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## Developing an Instructional Video Series Teaching Tabletop Games

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# **Developing an Instructional Video Series Teaching Tabletop Games**

**Sam Jackson**

**Design & Development Project Report  
Instructional Psychology & Technology, Brigham Young University**

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# Executive Summary

## Purpose

This report describes the design and development of a video series (YouTube channel) teaching how to play tabletop games. The goal of each video is to prepare viewers to confidently play the game in question. Players do not need to fully understand every minute detail of the game's rules, but questions during gameplay should be minimal and easily resolved without significant harm to newcomers' strategy<sup>A3.2.6</sup>.

For the scope of this project, I made three videos to teach two very different games. Creating these videos allowed me to teach a few popular games, but more importantly it served as a prototype for the future of the channel. Designing a repeatable, efficient instructional design process for creating similar videos in the future was a critical goal of the project.

For the second game, *Tortuga 1667*, I also worked directly with a client (the game's creator), who shared the video to his company's YouTube channel as an official tutorial and plans to commission similar videos for his other games in the future.

## Project Needs and Constraints

“Games are my preferred way of socializing. Talking's good, but I'd always rather play a game.”

-Ellen Briggs\*, regular gamer and host of game nights

“I see people put games back because they couldn't figure it out. They say ‘I have no idea what's going on,’ and that's the rulebook's fault. I see people staring at the rulebook for half an hour, then giving up. That's always sad, especially when it's a game that I know is good.”

-Neil Denning\*, professional game teacher at *Good Move Cafe*

“I've rarely had great experiences learning games for the first time.”

-Penny Dalton\*, novice gamer forced to learn new games regularly

\*All interviewee names have been changed

Tabletop games are becoming increasingly popular, and the number and variety of games available is constantly growing<sup>A3.2.10</sup>. Games facilitate social interactions that build relationships by providing groups with a shared emotional experience<sup>A3.2.1, A3.2.4</sup>. Sharing beloved games with others and exploring new games together are important parts of game-playing culture, but both these activities are hindered by the difficulty of teaching games<sup>A3.2.2</sup>. Those who have poor experiences learning a game may even abandon what could otherwise have been a fun and community-building experience<sup>A3.2.4</sup>. Reliable, enjoyable, and accessible instructional videos can relieve this problem, as explained below.

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## Analysis

In order to fully understand this problem and formulate a solution, I conducted the following research:

- 7 Observations of groups and individuals learning games (lasting between 15 and 60 minutes), followed by interviews about the learning experience (lasting between 5 and 20 minutes)<sup>A3.3</sup>.
- 5 Interviews with game players and teachers (lasting between 25 and 45 minutes)<sup>A3.4</sup>.
- Study of secondary research<sup>A3.1</sup>.
- Analysis of existing instructional materials (including several game rulebooks and YouTube channels)<sup>A4</sup>.
- Study of scientific literature on instructional theory, game teaching (in tabletop gaming, video gaming, and sports), educational video development, and design<sup>A5</sup>.

I also expanded on this preliminary research through numerous prototype tests in later stages of the project<sup>A3.5, A6.3</sup>.

The following subsections summarize the critical findings of that research relating to the value of this project and its general design. Findings related to specific design decisions are covered throughout the rest of the executive summary.

### Current Solutions

Whenever possible, groups and individuals avoid using rulebooks to learn games, using them only as reference guides when a question comes up<sup>A3.2.2</sup>. Instead, newcomers prefer to learn from people who have previously experienced the game, preferably an expert friend who loves the game and is excited to share it. The expert explains the game and may even help players think through their opening moves<sup>A3.2.3</sup>.

When such experts are not present, rulebooks are generally expected to satisfy the instructional need<sup>A3.2.2</sup>. These rulebooks are often text-heavy, technical, and poorly organized, in part because while serving an instructional purpose they must also serve as encyclopedic reference material<sup>A4.1</sup>.

Rulebooks can provide better learning experiences if they are organized with helpful sections, break text into small chunks, include plentiful and helpful graphics (such as examples of rules), use and explain new terms wisely, and include helpful overviews (such as early descriptions of the game's theme and players' goals, or tables and figures that summarize the structure of turns and game phases)<sup>A5.2.6</sup>. Some even provide optional simplifications to the rules to make the game more approachable for beginners<sup>A4.3.1.3</sup>. These beneficial features are far from universal, though<sup>A3.2.3</sup>, and even the best rulebooks remain constrained by their paper medium. Because they are static, they can't easily show processes in action or respond dynamically to learner needs. Because they are purely visual, they force readers to switch back and forth between reading the explanatory text and looking at the helpful example figures. These limitations violate the principles of contiguity and personalization, which strains working memory and inhibits

learning<sup>A5.1.2, A5.3.1</sup>. A less-than-excellent rulebook exacerbates these problems and introduces others.

Groups often minimize the pains associated with rulebook learning by placing that burden on one person and trusting that person to quickly become an expert: ingest the rulebook in its entirety, understand the game well, reorganize that knowledge into an approachable structure, and feed it back out to the rest of the group<sup>A3.2.2</sup>.

Although learning from a human instructor is preferred<sup>A3.2.2</sup>, this instructional strategy has issues of its own. Whether the instructor is an “expert” who has played the game many times, or a novice who just read the rulebook, they are rarely true experts in the game or in instruction. Interviewees described numerous issues with this instructional method, including:

- Instructors may teach rules wrong (especially if they haven’t played the game recently).
- Instruction may feel thrown-together, jumping erratically from topic to topic.
- Instructors may under- or over-emphasize certain rules.
- Instructors often describe specifics before learners have general scaffolds in place to fully grasp them<sup>A3.2.3</sup>.

These and other issues can be mitigated by learners asking clarifying questions and drawing connections to similar games. Clarifications may also come up after gameplay starts<sup>A3.2.3</sup>. Despite these crutches, instruction is generally less effective than it could be.

Every bit of confusion in game instruction hurts the play experience of the newcomer by slowing things down, introducing negative feelings, and reducing the chances that the newcomer can play confidently and enjoy the game's social and strategic challenges<sup>A3.2.4</sup>. In extreme cases, learners can even become so overwhelmed or so bored that they give up, participating grudgingly or not at all<sup>A3.2.4</sup>. This is all far from the original purpose of the gathering: play.

## Why Instructional Videos?

This section summarizes the benefits and limitations of online videos as a learning tool. It is primarily based on findings from learner interviews<sup>A3</sup> and the theories of cognitive load<sup>A5.1.1, A5.1.2, A5.1.3</sup> and multimedia learning<sup>A5.3.1, A5.3.3</sup>.

When experts aren’t available and rulebooks are daunting, groups of gamers are increasingly turning to online videos that explain and demonstrate game rules clearly, pleasantly, and quickly<sup>A3.2.2, A3.2.9, A4.3</sup>. These videos are often used in place of the rulebook for whole groups learning a new game together, but they can also be used effectively to fill a variety of learning needs. For example, a group that does not want to spend much of their limited time together on instruction may agree to have newcomers watch a video to prepare ahead of time. Or players may watch a video for review before playing or teaching a game they haven’t played recently. Occasionally these videos may even fill non-instructional needs (like when a gamer is considering a purchase and wants to get a better idea about whether she will like the game before committing), although they risk becoming unfocused if they attempt to cater to these cases<sup>A4.3.1</sup>.

High-quality video instruction strikes a balance between expert instruction and rulebook study, with most of the strengths and few of the weaknesses of either traditional choice. Since videos do

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not need to serve a secondary purpose as reference material, their content can be organized purely for instruction, with content-based sections<sup>A5.2.6</sup>, overviews and scaffolds presented before details<sup>A5.1.3, A5.2.2</sup>, and just enough detail included<sup>A3.2.6, A5.1.2</sup>. They can demonstrate processes in action (even zooming in to emphasize important components) and combine visual examples with simultaneous auditory explanation<sup>A3.2.3</sup>. When necessary or helpful, videos can also present information through on-screen text, graphics, or animations, honoring the research-based principles of multimedia, modality, and coherence<sup>A5.3.1</sup>. They reach a high level of trustworthy accuracy (especially if they are sponsored or approved by the game's creators) while still maintaining a human face and friendly tone in keeping with the principle of personalization<sup>A5.3.1, A5.3.4</sup>. They are also highly accessible: they require no preparation or prior study from a group member; they can be rewound, repeated, sped up, slowed down, and paused; and they are freely available online, even before the game gathering begins<sup>A3.2.8</sup>.

Of course, not every problem is solved by instructional videos. Their biggest weakness is in the fact that, although polished, they are rigid once made. They can't respond to a unique audience's questions, prior experience, needs, or preferences. It is always possible that a distracted or confused learner will be left behind<sup>A3.2.3</sup>. They also fall short when reference material is needed after instruction: they are difficult to search when a specific question about the rules needs to be answered, can't provide permanently visible job aids to refer to during gameplay, and can't hold players by the hand during their early in-game decisions<sup>A3.2.3</sup>. The feedback and iteration necessary to ensure a video is accurate and well-presented cost significant time up-front<sup>A6, A9</sup>. And a good video can't make up for a poorly designed game (with overly complex rules or unfun gameplay).

Many videos already exist, but the vast number of games available today makes it impossible for the current creators to teach every game. The existing videos also vary widely in quality<sup>A4.2</sup>. So there is still room for the market to grow, and instructional design approaches can help.

## Constraints

This section describes the practical and logistical factors influencing the scope and process of the project.

Considering the vast number of games in existence, the scope of this project had to be clearly defined early. The complexity of developing a repeatable design process and the timeframe of the project meant it would be impossible to teach many games well. But teaching just one game couldn't provide the necessary experience to inform a flexible approach for a wide variety of games to be taught in the future. With these factors in mind, I chose to teach just two games, but to ensure that the two games chosen were extremely different (in genre, complexity, components, mechanics, etc.). For one game, I later decided to make a short second video teaching the official variant for 2-player games, bringing the total to three videos.

The timeframe for the project was another important constraint. I started the project in Spring of 2019 and expected to graduate within a year from that time. Between an internship in Summer 2019 and the aim to begin full-time employment in early 2020, I had to complete most of the project between August and December 2019<sup>A8.3</sup>. This required fast prototyping cycles.

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There was no budget for the project outside of my personal funds. However, I had access to numerous games, library film equipment, and friends and family interested in gaming and excited to help test prototypes. With these resources available, budgetary concerns were not significant<sup>A8.2</sup>.

Initially, I intended to work without an external client, instead focusing only on learner's needs, department requirements, and my goals for the project. I remained open to the possibility of working with clients once the channel was established. However, as I worked to select the ideal second game to teach, a frontrunner emerged that I happened to know the creator of, and I discovered that his company was looking for someone to work on instructional videos for their games. He was excited to work with me on an official video, and I felt that after making the first two videos I was confident enough to work with him. This brought additional, unanticipated needs to the table for the last video, such as the need to incorporate Façade Games branding, the need to determine whose channel the finished video would be posted on, and the need to meet a higher standard (of rule coverage, video and audio quality, and professionalism) for officially branded content.

## Product Description

The finished videos can be found on YouTube:

- Game Point YouTube Channel:  
<https://www.youtube.com/channel/UCLVNxqlwcR8vyzmrlWFtpRw>
- How to Play Sushi Go! Complete Game Rules in 5 Minutes:  
<https://www.youtube.com/watch?v=o0jduccqfQ>
- How to Play Sushi Go! Bonus 2-Player Variant:  
<https://www.youtube.com/watch?v=CXqcXSHNqhc>
- How to Play Tortuga 1667 | Complete Game Rules in 11 Minutes + All Event Cards:  
<https://www.youtube.com/watch?v=4FvkUd0ENVo>

This section summarizes the design specification<sup>A2</sup> I used for each video, then describes the specific features of each video and the YouTube channel.

The content and presentation of each video is heavily influenced by principles of cognitive load<sup>A5.1.1, A5.1.2</sup>, game approachability<sup>A5.2.2</sup>, and multimedia learning<sup>A5.3.1</sup>.

Each video teaches most—but not all—of the rules for the game. Some fine details are omitted because they are either not necessary for players to understand before gameplay begins, or they are unlikely to come up in a typical round. This helps keep the videos reasonably short, although they are still long enough to cover the game thoroughly<sup>A3.2.6</sup>.

The content is organized to flow from big-picture to small-picture (rather than the primarily chronological flow of most game rulebooks). Users have consistently recommended this structure<sup>A3.2.3</sup>, and it also fits with scientific recommendations to reduce cognitive load and improve learner engagement<sup>A5.1.3, A5.2.2, A5.2.5</sup>. I first explain the basics of a game: players' objectives, the structure of the game, and its theme. Then I explain the general mechanics: what players do on each turn, and how the game progresses. Finally, I explain further details about

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each portion of the game as needed: setup, specific options and their consequences, options and limitations players have, some special cases and rule interactions, and broad strategic considerations. The content is broken into a series of segments<sup>A5.1.1</sup>, but these flow smoothly from one to the next, rather than being clearly separated<sup>A4.3.1.1</sup>.

Narrated descriptions of game processes and rules are paired with video demonstrations of each in action, typically in close shots to make small details clearly visible and eliminate irrelevant visuals. This format is based on the principles of multimedia, contiguity, modality, redundancy, and coherence<sup>A5.3.1</sup>. Examples of gameplay, simple visual aids, and on-screen text are occasionally used to clarify rules learners have been found to struggle with. The narration is scripted, but presented informally and with minimal jargon.

Care is taken to ensure that video content strikes a balance between appropriately showing context for each action and focusing attention on one thing at a time. Eliminating extraneous details (by filming close-up, focusing gameplay examples on only the action in question, and other strategies) is a critical way to reduce extraneous cognitive load<sup>A5.1.1, A5.1.2</sup> so learners can devote their attention to what matters. However, showing the whole game is also useful at times since it allows learners to place each element in a bigger picture<sup>A4.3.2.1, A5.1.3</sup>. I accomplish this balance by introducing and concluding sections with overviews, and by showing the whole game setup in occasional broad shots which then cut in to show the specific action being described. Other decisions made to reduce extraneous cognitive load include not using background music, filming in a plain environment, and limiting the use of animated graphics.

Non-instructional content (such as channel branding, invitations to like and share the videos, invitations to comment with feedback, recommendations of useful resources, etc.) is minimized and kept primarily at the end of each video, after the instruction is complete. This is done to ensure that instruction engages viewers immediately when the video starts, and to make sure that viewers who leave before the video ends don't miss as much instructional content<sup>A4.3.2.4</sup>.

Video and audio quality is kept very high, with an emphasis on mobile usability<sup>A3.2.8, A4.3.2.2</sup>. Audio is loud enough to be heard clearly on smartphone speakers in a busy room<sup>A3.2.7</sup>.

## ***Sushi Go!***

To teach the game *Sushi Go!*, I created two videos. The first teaches the complete rules for the regular game, and the second teaches the official 2-player variant. I chose to make two separate videos because the variant was worth teaching, but not something most players need to know; it was not taught in any of the videos currently on YouTube and it significantly improves gameplay with 2 players. The two videos are linked to one another using YouTube cards, so players can easily navigate from one to the other as needed.





Figure 1. A YouTube card linking viewers back to the complete *Sushi Go!* rules video if they need to review those rules before learning the 2-player variant.

The main video relies primarily on an example game with 3 players to demonstrate game processes. The specifics of playing and scoring each card type are demonstrated with cards played by “you” (the second-person viewer), and occasional references to the 3-player example when a multiplayer context is needed.

The 2-player video is just over 1 minute long and covers only the changes from the base rules. The changed setup, drawing, and playing processes are demonstrated with a single player on one turn, which transitions into a sped-up demonstration of how those rules scale up for a complete game with 2 players.

## *Tortuga 1667*

The video teaching *Tortuga 1667* is much longer at 16:33, reflecting the increased complexity of the game. Because of this length, it includes a few features the shorter *Sushi Go!* videos didn’t need, such as brief overlays introducing the three overall sections of the video, a list of timestamp links in the description for easier navigation, and a soft conclusion after the first 10 minutes letting players know the rest of the video covers optional details they may wish to learn after they start playing.



Figure 2. A section introduction overlay and the list of timestamp links.

After an introduction and overview, the instruction is split into three distinct sections covering:

1. The options each player has on their turn, and the consequences of each
2. How to set up the game
3. The effects of each unique event card (most of this section is optional)

Other unique features of this video rise from the fact that it is sponsored by the game’s creators. These changes were relatively minor, such as a link to the Façade Games YouTube channel and the inclusion of their logo in the video thumbnail.

## Game Point YouTube Channel

The videos are hosted on a new YouTube channel, “Game Point.” The branding of this channel is intended to position Game Point as a gathering place for a community of gamers looking for resources to simplify the least pleasant part of their hobby. The logo was designed to represent board and card games, pleasant competition, and welcoming warmth with a simple and memorable appearance. More details on channel branding and setup are included in the Implementation section below.

## Design Process and Evolution

One critical outcome of the project was the development of a repeatable design process I can use to make future videos as I continue the work of this channel. This section presents a summary of my current design process, as well as an overview of the critical decisions that have shaped the process since it was first proposed. This process is flexible and will likely continue to change as I adapt to each game and other unpredictable factors, in keeping with agile project management<sup>A5.4.2</sup> and design thinking<sup>A5.4.5</sup> principles.

Throughout this process, I track my work using a Kanban<sup>A5.4.2</sup> system, as shown in Figure 3. In this workflow, each unit of work is prioritized in the “Backlog” list, where it is clearly defined with a number of success criteria detailed. The highest-priority items are pulled to the right as they progress. When each item receives feedback, it loops back into the backlog, so most items receive several rounds of feedback and work before finally reaching the “Done” list<sup>A8.1</sup>.

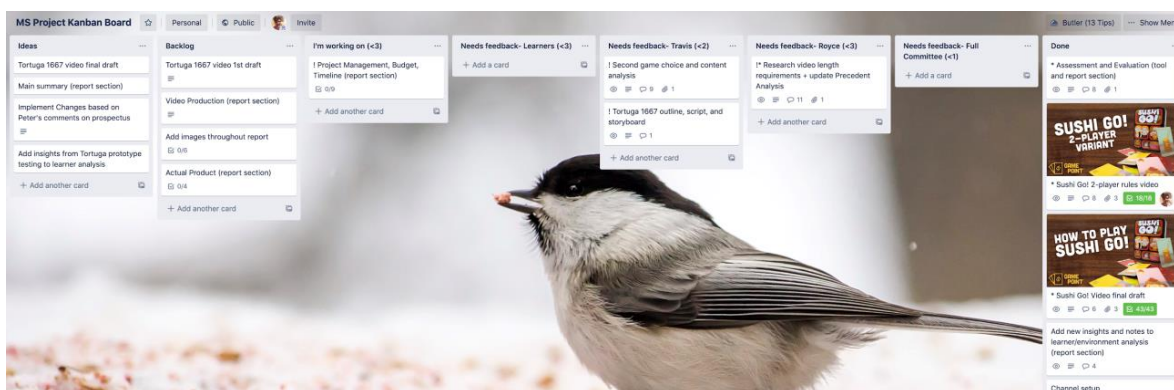


Figure 3. The Kanban board as it appeared on November 26th, with various tasks for this final report and the *Tortuga 1667* video in progress.

## Phase 1. Content Analysis and Outlining

Once a suitable game has been selected, I begin by analyzing its rules. I study the rulebook and other available learning resources to gather a comprehensive list of all rules and procedures<sup>A6.1</sup>. Then I organize this list into a series of graphical process maps<sup>A5.4.3</sup> showing the overall flow of gameplay at varying levels of detail. This part of the process has been relatively unaltered since the project began, although I have experimented with different analog and digital tools while mapping each game<sup>A6.1</sup>.

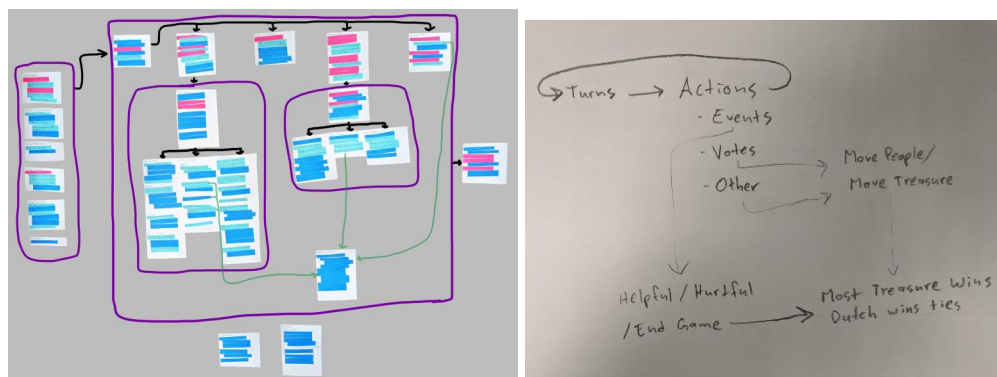


Figure 4. The complete and simplified process maps for *Tortuga 1667*.

