraint, with five reporting that they were too rushed without experiencing a positive benefit, and three participants were unaffected by the timer.

5.3 Artists were proud of their illustrations despite them not meeting their usual quality standards

The sizable portion (67%) of participants felt proud of the work that they produced after the end of 20 minutes (Figure 16). Over 50% felt that their participant peers would positively judge their artwork that they posted and shared in the community. Meanwhile, 83% of participants did not believe that the art they produced during the study closely matched the quality of their best artwork (i.e. what they are most capable of). Only 4 participants made significant revisions to their illustration to reach a higher quality level before sharing it with others in the Discord server.

5.4 Artists found it easy to form player pairings; their social interactions were formal, polite, and occasionally personal

Sixteen out of the 18 participants played Art TCG with someone who was a stranger to them. Surprisingly, 61% of participants found it easy to find a partner to play Art TCG with and only 33% (five participants) reported facing some difficulties finding paring (Figure 16 under Social Connection).

Nearly all participants (89%) were neutral or enjoyed interacting with their playing partner throughout their Art TCG session. Despite being strangers, half of participants felt that the bond between them and their partner improved after playing Art TCG.

Most players (78%) described the social interactions with their partner as formal and polite, wherein the discussion mostly focused on the game. Four players experienced mostly silence. Of the 78% of players, four had moments of

¹¹⁹⁷ talking about non-game related topics such as small talk, sharing personal experience, and learning more about each
¹¹⁹⁸ other.
¹¹⁹⁹

¹²⁰⁰ **6 Discussion**
¹²⁰¹

¹²⁰² **6.1 Art with role or purpose in the game may lead to higher motivation to participate**
¹²⁰³

¹²⁰⁴ A core design element of Art TCG is that the players' artwork had a function and played a role in the game beyond just
¹²⁰⁵ a visually appealing, static image. In Art TCG, the artwork's role was—at a basic level—the cover art for the card, which
¹²⁰⁶ all participants understood. At a more functional and purposeful level, the artwork's design also indicated the cards'
¹²⁰⁷ abilities that are usable against an opponent's cards in a card battle. Therefore, some players were motivated to render
¹²⁰⁸ their illustration accordingly. As one participant excitedly put it:
¹²⁰⁹

¹²¹⁰ *"i chose a "tank-y"¹⁷ poseidon, i wanted to create a god who both reflected what i envisioned and would
¹²¹¹ spark recognition in others. because he was a character on a playing card, i wanted his silhouette, attributes,
¹²¹² and role in the game to be unambiguous. if i showed my drawing to the majority of people off the street,
¹²¹³ i'm confident they would guess who it's supposed to be and what he's capable of."*
¹²¹⁴

¹²¹⁵
¹²¹⁶¹⁷The participant is using the word tank, like a military tank, to refer to their selection of the "Heavy Attacker" or juggernaut attack style in Art TCG
¹²¹⁷



¹²⁴⁵ Fig. 18. A participant's interpretation of the character Poseidon as an attack style Support. The left image is what the participant
¹²⁴⁶ completed in 20-minutes and the right image is revisions they made after the game session was over. Notice how the left image only
¹²⁴⁷ contains linework, indicating that the participant chose to focus only one step in their art-making process in the 20-minutes.

1249 All participants were able to draw their character art in a vibe, style, and/or personality that matched the card attack
 1250 style they had chosen.