Based on these process maps, I create a general plan for the video, outlining which topics should be included and in what order.

## Phase 2. Scripting and Storyboarding

Based on the outline, and referring regularly to the process maps, I draft a script and storyboard for the video. Scripting generally begins first, but storyboarding begins before scripting ends, and both processes inform each other as I plan compatible explanations and demonstrations.

I originally used an online scripting tool called WriterDuet, but soon realized this professional tool was bogged down with many features I would never use and switched to less formal Google Docs. My storyboards are sketched on printed paper templates<sup>A5.4.4, A6.2</sup>.

## Phase 3. Filming and Editing

Once I have a well-tested script and storyboard, I film a first draft, using equipment borrowed from the BYU library. My camera, light, and sound setup is pictured in Figure 5.



*Figure 5.* Current film setup. Table in middle of room with seating for host behind. 2 LED lights at right and left, each on a light stand. Diffuser disc in front of the right light, and the left light reflects off the white wall. Camera directly faces table, host, and plain wall (This position is used for wide shots. Close-ups have the camera closer to the table, or leaning against it). Wireless microphone receiver is attached at top of camera.

I film demonstration clips first. I make several passes through the storyboard, each time filming every clip that uses the same camera setup and game pieces. I mark each clip on the storyboard with the number of the pass on which it was filmed, which helps me later to organize the files into small folders and easily find each clip while editing. Then I film the narration, using my phone as a teleprompter hanging below the camera lens. When editing, I first cut together the narration, then add the demonstrations over top, along with on-screen text and effects. Last, I do fine-tuning edits like audio balancing, color corrections, and removing dead space in the audio<sup>A9</sup>.

## Learner Feedback and Iteration

Beginning at the end of Phase 1, I regularly test prototypes of each video with learners. In early stages, this takes the form of a performance, with me teaching according to the outline or reading the script while I demonstrate possible storyboard elements by hand. In later stages, learners can watch draft videos<sup>A3.5, A6.3</sup>.

Whenever possible, I ask learners to play a game (together, or with me) after the instruction, and note any questions or mistakes that come up during play. When learner time is more limited, however, I have also had learners give feedback without playing, based on hypothetical questions like “What would you be least confident about if you were starting a round right now?”<sup>A6.3</sup>

Recruiting testers has been a consistent challenge and I have regularly needed to try new strategies. For *Sushi Go!*, for instance, I offered coworkers snacks to stay after a meeting and learn, and I convinced strangers to watch the video during their lunch (again, in exchange for snacks). The much longer process of learning *Tortuga 1667* eliminated these options. Instead, I taught groups of family or friends at game nights and holiday gatherings, when there was

significant time available to play together. These strategies and new innovations may all be necessary with future games.

For most testing sessions, I have used audio recordings to easily capture all comments and questions in a conversational format while I focused on facilitation or teaching. This has worked well and is the approach I intend to use in the future.

As I gather feedback, I condense it into notes on scripts and storyboards, lists of clips to reshoot for the next video draft, and lists of video edits to be made. Then I complete these changes and test again<sup>A9.2.3</sup>.

## Implementation

One of the most critical benefits of videos for tabletop gamers is their accessibility over the internet. Making my videos accessible to audiences required that I set up a YouTube channel. And in order to make the videos as easy as possible to find, I had to include a number of search-engine optimization features with each one<sup>A4.3.2.3</sup>. This section describes that work.

### Channel Branding and Setup

I developed my channel's branding using an iterative approach based on principles of design thinking<sup>A5.4.5</sup> and agile project management<sup>A5.4.2, A5.4.5</sup>. Learner research investigating the reasons people play and learn games<sup>A3.2.1, A5.4.1</sup> revealed that people primarily see games as a catalyst for social interactions: playing together gives people shared emotional experiences and facilitates bonding. Other purposes for games included competitive outlets, imaginative experiences, and escapes from the digital world<sup>A3.2.1</sup>.

Learning and teaching new games is seen as an opportunity to expand a beloved hobby and share a part of oneself with friends<sup>A3.2.1, A3.2.4</sup>. But learning is also often seen as a necessary evil—the boredom that has to be endured before a good game can start<sup>A3.2.1, A3.2.6</sup>.

The Game Point brand aims to position the videos as a support or relief to gamers, simplifying teaching and learning so they can focus on playing together<sup>A7.3</sup>. This positioning is evident in the friendly brand visuals seen in Figure 6. It also influenced numerous other decisions, such as the informal narration style, the use of second-person language in gameplay examples, and the specific reasons given for viewers to share each video.

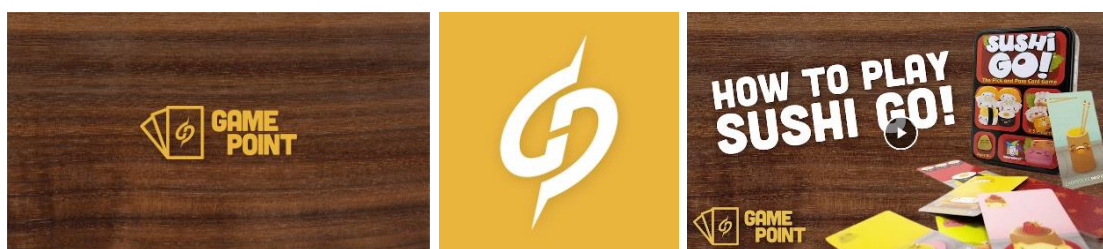


Figure 6. The finished logo and brand identity as it appears in channel art (left), channel profile picture (center), and video thumbnail (right).

## SEO

Each video also needs a number of SEO features to be optimally discoverable<sup>A4.3.2.3</sup>:

- Title. The title of each video is in the form “How to Play [game name]. Complete Game Rules in [number] minutes.” This title format is based on examples from across the existing marketplace<sup>A4.3.2.3</sup> and keywords identified in search trends<sup>A3.2.9</sup>.
- Description. The description for each video briefly explains what the video teaches (again using numerous keywords such as the game name and phrases related to learning game rules. The description also includes several links:
  - Link(s) to outside learning resources, such as a PDF copy of the rulebook
  - Link to purchase the game (these links are set up using an Amazon affiliate account, so I get a small commission for any purchases made through them)
  - Link to the assessment/evaluation survey<sup>A10.1</sup> (described in detail below)
  - (For the *Tortuga 1667* video only) links to timestamps for sections throughout the video and each card covered in the optional portion at the end of the video.
- Tags. Each video is tagged with “Game point,” “Gamepoint,” “Board games,” “Card games,” “Tabletop,” “Games,” “Play,” “Tutorial,” “How to play,” “Learn to play,” and other tags specific to the individual game (its name, publisher, genre, etc.)<sup>A3.2.9, A4.3.2.3</sup>.
- Thumbnail: An appealing thumbnail image presents components of the game, a snippet of text highlighting the video’s purpose, and the Game Point logo (the *Tortuga 1667* video thumbnail also includes the Façade Games logo).
- Transcript: A transcript of the final narration is uploaded along with each video to improve accessibility. This generates more accurate subtitles and improves the video’s search ranking<sup>A3.2.9</sup>.

The *Tortuga 1667* video is also included in a playlist on the publisher’s YouTube channel (at <https://www.youtube.com/channel/UCK7RDmncHvqDN9FZZXZeWpg/playlists>) for improved discoverability.

## Assessment and Evaluation

This section summarizes the processes used to verify that the project accomplished its goals, including formative evaluation (in the form of prototype testing and self-evaluation) and summative evaluation (in the form of a viewer feedback survey and native YouTube interactions).

The primary goal of this project was to ensure that viewers could successfully play the game in question after watching each video. This meant that assessment of learners’ abilities and evaluation of the project’s success were almost indistinguishable. Considering the channel’s long-term future and informal audience, strategies focused on embedding sustainable formative evaluation into each video’s development and implementation processes, rather than conducting a large and formal assessment of just these three videos<sup>A10</sup>. This way, I could be confident that each finished video worked for learners before it was finalized and posted.

The core of this strategy was prototype testing<sup>A5.4.5</sup>. Early and often checks of learners' understanding, ability, and feelings during and after use of the product provided reasonable evidence that the final draft of each video met the viewers' needs<sup>A3.5, A6.3</sup>. For both games taught in this project, I found that learners were largely satisfied with the product once I reached the first filmed draft. My client for the *Tortuga 1667* video was also largely satisfied by that point. This evidence was sufficient for me to be quite confident that the minor edits made for the next video draft would create a successful product. I also used a self-evaluation checklist to confirm each video matched my design specifications before publishing<sup>A10.3</sup>.

Figure 7. Video self-evaluation checklist.

Since all formative feedback came from recruited testers, it was also important to provide a long-term conduit for learner feedback on the completed videos after they are publicly posted. This serves as a failsafe in case viewers at large identify serious issues my testing missed. At the end of each video, I invite viewers to leave feedback using a google form accessible from a hyperlink in the video's description<sup>A10.1</sup>. This form is intended to give me structured and actionable feedback that can shape the strategy for future videos. Serious issues with a video (such as incorrect rules or glaring quality problems) can also be identified and resolved by reposting an edited version of the video. The questions asked in this form are based on criteria identified in my design specifications<sup>A2</sup>, and categories used in previous research of instructional video quality<sup>A5.1.2, A5.3.3</sup>. A draft of the form was tested with users to improve phrasing and format for maximum usability.

The figure displays three sequential pages of a Google Form titled "Game Point Video Feedback".

- Page 1 (Instruction):** Asks "Do you feel confident that you can play the game after watching this video?" with a 1-4 scale. It also asks about video pace (Much too slow, A little too slow, Just right, A little too fast, Much too fast) and whether examples in the video were helpful (Yes, Often, Sometimes, No). It includes a question about feeling confused or overwhelmed and how many times the video was paused, rewound, or rewatched.
- Page 2 (Presentation):** Asks "Were there any problems with the quality of the visuals?" and "Were there any issues with the quality of the sound?" with checkboxes for various issues like lighting, size, resolution, volume, and sound quality. It also asks "I wish the host was more..." and "Do you have any other feedback?".
- Page 3 (Submission):** Shows a "SUBMIT" button and a warning: "Never submit passwords through Google Forms."

Figure 8. The three pages of the video feedback google form.

In addition to this survey, the YouTube system allows viewers to offer feedback in several other ways, such as comments, likes, dislikes, shares, and subscriptions. So far, these summative assessment and evaluation tools have produced very minimal viewer interaction: a few comments and no survey responses. YouTube analytics suggest that interest in the channel is steadily growing, however, and the complete *Sushi Go!* rules video has been particularly popular<sup>A10.2</sup>.

## Design Knowledge

This section describes some of the most important principles I have learned during this work that may be applicable to other designers.

### Instructional Strategies Must Adapt to Unique Content

Teaching how to play games is not a new field of work. Rulebooks and even videos dedicated to this learning need have existed for years. However, formal research and design practices for this area proved impossible to find, so I had to rely on work from similar fields like video games and sports<sup>A5.2</sup>. This body of work was an excellent starting point but proved largely irrelevant as the project progressed. I ended up finding much more guidance in work that dealt directly with tabletop games, such as my own research with learners<sup>A3</sup> and the current body of videos and rulebooks<sup>A4</sup>.



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When academic research was focused on general principles (like learning theories<sup>A5.1.2, A5.1.4</sup> or multimedia instruction principles<sup>A5.1.1, A5.3.1</sup>), I was able to apply its general ideas to my specific project. It was more difficult, though, to apply principles intended for a very specific purpose, even when that purpose was relatively similar to mine. For example, the body of literature on Game-Centered Approaches from physical education<sup>A5.2.3, A5.2.4, A5.2.5</sup> provided some useful inspiration for my work, but had very little influence on specific instructional decisions I made. The instructional content for tabletop games was just too different from team sports to allow complete chunks of methodology to transfer between the two.

This suggests that designers might benefit from categorizing instructional design research into a hierarchical structure, with some research (like learning theories and design principles) applying generally, and other research working best for specific content areas or delivery methods.

## Adaptability is More Important than Planning

The messy work of design requires freedom to adapt as new challenges arise. Early commitment to a specific plan can easily hinder this critical ability. Plans are inevitably based on assumptions about what problems will arise, and no matter how well-informed those assumptions may be, they will never be as wise as a designer on the ground in the moment when a problem comes.

For example, I committed early in this project that I would test several prototypes of each video with a number of learners. Fortunately, I didn't specify in this plan how I would gather these users or run the tests. That lack of specificity was helpful as I worked, since every time I prepared to test a prototype, I found that the strategies I had used previously wouldn't work. Whether due to circumstances of scheduling or the nature of the game, I had to come up with a new strategy for gathering and organizing testers at least 6 times during this project. Those methods varied from asking strangers at lunch for video feedback to having a family member independently host a game night using the video and send me audio of the event<sup>A3.5</sup>. The flexibility of an unclear plan was also critical in my choices of which games to teach, how to structure each video, and numerous other areas.

This experience supports principles of agile project management. Plans and commitments do have value in structuring a design process, but they can't be allowed to supersede the decision power of a well-informed designer in the "last responsible moment"<sup>A5.4.2</sup>.

## Solving One Problem Usually Creates Another

The choice to teach games through a YouTube video series was largely a reaction to the problems of learning games from rulebooks<sup>A3.2.3</sup>. This new medium, however, brought challenges and limitations of its own, most notably:

1. Videos can't respond to questions and adapt in the moment as learners' unique needs become apparent.
2. Videos can be difficult to navigate when learners have a specific question.
3. Many struggling learners will never know a helpful video exists.
4. Videos require internet access<sup>A3.2.3, A3.2.8, A3.2.9</sup>.

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I believe that these limitations are a significant improvement over the limitations of rulebooks, and the growing demand for video game tutorials supports that belief, but this demonstrates that no instructional strategy is perfect. The work of design is improvement and balance, not perfection.

This truth highlights the need for designers to stay flexible throughout the design process, rather than committing to the first decent idea that arises. It also emphasizes the importance of continuous evaluation to quickly identify the shortcomings of the instructional product.

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# Appendix

This appendix presents further information and supporting documentation for all aspects of the project. It is organized to guide readers through the decisions made in the project, but it is not intended to be read top-to-bottom. It includes the following sections:

1. Actual Product
2. Design Specifications

These sections present *what* was made: the final design and the criteria with which it was created.

3. Learner and Environment Analysis
4. Design Precedent Analysis
5. Annotated Bibliography

These three sections present *why* the project unfolded as it did: the various inputs needed for all my design decisions. They document research that answered the questions of why this project was worthwhile and how it should be done.

6. Content Analysis and Prototyping Process
7. Design Narratives
8. Project Management Plan, Budget, and Timeline
9. Video Production
10. Assessment and Evaluation

These five sections describe *how* I designed the product: the steps and decisions made throughout the project. This includes my original plans, and the ways those plans changed as the project progressed.

## A1 Actual Product

The YouTube channel can be found at [youtube.com/channel/UCLVNxqlwcR8vyzmr1WFtpRw](https://www.youtube.com/channel/UCLVNxqlwcR8vyzmr1WFtpRw).

The video “How to Play Sushi Go! Complete Game Rules in 5 Minutes” can be found at <https://www.youtube.com/watch?v=o0jdqucqqfQ>.

The video “How to Play Sushi Go! Bonus 2-Player Variant” can be found at <https://www.youtube.com/watch?v=CXqcXSHNqhc>.

The video “How to Play Tortuga 1667 | Complete Game Rules in 11 Minutes + All Event Cards” can be found at <https://www.youtube.com/watch?v=4FvkUd0ENVo>.

Below are several images of the finished project:

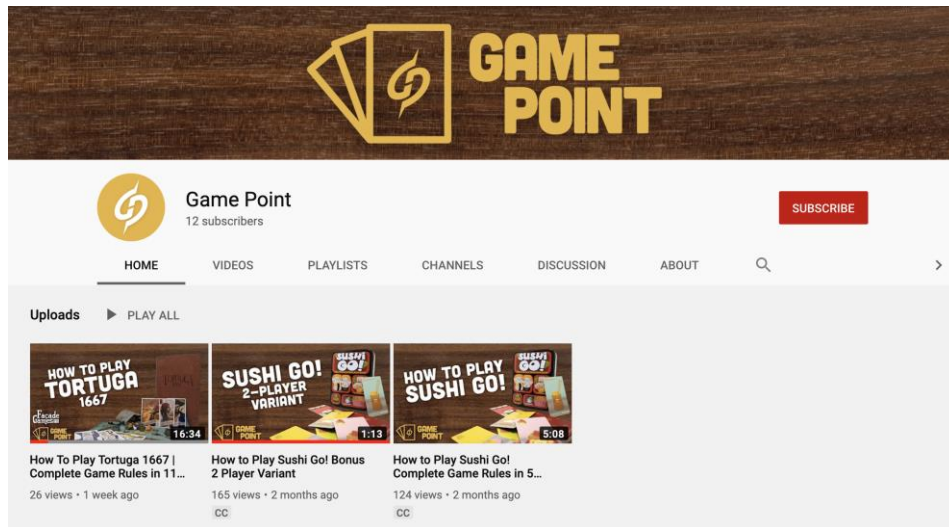


Figure 9. The finished channel with 3 videos

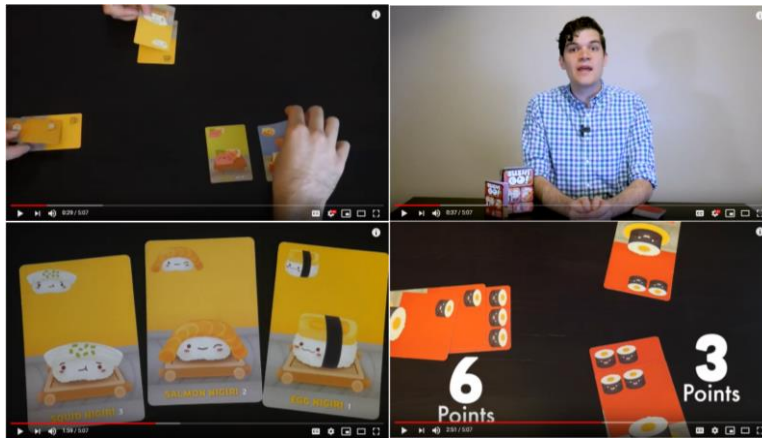


Figure 10. Several screenshots from the first *Sushi Go!* video.

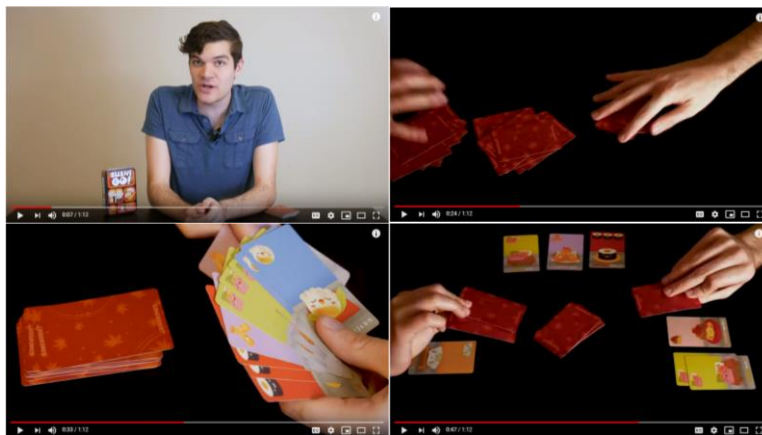


Figure 11. Several screenshots from the second *Sushi Go!* video.

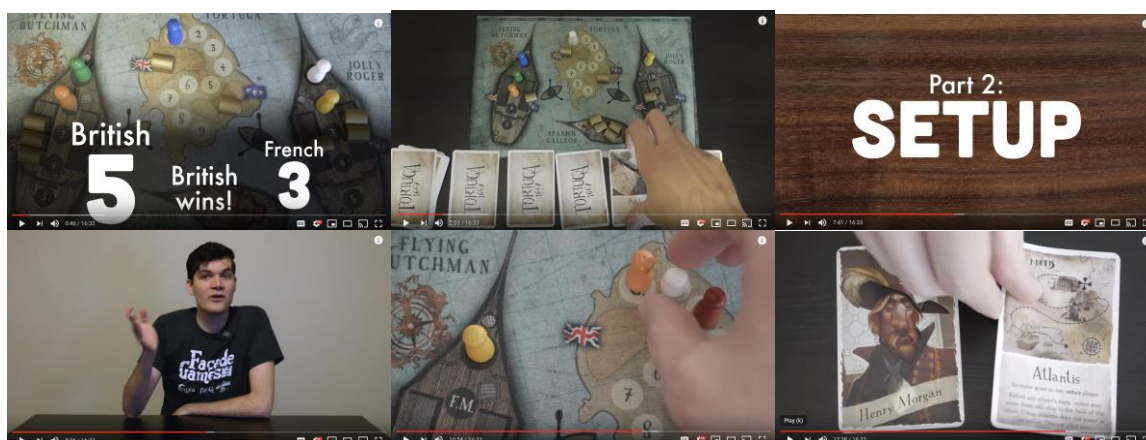


Figure 12. Several screenshots from the *Tortuga 1667* video.

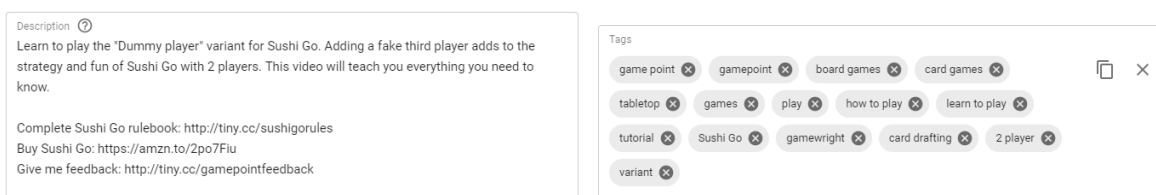


Figure 13. A video's description and tags.

## A2 Design Specifications

This section details the criteria with which these videos and the channel were designed. It is based on insights from the learner, environment, design precedent, and literature research presented later in this appendix, as well as the insights gained from numerous user tests on prototypes.

### A2.1 Content

The videos attempt to mimic and improve upon the experience of learning a game from an expert friend. They aim to minimize the limitations of video presentation and maximize its benefits to provide high-quality learning experiences for first-time players.

The goal of this instruction is to prepare first-time players of a game to be able to play confidently, soon. To do so, learners do not need to understand every rule in most games. They do need to understand the game's overall flow and nature, the procedures they will need to follow during play, and the basic options they will have throughout the game along with their effects. Those topics are generally covered in the following order, in order to scaffold information effectively so learners can best understand each topic when it arrives:

- Objectives/win conditions
- Overall game structure
- Basic mechanics
- More details on game structure and mechanics as needed

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Video length will vary with the complexity of the game but should be as short as reasonably possible. 2-15 minutes.

The instruction is presented in a series of sections. Most sections include the following elements:

- Introduction (an overview or question that draws interest, transitions from the previous topic, or prepares learners for what is to come)
- Description (Clear narrated explanation of rules, terms, and processes at an appropriate level of detail)
- Demonstration (Visible examples of all actions being described, timed to pair with each portion of the narration)
- Review (a summary recap of the section, or an example of the gameplay and strategic decision-making in action)

Sections will not be formally introduced with on-screen text, music, or animation. Rather, topic shifts will be signalled with review, brief natural pauses, and verbal transitions.

The following strategies occasionally support instruction as needed:

- Reiteration of basics covered earlier in the video as they apply to the specifics being discussed
- Recommended simplifications to the rules for first-time players
- Basic strategic tips
- Comparisons to similar games
- Highlights on the reasons a game is fun and exciting
- Links to outside resources (such as pdfs of the job aids and summaries included in rulebooks) for reference when questions come up during play (included in the video's description and mentioned in the video)
- Words of encouragement and comfort for confused learners
- Clarification of which rules are necessary to start playing and which are merely helpful to understand

Each video also needs the following non-instructional content:

- A very brief intro to welcome viewers and introduce the game
- An invitation to like, share, and comment on the video and subscribe to the channel (at the end of the video)
- Recommendations for ways to use the video to improve a gaming experience
- Thanks to any sponsors (at the end of the video)

## **A2.2 Presentation**

The host (me) must present information well. I should be:

- Knowledgeable.
- Informal.
- Clear.

- 
- Friendly.
  - Fun.
  - Excited.
  - Encouraging.
  - Natural.
  - Affirming.
  - Quick.
  - Welcoming.
  - Professional.
  - Respectful.

When talking directly to the camera, the host should make clear eye contact. Narration uses primarily second-person language, describing gameplay as if the learner is participating in it.

The visuals need to be useful, engaging, and visible at small sizes. To accomplish this, I:

- Use primarily close-up shots showing just the relevant pieces for the action being described (zoomed in close enough to be visible on phone-size screens).
  - Demonstrate every action as it is described, so the audio and visuals support one another.
  - Demonstrate and narrate actions from the player's perspective, as if the viewer is making these choices and movements
  - Occasionally, complex multiplayer processes require extra demonstrators, but most actions can be demonstrated with just one player.
- Use regular wide shots (of the whole game setup, or of the game and host together) to show bigger context, introducing sections, or when not discussing specific actions.
- Occasionally use unrealistic visuals (simple illustrations, still or lightly animated images of portions of a board or card with the rest removed, simple animations) when realistic detail is just too complex to support focused learning.
- Occasionally use video effects to clearly highlight an area of interest, dim out distractions, or add necessary on-screen text.
- Occasionally use on-screen text for summaries of processes or options.
  - When helpful, organize into flowcharts, diagrams, or tables
  - Large fonts, high contrast, solid colors
  - If using text as labels, place them as close as possible to the thing they are labelling
- Use HD footage (at least in final drafts).
- Remove background distractions as much as possible (place games on a dark, plain table. Film in front of a plain wall).
- Use excellent, consistent lighting from at least 3 sources (reduce harsh shadows that obscure game elements and negatively affect appearance. Make colors pop)

Audio must be:

- Clear.
- High-quality.
- Free from extraneous sounds or background music.

- 
- Loud enough to be heard on average phone speakers in a group setting with background noise.

## A2.3 Implementation

The videos are hosted in a YouTube channel, which needs the following elements:

- A consistent and memorable brand that expresses fun, ease, and reliability through:
  - A channel name.
  - A channel logo.
  - Consistent video titles including the keywords “How to play,” “Game,” and “Rules,” along with the name of the game.
  - Consistent video thumbnails that include enticing visuals of the game and channel logo.
  - A clear channel description
  - Consistent video intros and outros.
  - A short video welcoming visitors to the channel’s homepage and explaining the channel’s purpose (optional for a young channel, but eventually necessary)

Consistency in video style is also necessary to this brand, as described in the section above. The channel’s branding aims to position these videos as a tool for improving game-based social gatherings by facilitating or offloading the teaching of games, which tends to be one of the most complex, boring, and energy-depleting portions of these gatherings.

In order to grow the channel and sustain it long-term, it also needs:

- Search engine optimization.
  - Relevant tags on each video, based on the tags competitors are using, such as the following:
    - Tags about the channel: “game point”, gamepoint
    - Tags about games: “board games”, “card games”, tabletop, games, play
    - Tags about learning: tutorial, “how to play”, “learn to play”
    - Tags specific to the game: the game’s name, the game’s genre or type, etc.
  - Transcripts of each video for improved subtitling
- Audience interaction.
  - Open comments
  - Regular replies to viewer comments
  - Good discussion questions at the end of each video or in a pinned comment
  - Invitations for audience members to provide feedback (see “Assessment and Evaluation” section for more details)
  - Invitations in each video to like, comment, share, and subscribe
- Monetization (I do not expect notable revenue at this early point in the channel’s life, but am working to keep my options open and start small).
  - Sponsorships/commissions. Small game companies may pay for official “how to play” videos of their games. Their sharing of the videos could also grow my audience. (One such sponsor is already lined up for after this project ends. Façade



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Games, the independent game company owned by my friend Travis Hancock, intends to commission videos teaching their other games after I make their *Tortuga 1667* video for my project)

- Affiliate marketing: Each video's description includes an Amazon Affiliate link. If viewers buy the game (or other products on Amazon) after following that link, I receive a percent commission.
- Youtube advertising (once the channel has a wide enough audience, videos may be eligible to start generating ad revenue, although this is likely to be minimal).

Creating each video requires the following workflow (detailed further in the rest of this document):

- Choose a game that is fun, challenging, interesting, exciting, reasonably popular, and reasonably difficult to learn (user recommendations may help).
- Analyze and break down the rules of that game.
- Develop a script and storyboard.
- Record video.
- Edit video.
- Post video (including thumbnail, title, tags, transcript, and settings).
- Test with users at several phases in this process, and iterate by returning often to earlier steps as user feedback necessitates.

## A3 Learner and Environment Analysis

A great number of potential questions could be asked about my learners, their learning practices and preferences, pain points, demographic characteristics, and the environments in which they learn. In this analysis I detail eleven questions (or categories of questions) I found essential to my work. This list of questions was developed iteratively, as I found myself needing answers to these questions in order to make design decisions, as questions were suggested by those with whom I discussed the project, or as I identified critical themes in my research findings.

I chose to analyze learners and their environments together since I found that the questions I could ask about both (and the methods I could use to answer those questions) overlapped significantly.

### A3.1 Methods

I selected my methods gradually. I initially listed many methods for each research question, any method I could think of that might help provide some or all of the answers I needed to proceed. Observation, interviews, and secondary research appeared frequently in these lists, so I began conducting this research. As I conducted more of this research and filled in the findings on each question, I found that these methods were sufficient. I therefore stopped planning for other research methods and proceeded with my primarily qualitative analysis.

I conducted seven observations at game nights throughout the month of April, 2019. In each, I watched people teach and learn games, and asked them questions afterward about their

experiences. In three of these cases, most of the group had played the game before, so they were just teaching it to one or two new players. In the remaining four cases, all or most of the group was new to the game and had to learn it together. I conducted two interviews in May 2019 and three further interviews in August 2019, using a semi-structured approach. I asked a few planned questions based on the questions in this document, then let the conversation following each question go where the interviewee took it, continually probing for deeper insights or clarifications. My complete notes from those observations and interviews can be found at the end of this section.

My secondary research began with google searches. I found articles and blog posts from board game companies, players, and news sources. These are the secondary sources I found most useful:

- Stonemaier games [2017](#) and [2018](#) demographic survey results blog posts.
- Quantic Foundry [Board Game Motivation Profile](#) research.
- [This article](#) from *The Guardian* about the growth of the tabletop game industry.
- [Google Trends](#) comparisons of different keyword searches for various popular games.
- [This article](#) by Jenn Villa about Search Engine Optimization on YouTube.
- Wistia [2012](#) and [2016](#) blog posts about video length and engagement statistics.

Throughout my prototyping process, I collected notes and recordings of product tests with various learners. Notable insights from these tests are also included here.

## A3.2 Results (Questions and Answers)

In the following sections, I present eleven questions, research methods I used to answer them, findings from that research, and implications of those findings for my design. Findings and implications are grouped thematically.

### A3.2.1 Q1: Why do people play games? Why do they explore new games?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Secondary research</li> <li>● Interview gamers</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● People want to get together with friends, but don't want to go somewhere. Games provide fun social nights at home.</li> <li>● Talking is good, but talking while playing a game is better.</li> <li>● The motivations of board gamers tend to fit into these 11 categories in 4 buckets: 1a) Conflict, 1b) Social Manipulation, 2a) Immersion, 2b) Aesthetics, 3a) Strategy, 3b) Discovery, 3c) Need to Win, 4a) Social Fun, 4b) Cooperation, 4c) Chance, 4d) Accessibility.</li> <li>● Female gamers' motivations tend to emphasize social</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● Emphasize the social value of games (especially in branding, positioning, and audience interaction).</li> <li>● Encourage viewers to use the videos to simplify hosting or attending a game night. Knowing how to play ahead of time makes it easier than</li> </ul>

<p>interaction.</p> <ul style="list-style-type: none"> <li>● Games bring people together for a shared journey where they can form relationships. Family or friends.</li> <li>● Games bring people together outside of video games.</li> <li>● Something to do while talking with people. Easier and better to converse while doing something instead of just sitting. Helps start and build friendships.</li> <li>● Inviting someone new to your home for a game night is a great ice-breaker. Much easier than inviting them over for no specific purpose.</li> <li>● For those who have a hard time opening up to others, games offer connection in a judgement-safe way.</li> <li>● Games let you see people stressed, victorious, confused, etc. So you get to know them, but in a low-risk environment.</li> <li>● There's no risk in the social interaction within a game. Once the game is over it doesn't carry over to real life.</li> <li>● Teaching new friends a game you like is a way to share your personality and create shared experiences. So people are more willing to teach and learn if they like those they are with, or want to get to know them.</li> <li>● People crave experiences that feel authentic and tactile. Analog games provide a break from technology.</li> <li>● In some cases, games are part of a culture, so learning and playing them is a form of initiation.</li> <li>● Gaming is a low-stakes innocent competition. That innocence can be a refreshing escape in a stressful world and adult life.</li> <li>● Gaming can be nostalgic, especially when playing the games one played as a child.</li> <li>● People played games as children</li> <li>● Games are a break from reality. You assume a different role.</li> </ul>	<p>ever to come together over a great new game.</p> <ul style="list-style-type: none"> <li>● Celebrate specific ways each game creates a fun experience.</li> </ul>
<ul style="list-style-type: none"> <li>● Male gamers motivations are highly varied but tend to emphasize strategic challenges.</li> <li>● Games are a strategic and intellectual challenge. Finding the best strategy is like solving a puzzle.</li> <li>● Strategic games bring out different skills you don't normally use. Make the brain work in a fun unique way.</li> <li>● Problem solving makes the game more engaging but can actually inhibit the social interaction unless you know the game very well. Sometimes that's desirable (if you're with people you don't care for, or a game you really like) but often that's undesirable.</li> </ul>	<ul style="list-style-type: none"> <li>● Teach reasonably interesting strategic games.</li> <li>● Explain enough of the strategy to intrigue viewers and get them started, but not so much that there's nothing left to figure out. (Advanced strategic tips could feature in later videos, but aren't fitting at this point)</li> <li>● Emphasize the fact that good</li> </ul>

<ul style="list-style-type: none"> <li>● Games scratch the competitive itch.</li> <li>● Winning is nice, but not necessary for a good time.</li> </ul>	<p>learning experiences will help players enjoy the strategy without needing to have their attention totally consumed by it.</p>
<ul style="list-style-type: none"> <li>● Age is a less significant factor in determining gamers' motivations, but older gamers tend to be more interested than younger gamers in discovering new games.</li> <li>● Personality differences lead some people to stick with things they like and others to continue exploring new things.</li> <li>● Certain games are best for certain conditions (tiredness, closeness of relationships, desire for interaction, desire for challenge, size of group, etc.).</li> <li>● Learning a new game is a hurdle. Takes more energy than sticking with what you know, and how much fun you'll have is uncertain.</li> <li>● Learning very simple games is easy, but complicated games are more stressful to learn.</li> <li>● Selfish competitive urges pressure people to stick with what they know and are good at.</li> <li>● Some new games are trusted because of familiar developers, publishers, or mechanics. They will be like games I already know I like.</li> <li>● Comparing a new game to games one someone already likes and doesn't like helps clarify whether its worth investing time, energy, and money in.</li> <li>● Buying new games can be expensive. People have to weigh how certainly will I enjoy this for a long time with how much enjoyment could I get using that money elsewhere.</li> <li>● Like with other hobbies, interest in the next release can be strong. Getting and playing the newest version or next big thing is exciting and fun.</li> </ul>	<ul style="list-style-type: none"> <li>● Offer recommendations of who might like each game, or in what situations it might play well.</li> <li>● Refer occasionally to games with similar mechanics, theme, or strategies.</li> <li>● Sell the fact that simplified learning makes it easier to explore new games and introduce them to others.</li> </ul>
<ul style="list-style-type: none"> <li>● Introducing a game to friends allows someone who likes the game to play it more often.</li> <li>● It's important to gamers that their friends have a good experience their first time with a game. Otherwise there won't likely be a second.</li> <li>● People are careful to introduce games they are fairly confident their friends will like, games they trust their friends are ready for.</li> <li>● Teaching games is a lot of energy so people check first to be sure everyone will enjoy the new game and see it</li> </ul>	<ul style="list-style-type: none"> <li>● Invite viewers to use the videos to facilitate successfully sharing their favorite games with friends.</li> <li>● Make brief recommendations of who might like each game, or in what situations it will work well.</li> </ul>

<p>through.</p> <ul style="list-style-type: none"> <li>● Learners (especially those who have played many games) can get a good sense of how playing the game will feel and whether they'll like it from the rules and demonstrations.</li> </ul>	
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### A3.2.2 Q2: How do learners typically learn games now? Who teaches and how do they do it?

<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>● Secondary research</li> <li>● Interview an expert instructor</li> <li>● Observe &amp; interview gamers</li> </ul>	
<p><b>Findings</b></p>	<p><b>Implications</b></p>
<ul style="list-style-type: none"> <li>● When possible, learners prefer to learn from a friend who knows the game. Especially if someone in the group already loves the game and is sharing it, they teach. If an expert who is not a friend is available, they are also preferred.</li> <li>● Other experts will chime in if the teacher misses a detail.</li> <li>● If the game is new to everyone, one person usually reads the rulebook then teaches it to everyone else. Or occasionally they read the rulebook and discuss it together.</li> <li>● Some learners (about 12%) almost always learn from videos instead of traditional sources.</li> </ul>	<ul style="list-style-type: none"> <li>● Make expert instruction that anyone can access, so even those without an expert present do not need to learn from the rulebook.</li> <li>● Be friendly, and interact with the audience.</li> <li>● Take advantage of this growing video-instruction market.</li> </ul>
<ul style="list-style-type: none"> <li>● Questions come up throughout first gameplay. Experienced players are happy to help provide answers (They will also give occasional unsolicited advice as needed). Or, if experts are not available, learners consult the rulebook or search the internet for answers.</li> <li>● Some teachers deliberately do not teach all the rules before starting the game, but teach portions of the rules as they become relevant during the game.</li> </ul>	<ul style="list-style-type: none"> <li>● Do not try to teach every rule before people start playing, but cover most things.</li> <li>● If I choose to teach a rule that won't apply in every game, I should teach it at the end of the video, and clarify that most players will be fine to start playing without learning it, but can come back if they run into the question.</li> <li>● When I do not cover every detail of the rules, I should provide links or recommendations to the rulebook for reference during gameplay.</li> </ul>

### A3.2.3 Q3: What makes the learning process smooth (+), and what makes it painful (-)?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Interview an expert instructor</li> </ul>	
<b>Findings</b>	<b>Implications</b>
<ul style="list-style-type: none"> <li>● (+) It helps to know the main goals of the game (win conditions and generally how to achieve them) first, and the main obstacles in your way.</li> <li>● (+) Explaining and demonstrating clearly what each turn will look like helps learners feel confident that even if they do not understand the whole game they can start to play.</li> <li>● (+) Focusing on learning just a few important rules and ignoring everything else sometimes lets learners feel confident enough to play and strategize.</li> <li>● (+) Some games include job aids (often on extra cards, or the back of the rulebook or box) players can refer to which summarize turn and round structure, goals, terminology, or easy-to-forget rules. These could include flowcharts, tables, or lists.</li> <li>● (-) Learners can get “analysis paralysis” when they have too many choices with too many moving pros and cons. This is partly a game design problem, but instruction can also exacerbate it by emphasizing all the complexity and not providing summaries or simple structures to help learners keep track of possibilities.</li> <li>● (+) Game boards with really clear guides for where everything should go can help new players learn and remember the logistics of play.</li> <li>● (-) It is tough to remember specific numbers that come up in rules without visible reminders during play.</li> <li>● (+) People appreciate visual aids and reminders included in the game design, but only if they understand them well enough to confidently interpret them.</li> </ul>	<ul style="list-style-type: none"> <li>● Teach the big picture first (objectives and basic mechanics).</li> <li>● Use on-screen text to summarize processes and options</li> <li>● Provide links in the video description to the rulebook’s job aids and summaries</li> <li>● Emphasize the basics. Make sure they are covered thoroughly.</li> <li>● Reiterate the basics regularly, in section summaries, when explaining connected details, and at the video’s end.</li> <li>● Point out the game’s included reminders and explain how to interpret them.</li> </ul>
<ul style="list-style-type: none"> <li>● (-) Disorganized rulebooks confuse people. Learners have to dig around to find answers to their questions, hold information until it becomes relevant later, or reread sections trying to understand thick blocks of text.</li> <li>● (+) It helps to explain how the game works (mechanics, structure, how things progress over time) before detailing specifics.</li> <li>● (-) Details explained too early do not make sense without the bigger picture they fit in. But sometimes that is not a big</li> </ul>	<ul style="list-style-type: none"> <li>● Progress smoothly and deliberately through topics, from the big picture down to small details. Teach objectives, basic game structure, the mechanics of turns and rounds, and how turns build into a complete game. Then go back and fill</li> </ul>