1251 Beyond serving as the cover art if the card and showcasing its abilities, some participants had an additional
 1252 interpretations of the purpose or role that their artwork played in the game. Three participants liked how their
 1253 artwork was being “used” in the game. When asked what was the most fun aspect of the Art TCG game, one participated
 1254 answered:

1255 *“I loved seeing both my art and my partner’s art in the game itself. Obviously super exciting to be using our
 1256 pieces and seeing them in conversation with the other premade cards.”*

1257 When comparing Art TCG to other online art challenges such as Inktober, where participants simply share their
 1258 works-in-progress or completed pieces of art on social media with the hashtag #Inktober, a different Art TCG participant
 1259 made the distinction of the purpose of their artwork:

1260 *“[Art TCG] tries to push further than sharing. Your art is actually being used as a step [in the game]. It’s
 1261 nice that my art is not being forgotten in a stream of art pieces [on social media platforms].”*

1262 Some participants anticipated that their artwork would influence the gameplay beyond the card cover art. One
 1263 participant when asked, “How did the card game affect the quality of art that you can normally produce?” responded in
 1264 the survey with:

1265 *“I don’t think the game affected my art, rather the art affected the game”*

1266 **6.2 ArtTCG as a form of quicker illustrative practice and overcoming perfectionist tendencies**

1267 The participants in our study reflected most artists in that their approach to illustration is intentional, methodical, and
 1268 consequently slower and perfectionist. Though this approach may lead to higher quality artwork, this approach can
 1269 also lead to art block or completing a piece. One participant in the study noted:

1270 *“[Art TCG] is a time for me to be rough [rough approach to illustration], and it’s okay to be rough. Because
 1271 I’m also in the process of learning to not be a perfectionist, I have been trying for a while to doing quick
 1272 work without looking into details.”*

1273 Many participants viewed the 20-minute time constraint as positive challenge or stressor that could help them grow as
 1274 an artist beyond their comfort zone.

1275 *“Timed and themed constraints forced me to decide faster what I’m going to draw (pose, colors, shading,
 1276 clothing). I usually take a long time to finish one piece but the game made me speed-sketche/be looser, which
 1277 was fun to not think too much. It also forced me to draw something I don’t usually so I had to quickly look
 1278 up references and adapt.”*

1279 In addition to a positive challenge, the participants viewed completing artwork within the 20-minute with a sense of
 1280 accomplishment or victory, considering the normally long art-making workflow. The following experiences are from 3
 1281 different participants:

- 1282 • *“I usually don’t commit to drawing a somewhat finished drawing (line art with color) so this is a small
 1283 milestone for me.”*
- 1284 • *“I’m proud of creating something in the time limit - not my best work, but a good exercise to get me
 1285 drawing.”*

- 1301 • "I was satisfied since I hit all my goals, given that I only had 20 minutes. I captured the aspects of the
 1302 design that I wanted: blue hair, face, trident, water eel/dragon. It could be polished with more time but I
 1303 tend to overdraw with more time so this is a better outcome."
 1304

1305 **6.3 Time and design constraints can help artists convey the core aspects of their illustration more 1306 efficiently and quickly**

1307 The time constraints coupled with the goal of conveying the character design objectives influenced participants to focus
 1308 more on ensuring their illustration read well to others and communicated the bigger picture rather than details. As two
 1309 participants shared:

- 1310 • "It became a nice "speed-drawing challenge" in my mind, and I enjoyed the problem-solving as aspect of
 1311 speed illustration - what is the least amount of information I can include and still convey my point/create a
 1312 mood? :) I didn't bother with clean up, since that's not absolutely necessary to convey the final idea."
 1313 • "It's definitely more sketchy and loose...But at least it gets the general message/idea across."

1314 Such outcomes may suggest the importance of creating design prompts that are suitable for shorter time constraints
 1315 for illustration making. Participants may need prompts that can quickly energized them creatively to start imagining
 1316 what they will design.

1317 *Each of the prompts were engaging and interesting, and I had ideas for many of them when I first saw
 1318 them. I also liked how there were descriptions that helped me understand the archetypes better.*

1319 The variety of character prompts provided under the time constraints could be an advantage for artists not comfortable
 1320 with their technical artistic skills yet. Some participants were able to find and choose a character that they felt comfortable
 1321 artistically executing:

1322 *"The hardest part was that I did a lot of overthinking! For the pose, the look of the character, and how it
 1323 would best reflect the card action. For ease, I stuck with a subject I knew best how to draw."*

1324 Another participant had a similar desire to stick with familiar subject matter or alter how they might approach and
 1325 interpret the character designs:

1326 *"I stayed away from character designs with armory, sleek wear. I'm not familiar with how to draw those
 1327 types of clothing."*

1328 The desire to stay in one's comfort zone may indicate the need for Art TCG to provide a variety of (character)
 1329 prompts that contain something that caters to a large artistic audience with different levels of illustrative skills. Some
 1330 artistic challenge is okay, but too much challenge may be daunting or paralyzing.