<p>deal since those details can be figured out during play anyway. Even big rules can be confusing without a clear picture of how the game generally works.</p> <ul style="list-style-type: none"> <li>● (-) Learners can get overwhelmed if they feel like they are being told details (like card powers, strategy tips, etc.) before they know how the play will actually work (turn structure, basic mechanics).</li> <li>● (-) Unimportant or rare rules are sometimes overemphasized, and learners get stuck thinking about them instead of what usually matters.</li> <li>● (-) If a learner's question is not answered, they may stick on it and miss the next chunk of instruction.</li> <li>● (-) Tangents are confusing and unhelpful. They often happen when the teacher starts telling stories about past games, discussing similarities in other games, or elaborating on rare exceptions to basic rules. Multiple people giving input on the rules can also contribute to this disorganization.</li> <li>● (-) Some experienced teachers have a clearly planned progression of topics to cover when teaching. Other teachers jump around from rule to rule erratically without deliberate order.</li> <li>● (-) Instruction presented as an uninterrupted lecture is hard to follow, and learners who get lost can't catch up since they don't feel like they can interrupt the teacher's flow.</li> <li>● (+) When instructors pause at the end of each section of learning, it gives people a chance to express needs, or synthesize what they have learned before picking up more.</li> </ul>	<p>in the details.</p> <ul style="list-style-type: none"> <li>● Follow a well-planned script.</li> <li>● Break instruction into sections, with review and a brief pause at the end of each.</li> </ul>
<ul style="list-style-type: none"> <li>● (+) The teacher's tone helps learners feel comfortable and welcome, and know they are okay to make mistakes. Can also help clarify what is important and what is trivial.</li> <li>● (+) A real present expert teaching the game (or a video) can explain things faster than a rulebook, show gameplay in action, and explain complex things well. In-person teachers can also respond to questions and adapt to learner background.</li> <li>● (+) It can help to have an expert discuss opening moves with new players while they start the game (after brief instruction). Especially with games where every turn has similar decisions to be made.</li> <li>● (-) If an expert is helping new players during gameplay, they sometimes take over too much and end up making all the decisions so the learner is not actually playing.</li> <li>● (+) A close relationship between teacher and learner helps</li> </ul>	<ul style="list-style-type: none"> <li>● Be welcoming, affirming, positive, informal, and friendly as a host.</li> <li>● Be a helpful guide, but do not try to explain everything.</li> <li>● Be knowledgeable. Correct mistakes quickly.</li> </ul>

<p>learners feel confident to ask their questions and express their feelings.</p> <ul style="list-style-type: none"> <li>● (+) In-person teachers can have a plan to teach things in a good order, but also respond to the needs of learners as instruction progresses.</li> <li>● (+) Teachers can express excitement about teaching, and help learners feel like their inexperience is welcome.</li> <li>● (-) There are sometimes delays (during instruction or gameplay) to check the rulebook if questions come up that the teacher doesn't know the answer to.</li> <li>● (+) Experience or guidelines on how to read game rulebooks (what to look for, how much detail you need to start playing, how to deal with poorly organized rulebooks) is or would be helpful.</li> <li>● (-) Fallible human instructors sometimes teach rules incorrectly (especially if they haven't played in a long time). This could make the game less fun, and could lead to confusion if the learner goes on to teach or play with others in the future.</li> <li>● (+) Patience from experienced players is important since the beginning of a new game will likely be slow.</li> <li>● (+) A second round of play may be more enjoyable after the first, since the new players have now seen a full game and understand the rules and strategy more fully.</li> </ul>	
<ul style="list-style-type: none"> <li>● (-) Ambiguity (in rulebooks or explanations) leads to confusion.</li> <li>● (-) Unexplained jargon (game genres, mechanics, and specific in-game terminology for actions and items) can be confusing.</li> <li>● (-) Things that sound similar but are actually very different often cause confusion. On its own, consistent use of terminology is not enough to resolve this since people do not necessarily notice the teacher's careful use of terms. They just hear what they think to be synonyms.</li> <li>● (-) If learners try what they think is a clever strategy, only to find out it's against a rule they forgot or never learned, it may be too late for them to work successfully on a backup plan, and they feel like their whole game was ruined by that lack of knowledge.</li> <li>● (-) If an important rule is only covered once, it's quite possible for learners to miss that explanation.</li> <li>● (-) Grammatical errors or other mistakes distract learners so they can't focus on the next thing that's taught</li> <li>● (-) New players who don't know what they are doing</li> </ul>	<ul style="list-style-type: none"> <li>● Explain rules, terms, and processes clearly.</li> <li>● Test explanations with users.</li> <li>● Cover enough detail that learners can play confidently.</li> </ul>



<p>sometimes take a long time to make decisions, so everyone has to wait a long time between their turns and a game that could be fun becomes boring.</p> <ul style="list-style-type: none"> <li>● (-) Learners with questions during gameplay sometimes can't ask them openly without revealing secrets about their strategy or hand of cards. They have to ask someone who is not playing, search the rulebook for the answer, or ask the question as cryptically as possible and hope it doesn't give away too much.</li> </ul>	
<ul style="list-style-type: none"> <li>● (+) Having the game set up in front of you while you learn helps you see things in context.</li> <li>● (-) If cards and pieces are used in examples, game setup has to wait, so there is a pause between learning and play while the game is set up.</li> <li>● (+) Examples and demonstrations clearly visible help learners see rules in action and make better sense of them. They also save time since fine details (like where things go) do not need to be verbally explained.</li> <li>● (+) Experienced players sometimes take the first turn, and explain what they are doing and why, so newcomers have more practical examples before they have to actually play a turn.</li> <li>● (+) When reading the rules yourself, you control pace, which helps with confidence.</li> <li>● (-) Some rules are very hard to explain with words. These will not make much sense until they are seen in action.</li> <li>● (+) It is fun to learn by playing.</li> <li>● (-) Specific examples of play can create confusion if, out-of-context, they appear to violate rules taught previously, or deal with rules not yet taught.</li> </ul>	<ul style="list-style-type: none"> <li>● Use clearly visible examples to reinforce what is being taught.</li> <li>● Show, don't tell, whenever possible.</li> <li>● Walk through examples of complete turns, explaining the options and decisions made.</li> <li>● Encourage viewers to learn at their own pace, pausing and rewinding as needed.</li> </ul>
<ul style="list-style-type: none"> <li>● (+) Some games are just easier to teach than others due to the way they are designed: rules consistently applied and simple, limited jargon, repetitive choices without too many options, clear goals, etc..</li> <li>● (+) Some rules can be eliminated for new players to simplify their first time playing the game without making it less fun for everyone. And expansions and extras can be left out. Simplified games let you start playing sooner and see rules in action.</li> <li>● (-) Complex games can overwhelm learners if every detail is taught before they start play.</li> </ul>	<ul style="list-style-type: none"> <li>● When simplifications of the rules are provided by the designers, or when I think of helpful simplifications myself, I should recommend them so new players don't have to learn as much.</li> <li>● Do not attempt to teach every detail of a game, but let players know when detail is omitted and where they can find it in the rulebook.</li> </ul>

<ul style="list-style-type: none"> <li>● (+) Connecting the new game to games the learners have played previously helps establish common ground and make learning much faster since you just have to explain what's unique. Especially with hardcore gamers who are familiar with many games and game genres.</li> <li>● (-) If instructors assume learners already have a certain baseline understanding, then learners without that background are left completely lost.</li> </ul>	<ul style="list-style-type: none"> <li>● Mention, but do not rely on, similarities to other games.</li> <li>● When games fit into a well-defined genre, mention it.</li> </ul>
<ul style="list-style-type: none"> <li>● (-) Learners are distracted by less-than-perfect video quality, including audio or video footage issues, or editing problems</li> <li>● (-) Learners are distracted or put off by poor eye contact between host and camera</li> </ul>	<ul style="list-style-type: none"> <li>● Capture high-quality video and audio with lights, microphones, etc.</li> <li>● Edit audio to remove background sounds.</li> <li>● Set up camera and teleprompter so host can easily look directly at the camera.</li> </ul>

#### A3.2.4 Q4: How do learners feel while learning a new game/playing it for the first time?

<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Secondary research</li> </ul>	
<p><b>Findings</b></p>	<p><b>Implications</b></p>
<ul style="list-style-type: none"> <li>● Connected (when someone is sharing with you a game they love).</li> <li>● Safe (when teacher creates a good environment for questions and shows empathy).</li> <li>● Unwanted, intimidated, discouraged, guilty (when it seems like your ineptitude is slowing down or getting in the way of experienced players' fun, when other players harshly criticize innocent mistakes).</li> <li>● Afraid (when hesitating to ask questions that might seem dumb, or when it seems like everyone else understood something you missed).</li> </ul>	<ul style="list-style-type: none"> <li>● Host warmly. Help people feel welcome and respected at the table.</li> <li>● Occasionally mention that it is okay to not understand, or to make mistakes while learning.</li> <li>● Interact and connect with the YouTube audience through comments, questions, etc..</li> </ul>
<ul style="list-style-type: none"> <li>● Confused, lost (when game is too complex or teacher moves too fast).</li> <li>● Fear (that if you don't learn well enough you'll have no fun and no chance of winning).</li> <li>● Overwhelmed (when too much information is presented at once, questions aren't answered, learning takes too long,</li> </ul>	<ul style="list-style-type: none"> <li>● Teach at a steady pace and explain things clearly.</li> <li>● Move through topics in a logical order, avoiding details until the general scaffolds are well in place.</li> </ul>

<p>too many options are presented in a choice).</p> <ul style="list-style-type: none"> <li>● Frustrated, disappointed (when a game is taking too long to learn, or something just doesn't make sense after multiple attempts at explaining it).</li> <li>● Confused, stressed (when unsure what you're doing during play)</li> <li>● Disappointed (when giving up on a game that was too difficult to learn).</li> <li>● Stressed, left behind, sad (when everyone knows what they are doing except you, or when you ask a question and it isn't answered well enough before the teacher moves on without you).</li> <li>● Miserable (when slogging through a game that should be fun but you don't understand the rules).</li> </ul>	<ul style="list-style-type: none"> <li>● Take brief breaks or review between sections.</li> <li>● Encourage learners. Help them feel confident that they can succeed even if they are confused now.</li> </ul>
<ul style="list-style-type: none"> <li>● Curious, intrigued (when a game has an interesting theme, subtle strategy, or unique mechanics).</li> <li>● Excited (when something sounds fun).</li> <li>● Unenthusiastic (about a game that doesn't seem like it will be fun).</li> <li>● Skeptical (when being introduced to a new game and you don't know whether you will end up liking it).</li> </ul>	<ul style="list-style-type: none"> <li>● Choose games that are fun and challenging.</li> <li>● Describe the exciting theme and story of a game (long enough to entice interest, but not so long that learning is significantly delayed).</li> <li>● Occasionally tout a game's best parts, the reasons it is fun to play.</li> </ul>
<ul style="list-style-type: none"> <li>● Clever (when thinking of new strategies to beat experienced players).</li> <li>● Successful (when winning against experienced players, with or without help).</li> <li>● Disadvantaged (when playing against more experienced players).</li> <li>● Proud (when understanding things well despite limited experience)</li> <li>● Frustrated (when they make mistakes or forget rules during play, and hurt their chances of success).</li> <li>● Apprehensive, unsure (when trying to apply what they learned on first turns of the game).</li> <li>● Confident (a bit into gameplay when you finally have your feet under you, or when a question gets answered well).</li> <li>● High pressure (when scores are counting, teams are relying on you, or winning is on the line).</li> </ul>	<ul style="list-style-type: none"> <li>● Teach just a bit of strategy—enough that new players have a direction to move in, but not so much that they feel spoon-fed or unchallenged.</li> <li>● Show examples of in-game decisions, and talk through how I would make them.</li> </ul>

### A3.2.5 Q5: Are whole groups usually learning a new game together, or is it more common to have experienced players and novices playing together?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Interview an expert instructor</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● At least 80% of the time, at least one member of the group has played the game before, and can teach to their friends. Often, though, they haven't played the game in a long time and need a review before teaching, or a source to consult when questions they don't remember come up.</li> <li>● If nobody knows the game, most groups prefer to have one person read the rulebook and teach it to the rest.</li> <li>● When everyone is relying on the rulebook together, the reader gets asked questions and isn't sure how to answer them. Nobody understands the whole picture.</li> <li>● When whole groups learn a game together, that is usually because someone just bought it, or they are borrowing it to try out.</li> <li>● Playing a new game for the first time can be more fun when everyone is on the same level (all new) rather than a mix of underdogs and experts.</li> <li>● If multiple players learn together, they will each learn different rules to different levels, and can correct each other throughout the game, or check the rulebook/video to resolve disagreements.</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● Focus on designing for players (individuals or groups) who do not have an expert on-hand. They have the rulebook available for disputes or questions, but would rather learn from a person.</li> <li>● Be pleasant, welcoming, excited, and informal.</li> <li>● Do not worry about covering every detail and possibility.</li> </ul>

### A3.2.6 Q6: How long should it take to learn a game? Is brevity or thoroughness more important?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Interview gamers</li> <li>● Secondary research</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● The longer YouTube videos get, the stronger their tendency to lose viewers over time. For example, around 60% of viewers finish a 1 minute video, while only 10% of viewers finish a 60+ minute video.</li> <li>● The steepest dropoff in view time statistics occurs when videos are between 10 and 30 minutes long. Although there</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● Make efforts to teach quickly, but focus first on quality.</li> <li>● Let video length vary depending on the complexity of each game, but aim for no</li> </ul>

<p>is a difference between most groups, groups outside this range are not so sharply differentiated.</p> <ul style="list-style-type: none"> <li>● For videos of any length, viewership declines throughout the video. Viewership declines sharply during the first 10% of the video, then holds mostly steady until another (less steep) dropoff occurs during the last 10%.</li> <li>● Videos at lengths up to 2 minutes all get about 70% viewer completion. Then there's a steady decline in completion rates until it levels out again around 50% for videos between 6 and 12 minutes. Between 12 and 20 minutes completion steadily declines to around 45%, and this trend would presumably continue for longer videos.</li> <li>● Spending too long on teaching overwhelms learners. By the time the game starts they don't care anymore or don't remember what was taught at the beginning.</li> <li>● Instruction should be paced fast enough to keep learners engaged, but not so fast that people feel left behind and disengage.</li> <li>● Length of instruction varies with game complexity. Could be as short as 30 seconds or as long as 20 minutes. 5-10 minutes should be enough for people to get started, then the teacher can provide more support after the game has started.</li> <li>● Learning a complex game from the rulebook alone sometimes takes an hour or more.</li> <li>● Most of those learning from rulebooks do not mind a high page count as long as it is usable (well organized, clearly written, includes enough detail, examples, has good overviews).</li> </ul>	<p>longer than 12 minutes. Simple games can be taught in 5 minutes or less.</p> <ul style="list-style-type: none"> <li>● Break extremely long videos into sections or chapters.</li> <li>● Provide navigation aids for longer videos.</li> <li>● Get straight into the instruction at the beginning of each video so viewers decide to stay.</li> </ul>
<ul style="list-style-type: none"> <li>● New players will do alright as long as they have enough information to know what a turn will look like and their main goals.</li> <li>● Learners can start considering and even making their opening moves while still learning the game, perhaps with input and discussion. Then the line between learning and play is blurred and the length of time on each is not as big of a concern. Plus the strategies and rules make more sense in context of action.</li> <li>● Some details (logistics, rare events and powers, minor details) are easier to leave out, then explain thoroughly when they become relevant during gameplay.</li> <li>● Most learners do best when given only basics of the strategy (the type of thought process they will need, things to keep in mind), and answers to strategic questions during play. They want to figure out most of the strategy on their</li> </ul>	<ul style="list-style-type: none"> <li>● Focus on teaching enough that players can start the game and figure out more through experience.</li> <li>● Definitely cover objectives, overall game structure, the structure and options on each turn, and the fundamental rules.</li> <li>● Do not cover every detail.</li> <li>● Only teach the basics of the game's strategy.</li> <li>● Provide a few well-crafted examples to demonstrate play in action, but do not attempt to demonstrate every</li> </ul>

<p>own.</p> <ul style="list-style-type: none"> <li>● Enough examples should be given that the gameplay will make sense and other possibilities can be figured out when they arise. There is no need to explain every possibility up front, but you should cover every category of possibility.</li> <li>● Sometimes learners wish to just start the game without instruction and figure it out while playing. That may work with some games but with complex games it tends to cause more pain and frustration than fun.</li> </ul>	<p>possibility.</p>
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### A3.2.7 Q7: Where do people usually learn games? How much distraction and noise is there?

<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Secondary research</li> </ul>	
<p><b>Findings</b></p>	<p><b>Implications</b></p>
<ul style="list-style-type: none"> <li>● Game night environment at someone's home. Some group clamor and distractions (children, other conversations, snacks, etc.).</li> <li>● Public environment (like a board game cafe) with ambient noise.</li> <li>● At home alone, before a game night or while considering purchasing a game.</li> </ul>	<ul style="list-style-type: none"> <li>● Publish videos with above-average volume throughout.</li> <li>● Do not use background music.</li> </ul>

### A3.2.8 Q8: What technology do learners have access to (screen size, volume, internet connection)?

<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Secondary research</li> </ul>	
<p><b>Findings</b></p>	<p><b>Implications</b></p>
<ul style="list-style-type: none"> <li>● Just about everyone has access to enough technology to pull up a video at a moment's notice.</li> <li>● Smartphones are most common and tend to have smallish screens and somewhat quiet speakers.</li> <li>● People who can't hear a phone video well will hold it up to their ear to hear better, which stops them from seeing the video.</li> </ul>	<ul style="list-style-type: none"> <li>● Zoom in very closely whenever showing small details.</li> <li>● Use very large font sizes, solid colors, and high contrast for any on-screen text.</li> <li>● Publish videos with above-</li> </ul>

	average volume throughout.
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### A3.2.9 Q9: How do learners find game instruction online?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> <li>● Secondary research</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● Keyword searches for “How to Play __” or “__ Rules” are much more common than searches for “__ tutorial” or “__ instructions.”</li> <li>● Google is the most popular search engine.</li> <li>● YouTube’s search algorithm prioritizes videos based on keywords, tags, view time, video quality, view count, view diversity, engagement, and channel interaction, in that order.</li> <li>● Search volume peaks in December.</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● My videos should be have titles that include these keywords (e.g. “How to Play __: Game Rules Explained”).</li> <li>● Put relevant tags on each video.</li> <li>● Share the videos as widely as possible, and invite viewers to share them as well, especially while the channel is young.</li> <li>● Respond to comments and maintain a conversation with viewers.</li> <li>● Optimize for YouTube search with keywords, transcripts, and other SEO features.</li> </ul>
<ul style="list-style-type: none"> <li>● Search volume peaks in December.</li> </ul>	<ul style="list-style-type: none"> <li>● Aim to post videos on YouTube by November.</li> </ul>

### A3.2.10 Q10: What are my learners’ basic demographics (age, gender, etc.)?

<b>Methods</b> <ul style="list-style-type: none"> <li>● Secondary research</li> <li>● Observe gamers</li> <li>● Interview an expert instructor</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● 20-50 years old.</li> <li>● Play in groups of 2-5+.</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● Teach to an adult audience. Do not talk down to them.</li> </ul>

<ul style="list-style-type: none"> <li>● Mostly men.</li> <li>● Driven by need to win, feelings of discovery, social fun, cooperation, etc..</li> <li>● Growing market.</li> <li>● Most live in Europe or North America.</li> <li>● Varying levels of expertise and experience with other games. All have played some games. Many play regularly and have vast experience with other games.</li> <li>● Different ages tend to like different types of games. Younger players tend to play social party games. Older players tend to prefer strategic challenges.</li> </ul>	<ul style="list-style-type: none"> <li>● Briefly explain why each game is fun, how it feels.</li> <li>● Occasionally refer to similar games or game genres when helpful, but don't rely on those connections or assume that everyone will understand them.</li> <li>● Use English.</li> </ul>
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**A3.2.11 Q11: How much can I trust my judgement on this project? How similar am I to most other learners? How sure can I be when decisions arise that I understand completely what my learners need and what they will prefer?**

<b>Methods</b> <ul style="list-style-type: none"> <li>● Observe &amp; interview gamers</li> </ul>	
<b>Findings</b> <ul style="list-style-type: none"> <li>● Compared to the median audience member, I am slightly younger, but have a slightly longer history of game playing.</li> <li>● I have above-average previous experience. Many learners have less experience than I do with a variety of strategy games and the mechanics they employ. A few learners have much more experience than I do. My experience level makes it easier for me to draw connections to similar game mechanics, pick up on strategic opportunities, and get excited about learning new games.</li> <li>● My past experiences with learning from rulebooks are quite similar to the various experiences others have. My past experiences with learning from other people are largely similar to others' experience, but I tend to be more confident than other learners (both in my willingness to interrupt and ask questions, and in my trust that things will make sense later), most likely due to my experience level.</li> <li>● I don't mind learning mechanics and procedures last, but this is a rare feeling. Most other learners will be confused if they are told much about what individual cards and objects do before they learn how and when those things are played.</li> </ul>	<b>Implications</b> <ul style="list-style-type: none"> <li>● I can trust my own judgement when it comes to minor decisions, but must verify regularly with users, particularly less-experienced users. Large decisions always need outside input.</li> <li>● I may be particularly prone to overestimate my audience's expertise when it comes to common game jargon and mechanics.</li> <li>● I should consider mechanics and procedures as a basic topic, and teach these early.</li> </ul>
<ul style="list-style-type: none"> <li>● Many of the findings in this analysis are things I already thought based on years of personal experience and conversations with friends about this topic.</li> </ul>	<ul style="list-style-type: none"> <li>● This analysis has been necessary and helpful. I should rely on what I learned</li> </ul>



<ul style="list-style-type: none"> <li>● About 30% of these findings are new or unexpected information to me. These are spread throughout the range from big themes to small nuances.</li> <li>● The findings in this analysis are internally consistent, and also align well with my findings from design precedent and academic literature.</li> </ul>	<p>here.</p> <ul style="list-style-type: none"> <li>● My understanding of my learners is thorough and trustworthy.</li> <li>● There are likely still gaps in my understanding, but I can trust that these will be closed as I earnestly pursue learner feedback on my designs.</li> </ul>
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## A3.3 Raw Observation Notes

### A3.3.1 Cover your assets being taught to Derek Gray.

Group of 5, and all the other 4 have played it before, though not all have played it recently.