1331 **6.4 Artists adjusted their workflow to meet the design and time constraints**

1332 Participants adjusted their art-making process to be more loose and quick-thinking in the spirit of the game. One
 1333 participant response encapsulated a common experience illustrating for Art TCG:

1334 *"This time, because of the time limit, I had to imagine something a little more defined first, then draw more
 1335 flexibly and quickly based on what I roughly envisioned. But I still kinda winged it as I went."*

1336 Other participants initially struggled to be more loose and simple, but eventually adjusted, especially for those who
 1337 played Art TCG more frequently (Figure 19):

1353 “Again, wrestling with ‘expectations’ about what my art needed to look like. Once I realized I was perhaps
 1354 unnecessarily constraining myself, then the drawing became a lot easier and then it was just a matter
 1355 of having fun and working quickly enough to meet my own expectations of what a reasonably ‘finished’
 1356 drawing looked like.”

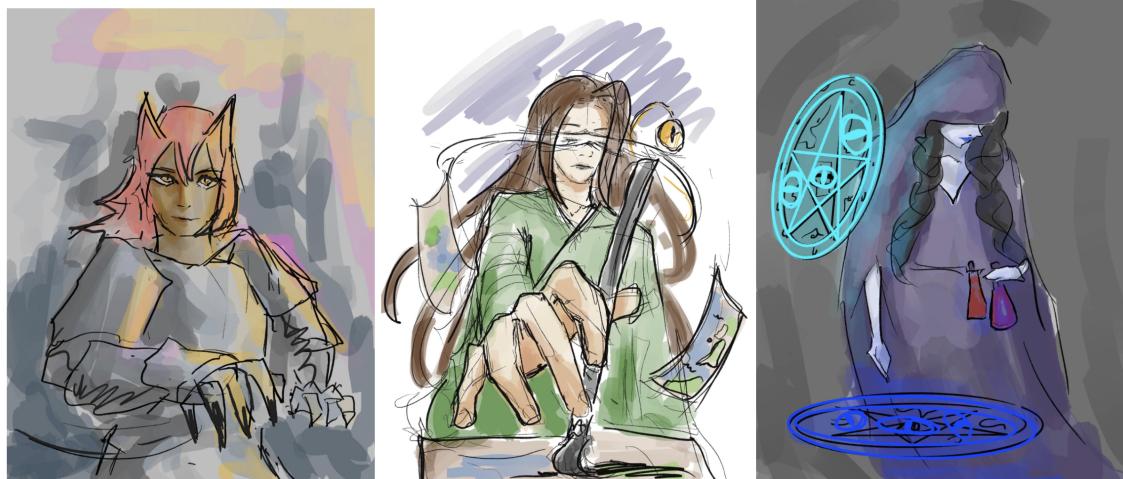
1358 **6.5 Strong social connections for player enjoyment and play frequency**

1360 Art TCG was hosted in a Discord server wherein many (88%) participants did not know each other and there was,
 1361 therefore, little social interaction amongst participants in the server. We suspect that this may have affected how people
 1362 could find playing partners and consequently affected the frequency at which players chose to interact with Art TCG.
 1363 Usually participants found a pairing via one party initiating and inviting to play the game with another. We suspect
 1364 that these invitations would occur more likely amongst friends. Here’s what one participant who was fortunate enough
 1365 to partner with a friend (another participant) had to say:

1366 “[Art TCG] was fun! It’s not really something I would actively seek out to do again unless a friend (a
 1367 non-stranger) specifically asked me to play again, in which case I would probably say yes.”