One teacher unofficially designated. Deferred to because she's the one who initially wanted to play and convinced Derek to join. Also she's loud and experienced at the game and is the hostess of the game night and was holding the game.

Started by briefly explaining the goal and primary obstacle to achieving it (you want to get the most money, but the problem is people can steal your stuff). Teaching with a combination of verbal explanation and demonstrating on the table in front of the new player. Storytelling through examples while laying the cards talked about down in Derek's area.

Input from other players when missing details or some tangential storytelling. Had to check the rules once to clear up a discussion about a fine detail rule.

Explained using cards as demo, then deck had to be shuffled and dealt.

Minor details and logistics left out of explanation until questions asked during first few rounds of play. Several questions asked during first 3 rounds (by Derek and by other players who just hadn't played this in a while.) One brief conversation about a potential strategic mistake Derek and Emma made also happened.

By 5 minutes into play, Derek feels confident he knows everything of the rules. Doesn't feel confident in strategic nuances though, but doesn't expect to at this point. My question about how confident he is in all the rules caused Penny to remember she hadn't explained some details about how gameplay will be different as the round ends.

### A3.3.2 Dan W. teaching Kemps to group of Dana Maria and Edward

Tremendously simple game, so Dan taught it in like 30 seconds. "It's a card passing game, where you each have two cards, and pass cards around the circle. When you have a pair your partner has to say Kemps, so you have to have a signal as a team to tell your partner when you have kemps. If your partner says Kemps and you have Kemps you win. If the other team thinks you're doing the signal and says antikemps. If you have kemps and they say antikemps you lose. But if

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they say antikemps and you don't have kemps they lose. And if your teammates says Kemp's and you didn't have kemps you lose."

After being taught, Maria thinks the same sounds dumb (after playing and losing a 20-second round she still thinks the game is dumb). (After playing a couple rounds she's having fun but says she still thinks it's dumb.)

After the first round, Dan googled and realized he'd taught the game wrong (he hadn't played it in a long time). The objectives and teamwork were right, but not the logistics of gameplay. So he re-explained the correct version and Maria was really confused and asked him to re-explain. Instead of explaining again they just launched into the next round trusting she'd get it soon enough. Then he and Dana explained to Maria what they were doing with their first few actions, sort of demonstrating. It took a moment but she got it definitely early enough before she had to make any important strategic decisions. (She was confused and didn't realize the new version of the rules hadn't changed the goals, and that she now had to go for 4 of a kind.)

Edward is picking up the strategy very fast and doing innovative things to mess with the other team.

Both these games are really simple, so they were taught in less than 5 minutes.

### **A3.3.3 Tortuga 1667 being taught to Dan and Neil**

Dana took charge because she's experienced and loves teaching, especially teaching this game which she loves. Because she has explained this game many times, she likes to teach it by just explaining half the rules and playing a simplified game with fewer options where you don't have to explain what individual cards do until they come up in the game.

Explaining teams and demonstrating endgame win condition first, then generally how the gold moves around, then how teams have to keep secrets and trust each other, then special actions available to certain players (in the order they appear on the jobaid card), then more details on how those actions work using vote cards. Then how the other cards work basically (just 2 examples from the whole deck).

Dan asked some good questions which were answered by Edward and Dana.

A couple tangents caused by other players, which Dana mostly ignored.

Lots of questions came up as we played, which the experienced players answered.

### **A3.3.4 Penny learning Wingspan**

Rich convinced her to play by explaining it's an engine builder. Confused by engine builder term. But that didn't slow her down. Rich's convinced that talking about genres helps with hardcore gamers.

Set up before starting.

Explained dice rolling and food first, then all the different types of cards and pieces

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Explained round structure, then each action type.

Interjected comforting "it'll all absorb don't worry. This is just so you know what the bird cards look like"

Now getting to theme and goal.

Handed out cards for people to start making their starting decisions, then demonstrated how the rest of the actions work, and some examples of how birds could stack up to make more impressive powers.

Lots of tangents talking about terraforming Mars, which none of us have played.

Lots of little clarifications coming up in play. Bird feeder really didn't make sense until she saw it happening. Once between turns hadn't come up. Tucking hadn't made sense.

### **A3.3.5 Penny teaching Salem to group of 8**

What it's like, goals, people.

Confusion about people powers vs witches

Conspiracy

Lots of questions being asked

Explaining deck smoothly. Red cards, green, and blue.

Game started. Going well just a couple questions being asked

### **A3.3.6 Penny teaching Deadwood to group of 4**

Confusion about guns in safes vs guns in hand

Confusion about final showdown only including one team

Questions about cards

Nobody sure what to do on first turn

### **A3.3.7 Group of 6 learning plague game (Playtesting a game in development)**

Dana's read the rules. Some of the group have played previous versions of this game.

Reading rules to group, then answering questions and discussing examples that clear up things. Starting with goals and general roles. Mike and Penny don't really get it.

Explaining turn options next. Movement and special powers. Lots of questions and clarifications coming up.

Penny and Mike haven't played the previous versions and they're really confused and not getting it.

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Some clarifications coming up mid-game. Texting Travis for clarifications. Those who understand things

People's thoughts on simplifying games (brief conversation at game night): simplified versions are especially valuable for teaching complicated games. Many complex games can't be learned without playing and seeing things in action. And it's much more fun than sitting around learning the whole game and not really quite getting it and playing disadvantaged. Simplified version or shortened game or just a round or two before you start keeping score.

## A3.4 Raw Interview Notes

### A3.4.1 Interview with Neil Denning, April 2019

(Neil is an employee at Good Move Cafe who teaches games and watches people learn games every day at work and in his personal life. Really an expert. Good Move's designated teacher at tournaments and big game night events)

People generally learn from the rulebook, a video, or a person who already knows it. Within those categories there is a lot of variation in strategies though.

Rank order of options for ease of learning:

1. Learning from a person
  - a. They are right with you and can answer your specific questions
2. Video
  - a. Especially if it's a complex game with lots going on. Video can show you how a turn works, what gameplay look like.
3. Rulebook
  - a. Sometimes ambiguous but it's nice to have a reference

Making connections to other games is really helpful. Cafe customers have usually played a lot of games, so if you reference similar games and see if they know those already, then you can use that terminology in explaining. Establishes common ground.

Occasionally a customer has very limited game knowledge. You can still reference what they do know. Everyone knows some games.

Sometimes I have people play the first round open-handed and talk through my process of what I would choose. Walk through the process with them. (especially useful with games like 7 wonders or Azul where people are making the same type of decision over and over).

When learning a new game alone or with a bunch of other people who also don't know it, focus on structure. Search rulebook or videos and try to learn enough detail that you know what a turn will look like. Complex games are easy to overwhelm people with. Like Terraforming Mars or 7 wonders often overwhelm people.

Overwhelming people is a big category of problems. A lot of people don't even approach complex board games because they're intimidated. If you're with a group of people and 2 shut

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down and stop caring, then everyone's locked into playing a game that they won't enjoy. It's boring and disappointing.

Things that cause overwhelming:

- Not understanding what to do in a turn
- Having to wait forever before your next turn because people are taking their time (lots of downtime)
- Analysis paralysis (too many choices. Too many moving parts)
- Feel like they asked a question and it wasn't fully answered and you moved on and they can't catch up so they just shut down.
- When teacher just does everything for them. (common problem with Pandemic)
- Too many details (people don't need to learn everything before they start playing)
- It takes too long (if it takes an hour to learn a game, then by the time you're done people don't care about playing anymore)

New players often get a lot of help from experienced players and end up winning. That's often the real source of what people call beginners luck. Sometimes jerk veteran players who need to win at all costs will ruin the game for beginners or sabotage them with bad advice. That's a really rare problem though.

People don't need to learn everything before they start. That's when you get a lot of shutting down. If I'm talking to someone it shouldn't take more than 5-10 minutes. Then I'll check up on them regularly and be there as a resource. Normally 7-8 minutes is enough for people to be ready to take a turn.

If it's me reading a new game rulebook I've never played before I'll expect it to take quite a bit longer. Depends on the complexity of the game. Like pass the pigs would still be 30 seconds, but other games could take a long time. Playing this Lord of the Rings Campaign game today and it's taking a really long time to learn.

80% of the time, it's someone introducing people to a game they've already played. The other 20% are groups all learning together. Often, in that 80%, the experienced players aren't really that experienced. They have played the game once and just remember that it was fun and want to share it. They're still a helpful resource and learning moves faster than if nobody knew the game, but they can't really teach it to the whole group without reviewing the rulebook or getting some help first. That 20% is bigger at the cafe than it would be in normal gaming environments, because there isn't the buying-the-game barrier so people can try games they otherwise wouldn't be able to. In a normal game night environment people have almost always played a game before they buy it.

I like rulebooks with flowcharts and aids. The best have one page that summarizes what you do in a turn. Other rulebooks leave you constantly flipping through the book searching for what to do next or what's going on.

I see people put games back because they couldn't figure it out. They say "I have no idea what's going on," and that's the rulebook's fault. I see people staring at the rulebook for half an hour, then giving up. That's always sad, especially when it's a game that I know is good. Game

rulebooks are a whole genre and you have to have some background to understand. A lot of rulebooks are problematic because of confusing organization.

Clear explanation of how to win. How the game ends.

Best videos I've seen go: This is what the game is and this is what a turn looks like. Then, these are some weird things you might run into. Maybe a little bit of the strategy but not too much. Fast enough pace that it doesn't feel like I'm just sitting (You should be able to get what you need in 10 minutes). But not blazing through so fast that people feel left behind.

Everyone has enough internet access and technology to access a YouTube video whenever they need to.

Occasional problems seen with low volume so people are holding phone up to ears and then they can't see.

Something that would be useful and cool: Training on how to read a game rulebook. People complain that rulebooks are hard to follow. That would be an interesting thing to explore further

Simplified version of games could be an interesting niche down the line, but nobody's looking for that right now.

People want to learn quickly and get to playing. Maybe consider making 2 videos for each game, 1 to teach the basics and a second to go deeper for those who care?

Major area to differentiate from existing videos: engaging host. Many videos out right now have boring hosts and nobody wants to watch them.

Demographics: Mostly 20s-40s. Lots of young parents. Not older generations. It's rare to see someone over 50, and they're usually there with kids or grandkids. Lots of adults getting away from their kids.

- Teenagers tend to play more party games (curses, apples to apples).
- College kids play a mix of creative party games and lightweight strategy (Dixit, pandemic, smallworld) or nostalgic games they played as kids (Monopoly, Life, Jumanji).
- Established adults into more strategic games (Imhotep, scythe, dominion). Older adults also like strategy. Maybe that's more about how long they've been around board games than it is about their age.

#### **A3.4.2 Interview with Penny Dalton, April 2019**

(Played some games when younger but not nearly to this extent in frequency or game variety and complexity. Had to learn lots of games to have social experiences in college, then married into a game-loving family and friend group. Now likes playing games quite a bit. Learns new games often and feels she is a slow game learner. Often learning games her husband and his friends and family all already know, so feels like the only newcomer)

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She has some stressed feelings from bad experiences learning games in the past, times she felt like there was too much detail explained before she got the basic picture figured out. She had questions and felt like they weren't answered before people moved on. She felt risk of appearing dumb by asking questions or not getting things everyone else got. Stress and sadness at the prospect of being left behind and losing. Especially when everyone else already knew the game and she felt like she was expected to get it right away or her need to spend longer learning would keep everyone away from the fun they wanted to have. Like she was in the way of their fun. Like dancing with experts. You know they say they love dancing with noobs and helping them learn, but you feel like you're holding them back and they could be having more fun if they danced with people at their own level. Intimidated.

She prefers to learn general goals, then procedures/game mechanics (turn order, actions, how and when cards are drawn or played, etc.), then more about what all that does and means, how the game progresses over time. Then go back for more details about individual cards, details, etc. Details don't make sense without context

If I have a question and it isn't answered before the person teaching moves on, I miss most of what they say after that because I'm still thinking about the question.

Often, after 10-15 minutes spent learning a game, she feels like all she knows is the basic idea that could be explained in 30 seconds. All the other details flew past her.

Drew cards with descriptions she didn't understand and didn't feel confident to play them.

I have a strategy and get excited about it, but then it turns out to be against rules I didn't know. I didn't want to ask clarification questions that would give away what I was planning on, but then when I try to do it everyone's like "oh you can't do that" and I have to give up on plans I worked hard on. I feel frustrated and dumb. Like you didn't explain this and now my whole plan is shot. Usually that doesn't matter that much unless it's gonna cost me the game or something, but it's still frustrating.

I've rarely had great experiences learning games for the first time.

One-on-one conversation really helped. Instructor could adapt to what she got. Her questions and answers.

Close relationship with teacher helps her feel confident asking questions. Some teachers are stuck with the notion they have a plan and can't sidetrack from it. Others will deviate to answer a question or have a more personal touch.

Rich's attitude was really helpful. He was excited to teach and didn't act like it was a burden. He expected her to have questions and wanted her to succeed but didn't expect her to get everything right away. It was clear she could ask any questions she had and they'd be answered. Father-in-law also taught game pleasantly once. Created a safe environment for people to make mistakes and have a fun time even if they didn't get everything right.

Allan teaching Capitalism the other day was confusing because he assumed everyone already knew how to play Scum (a similar game)

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When learning Killer Uno, focused on a few main rules and didn't worry about all the nitty gritty. Knew she'd get by with just what she knew and the rest wouldn't matter much. Plus she felt confident since it's a speed game and she's good at those.

Feels more confident with games that require physical reactions (like speed or ERS), or conversational word games (like Catchphrase, Jackbox games, or Taboo)

Hates being judged by teammates for making mistakes on her first time playing a game. Feeling like she made people lose by not doing what they needed at the right time. Discourages you from wanting to learn or play with people in the future. She's prone to feel guilty more than most people, so even though they weren't really mad at her she felt like it was a huge error and they blamed her for how the game turned out.

When she teaches games, she always asks if everyone's good to go at the end of each section. Rarely feels like other people have asked her that when she's learning. It was just boom boom boom now you get it lets play.

When she's left behind in teaching, she just zones out. Maria likes to read the instructions to understand, but that wouldn't work well on its own for Penny unless she was also the one teaching afterwards.

If she doesn't see how things are used, it doesn't make sense what they are or why they exist. Like with Wingspan's play mat which was really helpful because she could see where everything went.

If searching for instruction online, would search "[game name] game how to" or something like that.

### **A3.4.3 Interview with Rich Jordan, August 2019**

Why do you play games?

I think it started as a family value/social value. Earliest memories of actual games (not Sorry or Uno) are with my first girlfriend in highschool's family. Then after mission Aimee's family played board games as a family. Brought people together outside of video games.

As a child, played sorry, monopoly, but not often.

Social aspect. I like to talk to people but not just sit and have a long conversation. Like to be doing something (driving in a car, playing a board game, etc.)

Competitive itch

Strategic or intellectual

Why do you buy new games? How do you make that decision?

(Walk me through the timeline of your most recent purchase)

Not sure I can pinpoint exactly why.



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Like with video games as a kid. Excited for next year's release of the next version or iteration. That's something I've always looked forward to.

New version is something exciting and fun. That's something with all people and all hobbies. The newest one is always exciting.

Something about figuring out the best way to play a new game. I do tons of research before actually buying a game, and do research and talk to people a lot about why they won or why they didn't to try and find the best strategy. That's something I get out of it, but not something I look for.

Loyalty to brands isn't a big deal until recently. Recently started buying on Kickstarter so mostly you'll only buy from companies that have put out things successfully. Because kickstarter is a big risk.

Balancing factors. Some companies put out great products but their games are really expensive so I hold out.

Publishers don't necessarily control game quality, but they do impact quality of components, stuff in the box.

I haven't had time to follow developers, but there are a couple I follow because I've learned I like their stuff.

Some companies I avoid because I know they've failed Kickstarter campaigns. Some companies I trust because everything they've published is well-reviewed.

Bought 5 tribes recently. It was on our to-buy list for a long time but we set it aside because other games were higher. Comes from days of wonder so we weren't worried about component quality or anything like that. But they tend to be more expensive games so we weren't sure. On multiple people's top game lists. First I look at mechanics, whether it's a type of game I'd like. It had mancala-type mechanics which had a bit of nostalgia. It's been out for 5 years so there's lots of reviews. I had a good enough sample size to know it's gonna be a good game. Deciding to spend that money when we could buy 2 smaller games for the same price. I'll look up company and component quality, whether it's holding up over time. Whether I like the mechanics, theme, replayability. Compare to games I don't like. If it's like settlers of catan I won't get it. As I've gotten into board games I've looked for heavier and heavier games.

Why do you learn a new game? What do you hope to gain from that experience?

I like learning and don't have a problem with length. That comes down to the group. People who really like games don't have a problem with length of game. I have my favorites and have cycled out games I don't like. I didn't know I didn't like them until I played other games.

It's like music. There are people who only play poker and some people only play 24 hr RPGs. Such a wide spectrum and I have that personality. In your 30s you tend to stop looking for new music but I keep exploring new music.

Why do you introduce a game to friends? When do you stick to a game they already know?

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I hope they have a good time.

I introduce new games to people because I want to play them. It's a little selfish. But I'm careful about that decision based on whether they'll have a good time and want to come back. Some games I'd love to get but I know they're not playable with the people I play with now.

What is your experience typically like when you teach a new game?

Even if I teach poorly the thing I look to most is that someone has a good experience. If they don't have a good experience they'll never come back to it. Sometimes I'll intentionally hold back so people have a good time. Every game I introduce to new people I'm careful about whether they're ready or if I can help them have a good experience. If I have pull with them maybe I can get them to experiment and try something they normally wouldn't. I'll try to teach the game as it was designed, with theme and context. Teach basic mechanics. But things like strategies I'll usually try to leave for later (unless they're having a really hard time).

"Oh let's just play a round and I'll figure it out" doesn't work with a lot of more modern complex games. Sometimes it's half an hour of teaching before you play. My mom was lost when we tried to just start.

It's definitely worth taking half an hour to learn a great game but you have gateway games to introduce people to that style of gaming. Something that only takes 10 or 15 minutes to learn. Once people know they like those games you can introduce them to something bigger and more complex and they'll trust it.

#### **A3.4.4 Interview with Felicia Graham, August 2019**

Why do you play games?

Because it's an excuse to get together with friends

Sometimes if you want to see a friend or make a new friend you're not used to just saying come over we're gonna do nothing. If you say you're having a game night then no matter whether the games happen or not you've got people. Good ice breaker.

With someone you don't know as well, when the conversations lulls there's still something going on between you. You're doing something the whole time you're together. So it helps build friendships.

Negatives: Sometimes games bring out my extra-competitive side which might be unattractive. Makes me less friendly. New people may not understand that I'll be friendly again as soon as the game is over. I'm still enjoying the experience because it's competition but it's not as great socially. Or sometimes thinking games might not work well when I'm tired because I'm done thinking for the day. Then I'll want to play something relaxing like a card game.

Also I like to win things. Depends on the type of game. Some games are just relaxing and kill time but I usually prefer games that make you think.

Why do you learn a new game? What do you hope to gain from that experience?

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I learn a new game probably every 4-5 months. Usually once I learn a game I do like it, but it takes more energy to learn so usually I stick with what I know. Probably because I like complicated games.

If I know the game is gonna be complicated sometimes I'll dread learning it. But if someone is really excited that gets me excited too. Party games or card games are usually easy to catch on to so I won't mind learning those. Sometimes a bigger more complex game I dread learning a bit because I worry that I'll not learn it well enough and I'll have not much fun the first time I play it. I'll have no chance of winning. I hate feeling confused and stressed when I don't know what I'm doing. I won't have fun until I understand it. Usually the second time I play.

I'll invest in learning a complex game if I'm with people I enjoy spending time with, if I'm not tired, if its like other games I like.

Why do you introduce a game to friends? When do you stick to a game they already know?

If I'm going to teach a new game, I'll first make sure the people will enjoy it and stick it through. Otherwise it's pointless. It's a lot of energy. I like putting energy toward playing the game, but I'm not sure why learning new ones isn't my favorite. Partly that selfish competitive part of me. I'll be better at a game I know. But some sports I like to play even though I'm not good.