1371 Another participant stressed the importance of social connection and how it is a factor in choosing to engage in the
 1372 existing online art challenge called Art Fight. This participant explained how Art TCG could thrive in a group setting of
 1373 known peers:

1375 “I don’t do general ArtFight, and I don’t do general art challenges. I only do ArtFight in the context of [college
 1376 art club name], specifically because I know all of these people. … I’m going to draw my friends’ characters
 1377 because I know them [friends], and they mean a lot to me. For me in ArtFight, the personal connection that
 1378 I have to that person does kinda matter. I’m more inclined to draw a character … if that person is my best
 1379 friend. [While playing Art TCG], I thought multiple times that [Art TCG] would be really fun to play in
 1380 [college art club name]: ‘Oh it’s game that you draw characters and you play with one another.’ So I think



1384
 1385 Fig. 19. Three pieces of artwork from three different sessions of Art TCG by the same artist.



Fig. 20. Two character illustrations made by two different participants during the Art TCG game session. Both these artists intended to make their artwork silly and comedic.

knowing the person more and even knowing more people in the study would incentivize me to play more often.”

Social connection is especially important considering that art making can typically be a solitary experience. Another participant indicated the social need for Art TCG:

“My intention going into the [Discord study group] was to try to [play Art TCG] several times. I would have loved to [play Art TCG] several times. The main reason for that is I usually do [art] on my own. I have one friend I share [art] with. I think it’s cool to draw together at the same time … If the game kept being improved, I would definitely play this with other people.”

6.6 The social aspect of online illustration games affected illustration outcomes

The social nature of the game and the fact that players’ art would be shown to others affected how participants approached their artwork. Some participants simplified their illustration and wanted to convey a comical message (Figure 20) to their partners. For example, one participant who played with a friend said:

“While drawing, I was excited to see what my friend had picked and drawn, and was eventually excited to see my friend’s reaction to my silly character as I felt better about it.”

Even for players who did not know each other, the desire to be lighthearted and silly prevailed:

“I wanted to draw something that would look funny to my partner… I think he looks funny, which was the goal.”

1457 On the other hand, rather than seeking to stir a (comical) reaction from their playing partners, some participants
1458 focused more on the fact that their artwork was going to be viewed by others and consequently focused on making
1459 their artwork more presentable and readable to others. For example, of the four participants who made changes to their
1460 illustration after the game (Figure 19) and played played Art TCG three times said:

1462 “*If I feel like the [illustration from my second time playing Art TCG] is too hard to read and it’s too messy,*
1463 *I would do some touch up but not spend more than an hour or so to adjust. The first [time playing Art*
1464 *TCG], I didn’t continue on working on [my illustration] because I think it tells people quite clearly what the*
1465 *character is doing.*”

1468 6.7 Low emotional attachment to art produced in-game

1470 Despite developing the ability to whip up something presentable in the 20-minute time frame—or perhaps because
1471 of it—most participants had little attachment to the art that they produced in Art TCG. This is observed since 78%
1472 participants did not continue revising their work after the study ended (Figure 16).

1474 “*The fact that this is a character design that I have no emotional attachment to (just something I did for*
1475 *fun) made it less likely that I would share it outside the Discord server. I only shared it to the two friends*
1476 *who I already show all my artwork too and who would find the round bird funny.*”

1478 Another participant said:

1480 “*I didn’t feel a strong desire to perfect that particular piece of work; I didn’t have a strong personal attachment*
1481 *to it. I know I can do better if I spent a few more hours on it, but I also didn’t feel a strong need to ‘prove’*
1482 *myself to others.*”

1484 These experiences may indicate that art created in the context of an online art game, especially one with time
1485 constraints like Art TCG, to be considered by their authors as ‘throwaways’ or whose lifespan exists only in the context
1486 of the game. As one participant put it, they were less engaged in a ‘*piece that I made for a [research] study in 20 minutes*
1487 *that looks cute, but for it to get to a point that I am proud enough to post it outside the server … that would take multiple*
1488 *more hours and I just didn’t feel like doing that.*”

1489 That being said, the 4 participants who did significantly revise (Figure 18) their work after the game ended (Figure
1490 16) did show strong signs of attachment to their art showed potential to how the game could be improve. Of the 4
1491 players, 3 chose “only complete one step in the workflow” approach (Table 1), suggesting that approach my encourage
1492 participants to build upon their work.