It depends on who's teaching or learning. If it's someone I'm trying to impress or someone I already have a good relationship with I'll learn or teach more. I want to share something I like with that person, or they want to share something with me. If it's someone I feel neutral or negative toward I'd rather play something I already know and limit the interaction. Teaching is a human interaction that requires a lot of energy.

What is your experience typically like when you learn a new game?

I teach games as a theater teacher pretty regularly. Interpersonal improv games, though, not board/card games. Usually I let other people teach board and card games but chime in if they miss a rule or something.

Teaching a game takes energy so if someone else wants to do it I'll let them. I enjoy playing a game and thinking about it and learning how to play it better, but the actual learning the function of the game is not my favorite part.

My thoughts on expansions:

I hate them if they add more rules and make the game more complicated. I like them if they introduce new things within the set rules. Keep it fresh, more variety, etc.

#### **A3.4.5 Interview with Ellen Briggs**

Why do you play games?

Great way of interacting with people in a non-stressful environment because you assume a different role

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Break from reality to interact with other people

Problem solving and creativity. Logic/problem solving/strategy but in a fun way. Prefer strategy mixed with luck. Makes brain work in a fun way. Challenging.

Socializing in a safe way. See people in different situations. Stressed, victorious, confused, etc. But also low-risk. Have a hard time opening up to people but playing games lets me connect in a way where I don't feel like anyone's gonna judge me.

No risk. Once the game is done it's done. Doesn't carry over to real life.

Sports are similar. But those are also games.

Talking is hard with large groups. Movies don't have the interaction or getting to know each other. Games are a good way to get to someone's personality, how they handle different things. Connect with them.

Whenever I want to get to know someone, if I haven't played games with them I don't feel connected with them.

Problem solving engages me into the game but not the social aspects. I can be engaged in any kind of game that involves people. Games that don't require thinking allow me to focus on the people, but if I want to focus on the game I'd pick something more challenging.

Balance between finding a game that's too boring to too complex. Engaging but not so stimulating that I can't focus on anything except the game. E.g. power grid has had too much strategy for me. Dominion is hard to enjoy because I don't know it well. I'd rather play a game that's less complex.

I play not for the win but for the social aspect. So strategy is important to have an engaging game and that's something I look for. That's a way of bringing out different skill sets you don't normally use.

I've played Dominion a couple times and every time I've played with people who are very good. I could not succeed. I'm okay losing. That's just how games work. But when you don't succeed because you don't know the strategy. First time I played 7 wonders so confused, didn't like it. Second time understood it and enjoyed it a lot more.

That happens with games that complex.

Frustration from playing with people who have played before. Experts. Felt like no chance of winning because confused.

Games like something I've played before are less hard to learn.

How a game is explained is very important. Explain basic strategy but I don't know how that influenced my experiences.

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I like reading the rules myself. It helps. I can go slowly. I always go slower when learning something for the first time. Also visual learner so seeing the physical rules helps. Also seeing the visuals. If I had to choose the visuals of someone explaining are better, but I'd prefer both.

Why do you learn a new game? What do you hope to gain from that experience?

I love learning new games. Yes. Only since game testing. Focusing on the mechanics of games. I love learning the mechanics and seeing how different types of games work. It's like a puzzle to figure out. I love especially learning the new games and figuring out together how it works. When everyone is learning together is better. When someone already knows its more like playing catch-up. Which is still fun if the game is good, but less fun. Trying to figure out the mechanics is interesting. Especially with a group.

I enjoy figuring out a game with a group who have never played it before. I also enjoy learning games in general, especially if the people are patient because the beginning is just going to be slow.

Sometimes you just want to play it again because the first time you were learning.

Games are my preferred way of socializing. Talking's good, but i'd always rather play a game. You can talk over a game. Closest friends I've made have been friends I've played a lot of games with. Not sure which caused which.

## **A3.5 Raw Prototype Test Notes**

For most of my prototype tests, I used audio recordings as notes. Insights from those tests have been included above, but the complete notes will not be transcribed and included here. However, some prototype tests did use written notes, so I am including those in their raw form.

### **A3.5.1 *Sushi Go!* Video Draft Test with Allman Brothers**

They're watching the videos separately.

Eric: sometimes you show a quick shot and it's so fast you can't really see it. Feel like you missed something. Give those a bit more time.

Link: I started to lose grasp when it got into details. Maybe review or reinforce. Echoey audio. Maybe use sound booth at library. Improve lighting. Brighten up closeup shots.

Eric: Seems like a simple game. I'm willing to try it out. May not understand 100% but I'm willing to try it out.

Link: 8-y-o son would probably get it with an adult on hand. Adult would get it. Wasabi is a bit confusing. Does it have to be top of the deck? Might have to watch that again. Maybe didn't shift mentally to the counting because I was focused on something else.

Link had some questions during play. Whether you look at the hand or just play the top card. Put nigiri next to wasabi instead of on it, but did put it on when scoring. Wondered about second place Maki rolls with just 2 players. Ignored chopsticks because confused about them. Doesn't

remember that being in the video. Does understand puddings but thought they went with the round. Thinks it would be helpful to show a timelapse of 3 rounds to demo puddings. Include scoring after each round in the timelapse. Show scores collecting at top of screen. Then it's clear that 3 rounds are over before we look at pudding. Add pause time between steps. Give the mind time to think before next topic. Like a b-roll moment. Wasabi and Maki rolls really stood out. Dumplings are simple. Put effort into thinking about pudding. Chopsticks should be at the end, but maybe given a bit more time. Maybe break things into sections with simpler cards grouped together then a little pause/transition before the more complex cards (wasabi and Maki rolls, then pudding are even more weird and could be their own category.)

Production notes: POV shots are great. But get a mic for narration shots. Reduce echo. Use jump cuts to emphasize things. Panning on cards I wasn't paying attention. The clip felt long. I wasn't paying attention to the cards because I was thinking about something that had been said. Some shots may be useable in the final product but if the lighting changes a lot consistency is more important.

### A3.5.2 *Sushi Go!* Video Draft Tests with Strangers Passing By

Claimed a table in a public campus area and put up a sign: "FREE SNACKS. Takes 5+ minutes. It's for my homework." Got 9 people to stop in about 45 minutes. They each watched the video (on my phone or theirs) and offered feedback. I asked most of them a question like "If we were going to start a game right now, would you feel ready?" "What questions do you still have about the game?" or "If this was your hand at the beginning of a game, what would you play and why?"

These are my handwritten notes about their responses, feedback, ideas, and questions.

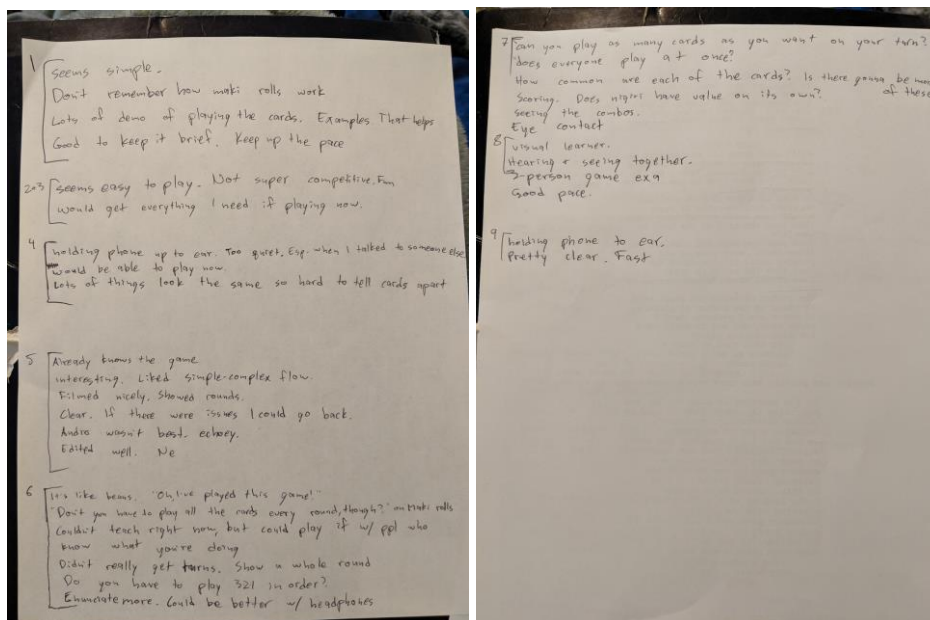


Figure 14. Notes from strangers' *Sushi Go!* video feedback.

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### A3.5.3 *Sushi Go!* 2-Player Video Draft Test with Penny Dalton

It wasn't clear that you don't have to play the card you drew. Clarify that you can't look at the dummy card stack, clarify that chopsticks work like normal. Don't use the word theoretically. Don't tell people how they should feel playing the game. That's not your job.

### A3.5.4 *Tortuga 1667* Script/Storyboard Test with Family

Some had played the day before (with audio notes), but 3 were learning for the first time.

Got questions about marooning on Tortuga (how would that happen if not in a mutiny?), attack and mutiny votes (especially that the captain doesn't participate in a mutiny, and how cards work). They chose to not learn the cards until during the game, which leads to confusion, but does get things started faster. We also removed about 5 cards to speed things up. I like that for first-timers. Rich was reading about strategies on BGG while we played, and getting excited about trying new things.

## A4 Design Precedent Analysis

### A4.1 Game Rulebooks

Almost all game boxes include a booklet or sheet of instructions in some form. These vary widely depending on the complexity and style of the game. For example, these two rulebooks for the games [Sushi Go!](#) and [Diplomacy](#) show two very different styles of game rulebooks. The rulebook for *Sushi Go!*, a casual 15-minute card game where players collect sushi dishes, has 1,827 words on 12 pocket-sized, brightly-colored pages. It includes illustrations of cartoon sushi telling bad jokes, and little blocks of text set apart from the background for examples of gameplay and scoring mechanics in action. The largest section is dedicated to the game's relatively complex scoring rules. *Diplomacy*, a much more complex 4-hour game where players vie for control of pre-WWI Europe, has 10,428 words and 32 diagrams on 24 letter-sized pages. It uses muted colors, professional fonts, and multilevel headings. The bulk of the rulebook is spent clarifying how the movement rules work, with numerous exceptions, interactions, and complications clarified through examples.



Figure 15. A representative page from the *Sushi Go!* rulebook.

In Diagram 17, the Russian Army coming from Prussia dislodges the German Army in Silesia. The support of the Silesian Army is thus cut and the German Army in Berlin stands off the Russian Fleet in the Baltic.

- A unit being dislodged by one province can still cut support in another province. Just as a unit being dislodged by one province can still cause a standoff in another, a unit still manages to cut support even if it's dislodged. Just make sure that the dislodgment isn't coming from the province where the unit is giving support. (Remember this rule: A dislodged unit, even with support, has no effect on the province that dislodged it.)

In Diagram 18, even though the German Army in Munich is dislodged by a Russian attack, it's still able to cut the support of the Russian Army in Silesia. This prevents the Russian Army in Prussia from entering Berlin.

Note: In complicated situations, it helps to first determine what support, if any, is cut. Once this is determined, it's easier to resolve orders.



Germany: A Ber-Holds; A Mun-Sil  
Russia: A Pru-Ber; A Sil S A Pru-Ber; A Boh-Mun;  
A Tyr S A Boh-Mun

#### Convoy Order

##### Convoying an Army Across One Water Province

A Fleet in a water province (not a coastal province) can convoy an Army from any coastal province adjacent to that water province to any other coastal province adjacent to that water province. To do this, the Army must be ordered to move to the intended province and the Fleet must be ordered to convoy it.

Note: A Fleet can't convoy a Fleet.

#### Writing Convoy Orders

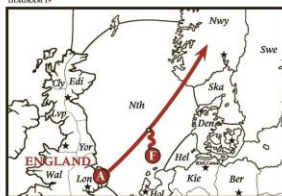
Just as "S" indicates support, the letter "C" is used to indicate convoy. Following is an example of a convoy order:

A Ank-Sev; F Bla C A Ank-Sev

A Fleet can't convoy more than one Army during the same turn. The order to the Fleet must contain both the location and the destination of the Army being convoyed. Just as with support orders, the convoy order must match the move order given by the Army being convoyed. For example, if the Army in Rumania is ordered to Ankara (A Rum-Ark) and the convoy order is written to take it to Ankara (F Bla C A Rum-Ank), then the convoy would fail and the Army would remain in Rumania.

Note: Fleets in any coastal province (including Constantinople, Denmark, and Kiel) can't convoy.

#### DIAGRAM 19



England: A Lon-Nwy; F Nih C A Lon-Nwy

In Diagram 19, the Fleet in the North Sea convoys the Army in London to Norway.

#### "Support" Can't be Convoied

Only Armies can be convoied. "Support" can't be transported from one Army via a convoy to another unit. For example, the orders shown below in bold are illegal and clearly fail.

England: A Dic-Bre; A Lon S A Pic-Bre  
F Eng C A Lon S A Dic-Bre

France: F Bre-Holds

#### Convoying an Army Across Several Water Provinces

If Fleets occupy adjacent water provinces, an Army can be convoied through all these water provinces on one turn, landing in a coastal province adjacent to the final Fleet in the chain.



Figure 16. A representative page from the *Diplomacy* rulebook.

From my review of several game rulebooks, I have found that they generally include the following sections:

- Game contents: A description of the various cards, pieces, and boards included in the game



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- Overview: An introduction to the game theme, win conditions, and basic structure.
  - Setup: precise instructions for preparing the game
  - Chronological details: A series of sections detailing the rules and procedures for each portion of the game
  - Conclusion: More details on how the game ends and the winner is declared
  - Other finishing sections: Other sections depending on the game, detailing alternate ways to play, notes on strategy, strange exceptions or rules that come up rarely, other notes, or helpful summary tables.

Most rulebooks include images and examples throughout, wherever they are needed to clarify or reiterate technical rules. These also add visual interest. Text may be formal or informal, and often uses bullet points, headings, and short sentences to improve readability.

My process for analyzing the rulebook for each game I teach is described in this document's Content Analysis section.

## A4.2 YouTube Videos

Videos teaching game rules are also available. A number of YouTube channels currently provide this service, and some modern game publishers are even creating their own videos (occasionally accessible with QR codes in rulebooks). Some notable examples are listed below:

Notable channels focused entirely or primarily on game instruction:

- [Teach the Table](#): This channel was started just a year ago and took a 6-month break in the middle, but still has nearly 3,000 subscribers. The videos are filmed from a perspective above the host's head with a view of the table set up. The host's hands are visible as he moves game pieces or points at things. Close-ups from a similar angle are also used occasionally to show details.
- [The Rules Girl](#): This channel specializes in efficient explanations. Each video is titled something like "How to play [game] in [number] minutes," Videos are purely animated, with boards, cards, illustrations, and text carefully choreographed flying on and off screen in time with narration, and no actual video footage included. Light music fitting the theme of each game plays behind the host's narration. After the game is briefly introduced, game objectives are explained first, followed by an efficient description of the gameplay, and finishing with setup instructions, recommendations for similar games, and an invitation to like and subscribe. Last year, she joined [The Dice Tower](#) (a larger and more popular channel) and for a while her videos were posted there, but recently she has started posting videos on her own channel again.
- [Watch It Played](#): Tutorials are the primary purpose of this channel, although it also includes a variety of other content. Each video begins with a brief catchy introduction and setup instructions. The camera sits across the table from the host, and is usually zoomed in on a specific portion of the game. This channel has almost 150,000 subscribers and is sponsored by boardgamegeek.com, so it has relatively high production value, with a nice table and backdrop, studio lighting, and occasional video animation.

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- [Skip the Rulebook](#): This channel has not posted in a year, but made impressive videos in its time. Two cameras sit directly across the table from two or more hosts. One camera shows the hosts and table, while the other gives a closer view of just the game area on the table. Hosts take turns reading portions of a script while they act out setup and gameplay. Occasionally, on-screen text or closeup images of a card are used to show important clarifying text.
  - [Games Explained](#): This channel has not had much success, despite decent quality videos. Each video has one host from the channel's team who appears on camera only at the beginning of the video (where they introduce the game) and at the end (where they just repeat the name of the channel and game in an awkward farewell). All the instructional content is narrated footage of gameplay. Choreographed videos show players' hands on the table playing the game and celebrating successes while the host describes the rules chronologically and with exceptional precision. The tone of the narration is very technical, slow, and scripted.

Notable channels that include instructional videos among other gaming-related content:

- [Gaming Rules!](#): Among other video content, the host of this channel regularly creates tutorial videos, often on commission from game creators. The videos mix wide-angle footage of the host and table with lightly animated close-ups showing game pieces are moved by hand or fade in and out. The host's narration is highly scripted and technical, sounding much like the text of a rulebook (read: boring). Each video has a series of segments introduced with on-screen text. For example, the tutorial video for Luna has segments for Setup, game overview, actions, scoring a round, moving to the next round, and final scoring. This order almost exactly mimics the order used in the game's official rulebook.
- [Shut up and Sit down](#): This channel has not uploaded any new "how to play" videos in at least a year. The camera sits across the table from the host, interview-style, and occasionally a zoomed in clip is used to show details.

Notable channels with playlists of playthrough videos that include instruction:

- [Geek and Sundry](#), [Wil Wheaton's Tabletop](#): Each video features TV star and geek icon Wil Wheaton playing through a game or two along with a group of friends (who are often other famous people). Before the gameplay starts, there is always a catchy introduction and brief overview of game rules. Fine details in the rules are explained as they come up in gameplay, either verbally to the group or with popup text.
- [BoardGameGeek](#), [GameNight!](#): A consistent group plays various games. Before they play each game, the host teaches that game to the rest of the group while they listen attentively. Then those instructions are reviewed as they come up in gameplay. Each video's description includes helpful links to the timestamps in the video where gameplay begins and where the post-game review discussion begins.
- [Polygon](#), [Overboard: Let's Play Board Games](#): Playthrough videos with brief introductory instruction. The instruction uses narration coupled with examples from the playthrough footage, customized footage of game pieces or actions, and occasional

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graphics. Fine details are explained (verbally to the group or with on-screen text for the audience) as they become relevant during gameplay.

Notable official tutorial videos produced by game companies:

- [Fantasy Flight Games](#): The official tutorials on this game company's channel have the highest production value of any videos on this list. Each video is entirely 3D animated with video effects and styling to match the game. The narration is professionally voice acted, and backed by dramatic background music. As for the instructional methods, this channel leans heavily on example. After a brief introduction to the theme and objectives, a portion of a game is described in detail, including descriptions of each player's choices and their consequences. Each action is animated on-screen as it is described, and more detail about various options, processes, and outcomes is provided as it becomes relevant in the narrative of the round.
- [Matthew Inman](#): Inman has published a few popular silly party games. Along with other promotional and random channel content, his channel posts official how-to-play videos for his games. The videos are completely 2D animated with a cartoon visual style that matches the graphics used in these games. Narration is conversational, dramatic, and humorous.

## A4.3 Insights from Precedents

There is a decent market of gamers looking for this type of instructional content. Most of the channels I found had over 10,000 subscribers, and some of the more popular videos have tens or hundreds of thousands of views (One video even had 2.3 million views, although this was a clear outlier).

However, successfully teaching games on YouTube is a complex undertaking, requiring much more than just a good script. Everything must start with sound instructional strategies, so I explore those thoroughly here. Then, I explore the other factors which impact the quality and popularity of videos I have reviewed.

### A4.3.1 Instructional strategies

The channels and rulebooks I reviewed had varying instructional quality. This seemed to be due in large part to the fact that many were balancing instruction with other goals. Most rulebooks serve a dual purpose as instructional guides and reference encyclopedias. Many of the YouTube channels I reviewed combine instruction with reviews, sales pitches, and playthroughs. This means many instructors are balancing goals that sometimes conflict. By focusing on pure instruction, I avoid that pitfall.

Other factors influencing instructional quality are based on the specific instructional strategies different instructors employ. This includes a vast number of instructional decisions that need to be made, but some of the primary ones I've noticed impacting the work of my forebears revolve around instructional order, examples, and simplification.

### A4.3.1.1 Instructional order

I have seen two common patterns of instruction happening in these rulebooks and videos: Some videos and rulebooks take the viewer through a game start-to-finish (chronological order), while others describe the game top-to-bottom (from abstract simplicity to fine details). Few cases are at the extreme ends of this spectrum, but there is almost always a strong leaning one way or the other.

The chronological approach is almost universally used in game rulebooks. Many videos follow suit. They begin with an introduction to the pieces, followed by setup instructions, then the order of actions on each player's turn or in each round. Then they conclude with how the game ends and the winner is declared. Some pieces of context, such as thematic information and the basic win condition, are often included early (out of chronological order). Fine details that do not impact every game are typically included in text boxes or blurbs near their place in the chronology. This works well for rulebooks because, along with their instructional role, they are serving as reference books for rule checks during play. It generally does not work well for instructional videos. Early options and actions make little sense without a clear understanding of the goals players are trying to accomplish and a basic understanding of how those actions might lead to success. This makes that information less memorable: it has to be either forgotten or held in working memory until its use finally makes sense minutes after its introduction. Learning setup first is also boring.



Figure 17. This video teaching *Luna* uses a series of chronological sections and introduces each section with 4 seconds of on-screen text. <https://www.youtube.com/watch?v=6jWgVFIII Fs>

I strongly prefer the top-to-bottom approach. In this strategy, games are taught at successive levels of detail. First, the player roles and objectives are explained in one or two sentences. Then, slightly more detail is provided to explain how those goals are achieved (e.g. “You can score points in 6 different ways, so you’ll have to make strategic choices to specialize in one or two areas or keep your options open. Those 6 ways to score are . . . ,” or “The game is played in 2 very different phases. In the first half of the game, . . . then in the second half . . . , and that’s

how someone will win, so phase 1 is all about preparing to have the best position and items so you can win in phase 2”). More detail is added progressively, and, since that detail includes explaining the order of events, this strategy eventually shifts to a chronological explanation of the game in full detail, filling any gaps left by the previous abstract explanations. I prefer this approach because it scaffolds the game smoothly and deliberately. Nothing is taught before it is ready to make sense.

#### A4.3.1.2 Examples

The extent to which examples should be used is another important consideration, closely connected to the issue of length. Can learners know a rule if they never see it applied? Do numerous examples make instruction too long to endure? Should players learn every possible scenario and exception, or is a foundation enough for them to start playing?

A few videos take example to the extreme and teach the game by describing a detailed narrative. As each player makes choices and the game unfolds, different rules come into play and are explained. Other videos stay close to this end of the spectrum by briefly teaching the game’s basics, then covering all the fine details as they come up in a lengthy video of a group playing the game. This approach creates engaging videos with a memorable and dramatic story. It is perhaps the best approach to the chronological teaching order described above, but it still suffers from the limitations of that instructional order, and those who learn primarily from examples may feel unsure of their ability to apply general rules to other cases. These videos also tend to be some of the longest videos available.



Figure 18. This tutorial for *A Game of Thrones: The Board Game* uses a single example game (3D animated with professionally voice-acted narration) to demonstrate all rules. <https://www.youtube.com/watch?v=X0XRVTacNxI>

The other end of the spectrum (pure explanation with no visual demonstration or examples of gameplay) is never used and for good reason. First, the nature of video is such that visual demonstrations accompanying verbal explanations are a basic assumption. Second, it would be confusing to the point of uselessness to teach any practical skill or active process without

examples. Some videos which strictly value efficiency get close, though. Minimizing the number and length of instructional examples is how they get their videos so short, but I think that extreme approach ends up hurting the quality of instruction too much. Unless a game is actually so simple its rules can be taught in an uninterrupted 2 minutes, it should be punctuated with helpful examples. Even simple games make more sense with more examples provided.

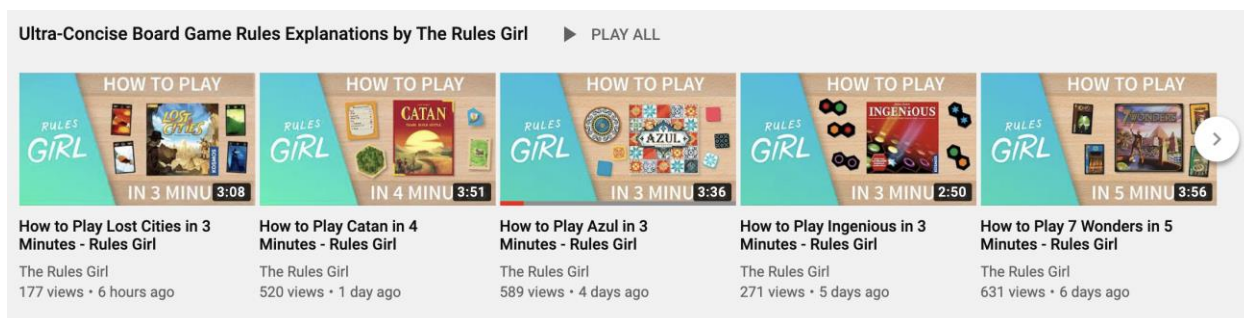


Figure 19. The Rules Girl specializes in extremely short tutorial videos. Perhaps too short.

Most instructors settle somewhere in the middle. Mine follow that reasonable trend. I explain rules and choices verbally (and with occasional on-screen text or visual aids), while visibly demonstrating what I am talking about (moving pieces around, playing cards, etc.). When teaching extra-complicated topics, I use narrative examples in second or first person. I also take the time to cover examples as review at the end of long video segments, or when introducing game jargon that needs to be defined in context. When a large number of possibilities exist (as when a game has many unique cards or unique player interactions), I review a few examples to cover all the general rules involved, or all the general categories of possibilities, then trust the players to read and follow more specific instructions on cards as they come into play. I occasionally need to recruit team members to help me demonstrate processes that involve multiple players at once.

#### A4.3.1.3 Simplification

Occasionally, rulebooks and videos point out small or large changes that can be made to simplify the game for first-timers. This follows the principle of tactical game-forms in the sport training literature. Simplified games allow first-timers to start their fun sooner, with fewer factors to juggle when making complex strategic decisions. They can also help even the playing field when a mix of experienced and inexperienced players play together. When such simplifications are provided by the game's creators, I wholeheartedly recommend them.

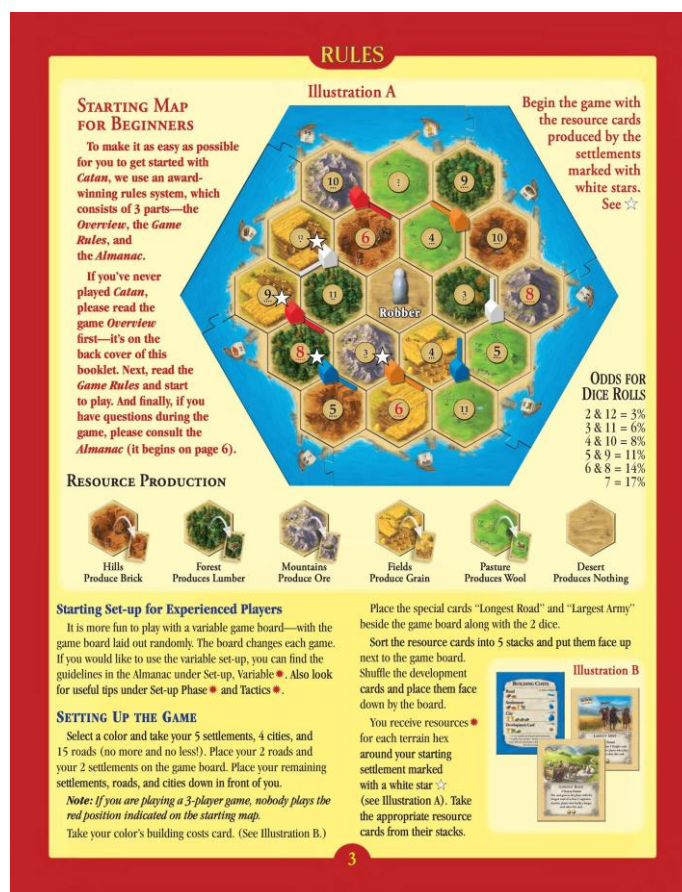


Figure 20. This page from the *Settlers of Catan* rulebook describes a simplified setup for beginning players.

I may also add my own recommendations if I notice certain rules causing new players too much trouble. In the distant future, I may take this tactic further by designing and teaching simplified versions of games that can be picked up quickly, to teach the game's basic structure and rules before moving on to the full version. I won't make that type of instruction now, though, because there does not appear to be a market of users looking for it.

#### A4.3.2 Other video considerations

High quality instruction will have no impact if viewers can't find it or won't view it. Making successful videos on YouTube requires much more than just good instruction. It starts with good video and audio quality and includes a number of other factors within each individual video and in the channel as a whole.

##### A4.3.2.1 Camera angles and video type

I saw three general types of footage in these videos: wide angles that include the table, host, and background; close-ups of the game pieces or actions being described; and animated or highly edited footage with little to no realistic detail included. These all have strengths and weaknesses.

Wide angles including the host and entire table mimic the familiar setup of a friend teaching a new game to their group. They allow the audience to see a human face explaining the game, but

they do not take advantage of the strengths of video to emphasize specific points. It may be difficult or impossible for viewers to see the small movements of game pieces or read card text, particularly on small devices. Clutter and complexity in these views can also be distracting.



Figure 21. This video teaching *The Taverns of Tiefenthal* includes these wide shots of the host with the entire game set up on the table in front of him. <https://www.youtube.com/watch?v=kzK9pL1ehiA>

Close views focus on only the area directly related to what is being said. They allow the viewer to see fine details without distraction, but may lack context. They are tremendously useful for reducing distractions and ensuring content is visible on any screen, but should probably be preceded by a bigger picture so the learner is oriented.



Figure 22. A close-up shot from the same *The Taverns of Tiefenthal* video.



The even more extreme application of that no-distractions approach is animation. This can be either drawn animation or pictures and scans of real game elements being animated around on a plain background (full 3D animations of games also exist but are well beyond my skills so not really worth considering. Plus a 3D animated video can have all sorts of shots included in it, with or without context). These tactics allow for a completely clear focus with no distractions and can appear very professional when made well. But they sacrifice context and realism to do so. They also require much more intensive editing skills and time investment to produce well, especially when motion is required (such as moving pieces or highlighting an important point). And in the end, the disconnect from reality can be just as distracting as the extra detail would have been. Frilly details added to make animations more interesting or professional-looking are pretty much always an unnecessary distraction. Animations introducing each section of the instruction are also distracting, especially when they last too long.

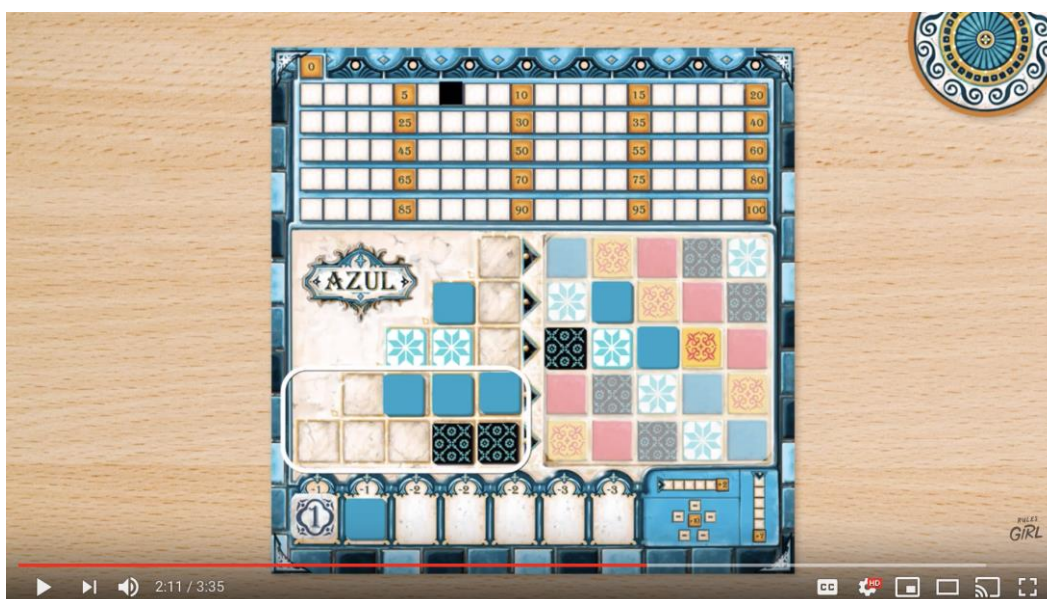


Figure 23. This video teaching Azul uses animated images instead of camera footage.

<https://www.youtube.com/watch?v=byHjDCxF5WU>

I primarily use close angles including relevant game elements and hands to point or move things as necessary. Wider angles of the whole table, or of the whole table and myself, are used for introducing the game, and when demonstrating actions that involve a number of areas or pieces. These are also included regularly throughout the video to ensure the context of each focused shot is clear, and the video doesn't feel impersonal. Animated images are occasionally useful when the real visuals would just be too complex for good learning to take place. Care is taken to ensure that players always know where the snippets they see fit in the bigger picture, though. I also use video effects occasionally to highlight an area, dim out distractions, or add necessary on-screen text.

#### A4.3.2.2 Production quality

High quality video is generally expected these days, and low-quality video, no matter how instructionally sound it may be, will not be watched. Making a high quality video starts with

good camera and microphone equipment, then goes a lot further. Along with clear audio and high resolution, you need:

- **Lighting:** Everything should be lit brightly and naturally so the presenter and game look their best. Bright light improves contrast, emphasizing what is important. It also brings out the beauty of well-designed game pieces and illustrations. Soft, natural light makes people look good, and reduces harsh shadows, including the shadows of the instructors hands which cut across the game in some cheaply-produced videos.
- **Setting:** Games should be presented on a nice, undistracting surface (such as a dark wood table). The area behind the host should be simple and free from distracting clutter. Some channels put fun things in the background (a shelf of props related to the game, a greenscreen background mimicking the setting of the game, the channel's logo, the host's shelf full of other games). Other channels leave less fun things in the background (like the host's messy apartment). All these things distract from the video's instructional purpose.
- **Hosting:** In some ways the host or narrator in these videos *is* the instruction. They have to be excellent. Clear and easy to understand, fun to listen to, and fun to watch. They should sound well-prepared and expert, but simultaneously natural and unscripted. They should look and sound excited about the game, but not weird or distracting. They should have some personality but not overshadow the game. And they should look nice, with clean professional clothing, hair, and face.

#### A4.3.2.3 YouTube success

Establishing a successful YouTube channel extends beyond the instructional content of any individual video. You also need a brand identity, intros and outros, audience engagement, search engine optimization and monetization.

Brand identity starts with a good channel name and logo. Many game channels use pun-based names. Many of their logos are hideously complex and look like they were made in the 80s by illustrators instead of graphic designers.



Figure 24. The YouTube Channel profile pictures for Games Explained, Gaming Rules!, The Rules Girl, Shut Up & Sit Down, Teach the Table, and Watch it Played.

Videos should have matching thumbnails that incorporate the logo, an image of the game, and some enticing visuals encouraging viewers to watch. Videos must also be consistently named so they are easy to find in searches.



Figure 25. A selection of video thumbnails

Starting and ending each video consistently also helps set a brand identity. Many channels take a brief break near the beginning of each instructional video to play an intro. I find this distracting and unnecessary (everyone knows where they found this video). At the end of each video, hosts encourage viewers to like and subscribe. I stick with that tried-and-true industry tactic, and also use that time as part of my assessment/evaluation plan by asking viewers to give the channel feedback. Channel announcements and thanks to sponsors are sometimes necessary. When possible, I put announcements in separate videos apart from instruction. Thanks to sponsors and any other non-instructional content belongs at the end of the video so it does not delay the beginning of instruction.

Few of the videos I watched prioritized audience engagement. My conversations with successful YouTubers in my personal network, however, have made it clear that interaction with your audience is one of the most important ways YouTubers can build brand loyalty and trust, get feedback, and grow. Asking questions at the end of a video or in a pinned comment can guide a productive conversation in the comments. Responding to viewers' comments shows you care. Likes, subscriptions, shares, and other interactions from the audience are also critical in YouTube's recommendation algorithms, which help new channels reach a wider audience.

Titles, keywords, tags, transcripts, and other features contribute to a video's rank in search results. Optimizing for YouTube and Google's search algorithms is an important part of making sure that this instruction can reach those who need it and serve its purpose. The table below shows tags currently being used by some of the channels in this space:

Tags being used by current channels:

Teach the Table	"board games", games, rules, tabletop, bgg, "learn to play", "how to play", boardgamegeek, "teach the table"
Watch it Played	"Watch It Played", "Board Games", "Rodney Smith", "Card Games", "Let's Play", Tabletop, Tutorials, "How To Play", Miniatures, CCGs, boardgames
Skip the Rulebook	"skip the rulebook", boardgames, rules, rulebook, "how to play", "just play", "lets play"

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These three channels were the only three “pure tutorial” channels from the above list which actually use tags on their videos. I randomly checked two videos from each channel and found that they used identical tags on each. Based on this example (and recommendations from the article “[How to Optimize your YouTube Tags to Get More Views](#)”), I plan to use the following tags on each video:

- Tags about the channel: game point, gamepoint
- Tags about games: board games, card games, tabletop, games, play
- Tags about learning: tutorial, how to play, learn to play
- Tags specific to the game: the game’s name, the game’s genre or type, etc.

Making a channel sustainable requires some monetization. This is done with ads, sponsorships, and affiliate marketing. I have started this with minimal affiliate marketing (I share an amazon link in each video’s description. If viewers purchase the game or other amazon products after following that link I get a small cut of the profits). I will also pursue sponsorships/commissions in the future, and may also explore advertising once the channel becomes popular enough.

#### *A4.3.2.4 Video Length*

Video length has been identified as an important factor in YouTube viewership. Some secondary research on this subject was already included in the above learner/environment analysis. However, those secondary sources only reported on *engagement*, how long do viewers stay once they’ve started a video? I couldn’t find any sources—academic or professional—that explored the impact of video length on total view count. So I analyzed the lengths and view counts of every tutorial video posted on the major channels listed above. I expected video length would negatively correlate with view count, since potential viewers looking at a page of search results would prioritize shorter options. I did not find this hypothesis to be true.

Dr. Royce Kimmons scraped the necessary data for me: the duration and view count of every video labelled a tutorial posted by the channels Teach the Table, Skip the Rulebook, The Rules Girl, Watch it Played, Games Explained, and Shut Up & Sit Down. This totalled 548 videos. I looked at the title of each video and filtered out 16 videos that weren’t tutorials, leaving 532 for analysis. The results of that analysis are as follows:

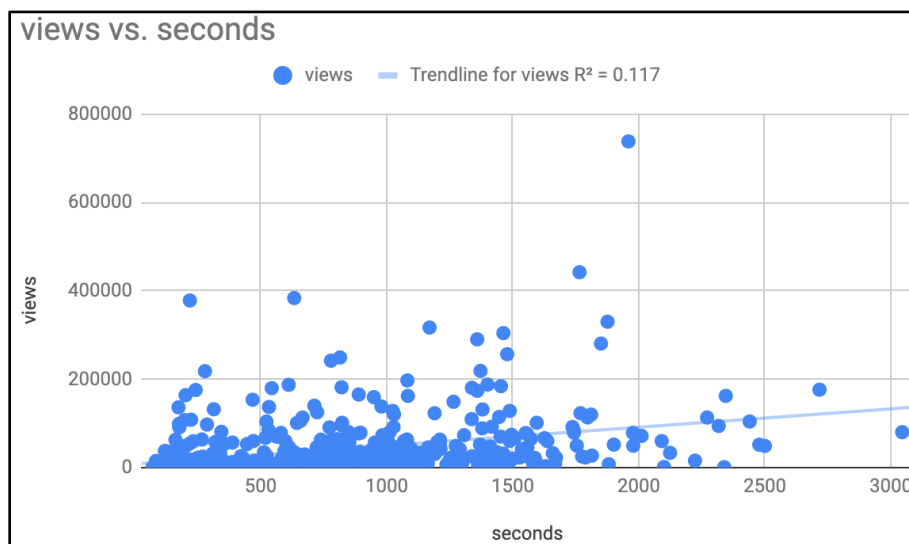


Figure 26. The lengths and views of all the videos.

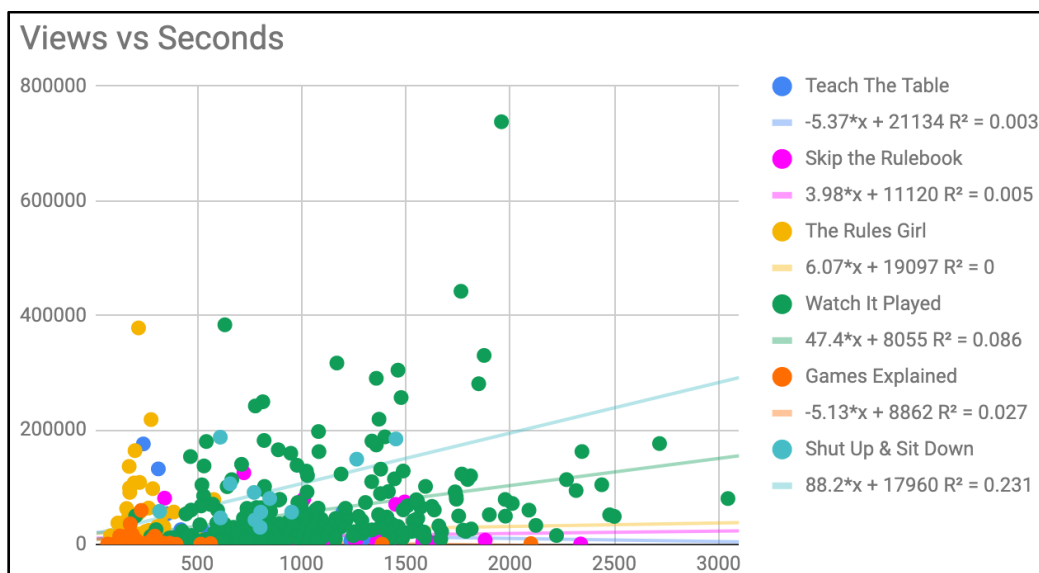


Figure 27. The same data, differentiated by channel.