1496 6.8 Limitations

1498 There were a few technical difficulties during the study. The main one was that a few participants were not able to
1499 upload their artwork because of a bug wherein after the 20-minute timer ended, the game skipped the upload image
1500 stage. This meant that some participants did not see their art appear as cover art for the card, which may have led them
1501 to not fully understand the connection between the illustration portion of Art TCG and playing the card game.

1502 Another technical difficulty was that the game became dysfunctional for a day during the study due a Discord
1503 platform update, and the game had to be ported over to a website by the next day. Many participants who had scheduled
1504 to play on the down day had to reschedule, in many cases to the end of the study period, which gave them less time to
1505 play frequently.

Another issue was that there were no instructions or tutorials on how to play the game. Participants were given the Art TCG Discord Activity or website and expected to go through the flow. In the post-study survey, many participants had wished that there were clearer instructions on what to expect and what to do when playing Art TCG. Although most participants simply figured it out as they interacted with the system, one participant noted that this may have been the reason why she and possibly other participants didn't understand the connection between parts one (illustration) and two (card game). She wished that there was a simple and even "vague" (her word) tagline that said, "Your character's design will affect the strengths and abilities of your card."

In addition, the study was only five days, which limited participant's ability to play more frequently and find playing partners. Many participants were university students with summer jobs and internships, which ended during the study's duration. This meant some participants were unusually busy (e.g. packing and moving out) and couldn't schedule more time.

Moreover, most participants in the study were strangers to each other. This could have affected how quickly partners paired up, how frequently they played, and what they chose to draw (friends tend to draw silly drawings to each other). As many participants mentioned, they would have preferred to play with a friend or in the context of a group of friends.

We paid participants and told them that a condition to receive full payment is to play the game at least once. Most participants only played the game once, with the exception a few participants who played multiple times. We would be able to more concretely conclude our results if we hadn't paid participants coupled with running a longer study in the context of participants who knew each other, rather than being strangers.

6.8.1 Future Work. We plan to push the project both on the illustration process front and the card game front. With regards with the illustration process, we want to explore ways players could collaborate more with one another during that art-making stage. Perhaps players could influence each others' drawing criteria, or how the players collaborate would affect the game play.

With regards to the games, we plan to implement multiple rounds of illustration, game play, illustration, game play, and repeat. We plan to implement a total of three rounds, where the time for the illustration portion of the round will decrease each round. Players will be able to unlock new card moves for the custom card each round for a total of 3 moves. We have considered the idea of spreading the art process across multiple rounds (linework, then color, then polish) and may revisit that idea if it's more favored than drawing the same character, but in different poses. However, artists have mentioned they like the latter because of the affordance to explore the character further.

We may explore expansion mechanics to the game. For example, the idea of trading cards and collecting cards to build a deck has been a min goal of ours. We hope that players may build their decks according to strategies (more attacking based deck vs defensive-based deck). Another idea for expansion is having players needing to draw a set of characters (over multiple session) in order to build a team.

7 Conclusion

Online, social art like Art TCG have the potential to influence how illustrators approach their process and outcomes. Art TCG got participants to focus less on the quality of their art and in some cases, focus more on playing the game. Participants were excited and curious about the role that their artwork had in the game and how their artwork would affect the gameplay. Illustrators adjusted their process to work more loosely and quickly, while ensuring that their final result was presentable, readable, and sometimes comedic to viewers of their final work.

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