These data clearly show that there is no significant relationship between video length and view count, at least in this market. Any marginal relationship that does exist is, surprisingly, slightly positive, with long videos receiving more views than short ones.

Based on this analysis, I give only minimal attention to video length. Creating videos as short as possible is not a top-level priority. Brevity is still a consideration for good instruction, and is likely to influence video engagement, so it is a consideration, but not a critical one.

## A5 Annotated Bibliography

Little academic research on teaching tabletop games exists, but there are many other areas of research which can be applied to this project. In this annotated bibliography, I first explore

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relevant background theory, especially cognitive theories of learning. Then, I present research on games education from the worlds of tabletop gaming, video games, and sports. Next, I review the literature on instructional video development. Finally, I present various tools, processes, and mindsets useful in the design and management of this project.

Since the required rule and procedure content for each game I teach is supplied by the game's rulebook (supplemented by online sources), it was not necessary to include content knowledge in this bibliography. My content analysis plan is detailed later in this document. Additionally, some useful information came from non-academic sources, such as blog posts. This information was included previously in the learner and environment analysis and is not included here.

## A5.1 Theory

Elearning research relies heavily on cognitive learning theory, especially the concept of cognitive load. The cognitive model of learning focuses on how learners interpret, store, and retrieve information. Learners first choose to attend to a stimulus, then process it using visual and auditory processing resources. As information is rehearsed or fit with existing mental maps, it moves from working memory to long-term memory. Later, it can be either retrieved or forgotten (Ibrahim, Callaway, & Bell, 2014). Cognitive load theory focuses on the details of working memory processing and aims to make that processing as efficient as possible. Any thing to be learned will require a certain amount of mental effort, the *intrinsic* cognitive load. Instructional strategies can create additional *germane* load, which is valuable extra effort the learner must expend. *Extraneous* cognitive load, extra effort required to manage confusion or distractions, should be limited as much as possible. Since learners have limited cognitive capacity, instruction should be carefully designed to avoid cognitive *overload* (Ibrahim et al., 2014; Kruger & Doherty, 2014). Some strategies to manage cognitive load include segmenting, signalling, multimodal presentation, and advance organizers (Ibrahim et al., 2014; Story, 1998).

Some sport learning approaches rely more on situated learning theories and legitimate peripheral participation. By engaging students in play, they encourage identification as players and tactical decision makers. Players gradually inculturate further into the game by practicing team tactics, rather than focusing on declarative knowledge of the sport's rules (Suzuki, 2016).

Note: Since the field of eLearning has historically relied on cognitive theory, I was able to find theoretical sources specifically aimed at producers of educational multimedia (Ibrahim et al., 2014; Kruger & Doherty, 2016). Some of the game education literature is also highly theoretical (Suzuki, 2016). So, although those sources could have fit in other sections of this bibliography, I have placed them here since I used them primarily for their theoretical components and not their specific practical recommendations.

A5.1.1 Ibrahim, M., Callaway, R., & Bell, D. (2014). Optimizing Instructional Video for Preservice Teachers in an Online Technology Integration Course. *American Journal of Distance Education*, 28(3), 160-169. Retrieved from <https://www.lib.byu.edu/cgi-bin/remoteauth.pl?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN>

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[=EJ1036912&site=ehost-live&scope=site  
http://dx.doi.org/10.1080/08923647.2014.924697](https://dx.doi.org/10.1080/08923647.2014.924697)

This article includes an excellent review of the Cognitive Theory of Multimedia Learning (CTML) and Cognitive Load Theory (CLT) as they relate to video instruction. According to these theories, instructional designers can improve learning by producing media that minimizes extraneous cognitive load (distractions, confusing presentation, etc.). Researchers tested these theories by testing learning outcomes before and after students watched one of three instructional videos with or without segmentation and signalling. Segmenting is a strategy to preserving intrinsic cognitive load since it allows users to process each portion of the learning before they move on to the next. Signalling is intended to reduce extraneous and increase germane cognitive load by focusing learner attention on the most relevant material during or after each segment. Results indicate that segmentation and signalling significantly improved student learning outcomes after controlling for prior knowledge, but there was no significant difference in students' perceptions of the video's difficulty.

- A5.1.2 Kruger, J., & Doherty, S. (2016). Measuring Cognitive Load in the Presence of Educational Video: Towards a Multimodal Methodology. *Australasian Journal of Educational Technology*, 32(6), 19-31. Retrieved from <https://www.lib.byu.edu/cgi-bin/remotearchive.pl?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1123345&site=ehost-live&scope=site>  
<https://ajet.org.au/index.php/AJET/article/view/3084>

This article reviews cognitive load theory very thoroughly as the authors develop an extremely precise measure for educational video research. Video has high potential for cognitive overload since it includes simultaneous visual and auditory information. Subtitles are a particularly tricky problem since they are necessary for some viewers but add harmful redundancy for others. Their measure is too complex (it includes continuous eye tracking and EEG measurements) to use in my assessments, but their review of theory is useful.

- A5.1.3 Story, C. M. (1998). What Instructional Designers Need to Know about Advance Organizers. *International Journal of Instructional Media*, 25(3), 253-61.

This article reviews research on the use of advance organizers in education. Advance organizers are abstract, high-level information presented at the beginning of a lesson to help students connect their prior knowledge to the current lesson, prepare a framework in which to understand the information they are about to receive, and focus on what matters in the lesson. These may take many forms (graphics, text, video, etc.). The theory originally argued that advance organizers should be more abstract and general than the specific lesson material, and should not be mere overviews of what was to be taught, but some research has discarded that recommendation, or even found evidence against it.

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A5.1.4 Suzuki, N. (2016). Game Curriculum Based on Legitimate Peripheral Participation. Paper Presented at the *Die 6. Internationale Teaching Games for Understanding Konferenz*, 126.

Legitimate Peripheral Participation is a model of learning that focuses on the experiences of newcomers as they gradually join a community of practice. They begin with minimal legitimacy (they are respected and given real tasks to complete) and gradually become more integral to the community, moving from the periphery inward until they participate completely and identify with the community. Sport curriculum based on this theory is similar to the Teaching Games for Understanding (TGfU) approach. It relies on students participating in games and practicing tactical play, rather than focusing on knowledge of the official sport.

## A5.2 Approaches to Game Teaching

Little research on tabletop game instruction exists, but I did find one article about designing game rulebooks with instructional design principles (Yucel, 2014), and some other resources about instructional strategies used in video games (Alkan & Cagiltay, 2007; Desurvire & Wilberg, 2010) and sports (Gutierrez, 2016; Méndez Giménez, Valero Valenzuela, & Casey, 2010; Wright, McNeill, Fry, & Wang, 2005). The quality of game instruction can dramatically impact gameplay experience and likelihood to play again, so it is critical that games be taught well, and that players have fun as early and often as possible (Desurvire & Wilberg, 2010; Méndez Giménez et al., 2010). Specific recommendations from each field of game education research are presented in the following paragraphs.

Game rulebooks are used for learning and for rule arbitration during play, so they must be clear, precise, easy to read, and easy to navigate. Chunking large sets of information into a few pieces helps, as do visual aids and examples (Yucel, 2014).

Video games are typically taught using tutorial levels. The initial levels are simple, and as the game gets progressively more difficult users gradually improve their skills through trial and error as the game becomes more difficult and they begin to apply their skills. Game documentation, hints, and experienced friends can also be used as learning resources. Game learning experiences should be graspable but still challenging enough to stimulate interest (Alkan & Cagiltay, 2007; Desurvire & Wilberg, 2010).

*Teaching Games for Understanding* (TGfU) is a popular and effective approach used in physical education and sports coaching. Other game-centered approaches are practically and theoretically similar to TGfU (Gutierrez, 2016). Instead of building from parts (physical skills) to the whole (game strategy and tactics), TGfU begins with the whole and emphasizes discussion and practice of tactical decision making. So students play the game (or at least a simplified game-form that tactically resembles the complete game) early and often (Wright et al., 2005). This approach leads to improvements in game-play and decision making abilities, but its biggest benefits are in affective, emotional, and social variables. The players have more fun and feel more capable when instruction is player- and play-focused (Méndez Giménez et al., 2010).



- A5.2.1 Alkan, S., & Cagiltay, K. (2007). Studying Computer Game Learning Experience Through Eye Tracking. *British Journal of Educational Technology*, 38(3), 538-542.

This research used eye-tracking and interviews to understand the experiences of novice players learning to play a puzzle video game. The students learned primarily through trial-and-error, and did not take advantage of in-game instructional documentation. In interviews, however, learners said they would use different learning methods with different games, including asking friends for information. While solving the puzzles, students fixated their view on the contraption they were trying to build, and ignored the menu and other irrelevant areas of the screen.

- A5.2.2 Desurvire, H., & Wiberg, C. (2010). User Experience Design for Inexperienced Gamers: GAP – Game Approachability Principles. In R. Bernhaupt (Ed.), *Evaluating User Experience in Games: Concepts and Methods* (pp. 131-147). London: Springer London. doi:10.1007/978-1-84882-963-3\_8 Retrieved from [https://doi.org/10.1007/978-1-84882-963-3\\_8](https://doi.org/10.1007/978-1-84882-963-3_8)

Game Approachability Principles (GAP) is a framework of heuristics and research methods video game designers can use to improve the design of their tutorial levels. The goal is to produce tutorial experiences clear enough to be understood by novice gamers, but not so simple that they bore players or give away too much. The player should be left feeling motivated to continue playing and learn more. The following heuristics from the GAP checklist may be relevant to my work: Opportunities for practice, varied modelling, learner self-efficacy sufficient after training, scaffolds develop from general to more specific as needed, clear game goals. These heuristics can be used in game design, or as categories when analyzing user testing feedback.

- A5.2.3 Gutierrez, D. (2016). Game-Centered Approaches: Different Perspectives, Same Goals-Working Together for Learning. *Research Quarterly for Exercise and Sport*, 87(sup1), S24. doi:10.1080/02701367.2016.1200422

TGfU was introduced in the 1980s, and as it has evolved a number of similar approaches have also been introduced, emphasizing slightly different theoretical assumptions, or methods. The community working on these various Game-Centered Approaches (GCAs) should work collaboratively to define the core, essential features of GCAs, and explore the strengths and contributions of each specific method to provide instructors a complete set of tools for using these approaches.

- A5.2.4 Méndez Giménez, A., Valero Valenzuela, A., & Casey, A. (2010). What are we being Told about How to Teach Games? A Three-Dimensional Analysis of Comparative Research into Different Instructional Studies in Physical Education and School Sports. *Revista Internacional De Ciencias Del Deporte*, 18(6), 37-56. Retrieved from <http://journals.openedition.org/nuevomundo/1346>

This meta-analysis summarizes academic research on instructional methods for teaching high school sports sports in 3 dimensions. 1. Whole-task (rather than part-task or analytical) approaches significantly improved player self-efficacy, and may have also

improved task performance, but that result is inconclusive. 2. Direct instruction (instructor-focused, rigid presentation presentation) was much less effective than indirect instruction (student-directed, active methods) or a combination of both. Indirect or combined methods may improve decision-making in play, and unequivocally improve affective, motivational, and social variables like self-concept and enjoyment. 3. Tactics-based instruction (approaches wherein students play the game or a simplified form of it first, then discuss and practice tactics before playing again) makes no significant difference in game skills compared to skill-based instruction, but does improve motivation and enjoyment.

A5.2.5 Wright, S., McNeill, M., Fry, J., & Wang, J. (2005). Teaching Teachers to Play and Teach Games. *Physical Education and Sport Pedagogy*, 10(1), 61-82.  
doi:10.1080/1740898042000334917

The researchers taught sports skills using technical and tactical approaches in physical education teacher education classes, then assessed the learners' game skills and teaching self-efficacy. Students in both groups improved in teaching self-efficacy (although the tactically-taught group improved more). Only the tactically-taught group had significant improvements in gameplay abilities. The authors argue the importance of tactics-based (A.K.A. TGfU, or Whole-part-whole) strategies, particularly questioning, to engage learners in play and improve their 'game sense,' particularly when the learners will go on to teach others and are likely to teach the way they were taught.

A5.2.6 Yucel, I. (2014). Rules for Writing Rules: How Instructional Design Impacts Good Game Design. Retrieved from <http://analoggamestudies.org/2014/10/the-rules-for-writing-rules-how-instructional-design-impacts-good-game-design/>

This article targets game rulebook writers, but many of its recommendations also apply to my work. After demonstrating the problems that can arise when games rules are vague or poorly explained, the author offers 3 instructional design recommendations to alleviate those concerns. 1: Working memory can be freed up through *chunking*, such as when a long turn process is broken into a few general phases, or when setup instructions are separated from play instructions. 2: *Figures and examples* can be used to scaffold complex rules and aid those with different learning preferences. Figures are especially useful when they utilize the principles of *comparison*, *framing*, *highlighting*, and *iconic representation* wisely. 3. Game choices and processes can be clarified with *flowcharts*.

## A5.3 Creating Educational Videos and ELearning

Creating educational media is sometimes more science than art, although it will always have artistic elements. Along with the recommendations mentioned in the above section, researchers have identified several other strategies which can help focus learner attention and eliminate extraneous cognitive load. These can be summarized as follows:

- Visual and auditory information should be complementary, not competitive or redundant.
- Distracting details (like background music, irrelevant content in images, jokes, or "cool" graphics) or inconsistencies should be eliminated.

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- Tone should be as easy as possible for learners to follow (informal, often second-person).
  - Unambiguous cues (like arrows, highlights, simple text labels, or the complete absence of any possible distractions) should focus learner attention on the important information.
  - Diagrams, illustrations, and other visual aids can clarify complex concepts by representing only the essential details.
  - Videos can also produce germane cognitive load by providing example demonstrations or practice problems.  
(Clark & Mayer, 2003; Golas & Yao, 1993; Kizilcec, Bailenson, & Gomez, 2015).

Other recommendations from this research not focused on cognitive load include the following:

- Make high quality video (with good lighting, resolution, audio, movement, and corresponding visuals to every piece of narration).
- Plan, script, and storyboard well to ensure instruction is smoothly filmed and efficient, with fast-paced narration and natural pauses.
- Be engaging and interesting to watch.
- Establish credibility with correct content knowledge and confident, effective presentation.
- Provide transcripts for subtitling to increase accessibility and search engine optimization
- Be mindful of video length. Popular videos can be long, but shorter videos are more likely to be watched to completion.  
(Golas & Yao, 1993; Hanson, 2018, ten Hove & van der Meij, 2015).

#### A5.3.1 Clark, R. C., & Mayer, R. E. (2003). *E-Learning and the Science of Instruction*. San Francisco: Pfeiffer.

This book summarizes a great deal of elearning research (relying primarily on cognitive learning theory) to argue the following. Multimedia instruction is most effective when it deliberately connects spoken words with relevant graphics (such as demonstrations of procedures). Occasionally, minimal on-screen text is helpful (especially when learners must refer back to many pieces of information at once, or when no graphics are used), but should be placed contiguous with its corresponding graphics in time and space, and should not be redundant to narration. Added sounds, images, and words should be avoided as they distract and confuse learners. Narration should be relatively informal, and onscreen coaches can provide further humanity, but should not be distracting. Realistic practice opportunities are necessary for expertise. Step-by-step examples help learners make connections, especially for novice learners and especially when problem-solving processes are made visible.

#### A5.3.2 Golas, K. C., & Yao, K. (1993). *Storyboard Development for Interactive Multimedia Training*. Paper presented at the *15th Interservice/Industry Training Systems and Education Conference*, Orlando, 29 November-2 December 1993.

This article gives a number of recommendations for storyboarding interactive instructional media, and many of its points are also applicable to instructional video. Storyboards can include audio scripts, graphics, on-screen text, interactive elements, and animations. When created during the design phase of an ISD process, they serve as the

basis throughout development. Specific recommendations not already covered by other sources include: 1. Show the big picture before zooming in to details, with wide and close shots 2, Keep the subject well-lit, and preferably on a dark, plain background, 3. Use graphics or animation when realistic video would have an overwhelming amount of detail or when video resolution is a concern, 4. Have a corresponding visual for each piece of narration, 5. Make scripts easy to read with big font sizes and extra spacing, and include nonverbal cues and pauses in parentheses.

- A5.3.3 Hanson, J. (2018). Assessing the Educational Value of YouTube Videos for Beginning Instrumental Music. *Contributions to Music Education*, 43, 137-157. Retrieved from <https://www.lib.byu.edu/cgi-bin/remotearch.pl?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1183771&site=ehost-live&scope=sitehttp://www.omea-ohio.org/CME/>

Researchers assessed the quality of 100 youtube videos offering beginning instrumental music education. They found that the videos were of medium quality, but those produced by non-professionals were questionable. The most useful portion of their work for my project is the rubric they developed, based on previous similar video assessment research and well-researched principles of music education. One dimension, musicality, is irrelevant, but the other 7 are valuable with adaptation as criteria for judging the success of my work: Credibility (correct, professional, trustworthy presenter), Quality (Clarity of video and audio), Appropriateness (correct difficulty level for audience), Efficiency (no wasted time, clear planning), Engagement (enthusiasm, ability to maintain attention), Modeling (Frequency of demonstration rather than just talking), and Overall Value (Usefulness to learners).

- A5.3.4 Kizilcec, R. F., Bailenson, J. N., & Gomez, C. J. (2015). The Instructor's Face in Video Instruction: Evidence from Two Large-Scale Field Studies. *Journal of Educational Psychology*, 107(3), 724-739. Retrieved from <https://www.lib.byu.edu/cgi-bin/remotearch.pl?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1071516&site=ehost-live&scope=sitehttp://dx.doi.org/10.1037/edu0000013>

The researchers conducted two experiments to examine whether lecture videos in MOOCs should include the instructor's face (as a talking head in the bottom corner of the presentation slides). In the first experiment, participants could choose to watch lecture videos with or without the professor's face visible. Participants largely preferred to see the face, but some strongly preferred video without the face, or switched off between the two. In a second experiment, students were randomly assigned videos with the instructor's face constantly present, or with the face included strategically (based on insights from study 1 and theoretical recommendations). Strategic presentation of the face improved perceptions of social presence, but also increased cognitive load and attrition (especially for learners with a preference for verbal learning). The authors argue that strategic intermittent inclusion of the instructor's face, while theoretically sound, should not be used since the appearance and disappearance of the face actually makes it more distracting than if it were constantly present. However, these results are not entirely generalizable to my work since the nature of the videos is so different. I primarily take this as evidence that slideshow lecture video is a poor format choice, competing visual

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elements in video should not be superimposed on one another, and abstract focus cues based on absence of distractions are ineffective.

- A5.3.5 ten Hove, P., & van der Meij, H. (2015). Like it or Not. What Characterizes YouTube's More Popular Instructional Videos? *Technical Communication*, 62(1), 48-62. Retrieved from <https://www.narcis.nl/publication/RecordID/oai:ris.utwente.nl:publications%2F24f17635-7b3b-4732-a94c-52d4231b263a>

The researchers analyzed 250 instructional videos on YouTube to compare their popularity (measured in likes, dislikes, shares, and views) with certain characteristics. Popular videos differed significantly from average and unpopular videos in almost every characteristic. They tend to have higher resolution, more static images (particularly analytic images like diagrams), use short on-screen text more, provide more options for subtitling, more often use narration and music, have noisy audio less often, and have faster narrators (often above 185 words-per-minute) with more frequent natural pauses. Dynamic pictures (such as animations) had no significant relation to popularity, and neither did long on-screen text (although that was less common in popular videos). The average popular video was 6 minutes and 55 seconds long, but shorter videos had significantly higher watch time percentages where that data was available. This study was limited to videos teaching factual and conceptual knowledge, so the procedural knowledge important in games instruction may cause some small differences.

## A5.4 Other Design Approaches, Processes, and Tools

Designing solutions to learning problems begins with understanding those problems. Design thinking is a design method that relies on empathy with users and iterative development (Svihla, 2018). It is also essential to break down the knowledge to be taught. Process mapping accomplishes this by visualizing complex processes in flow charts and diagrams made up of many small steps (Marrelli, 2005). Video development relies upon storyboarding, a process of sketching scene concepts and camera shots in order to plan out a video before production (Simon, 2007).

Many complex development projects can be organized and managed using agile approaches, which embrace change as a positive reality, rely on collaborative relationships over strict plans, and emphasize delivering working products early and often. A number of specific methodologies have been developed to help teams work with these mindsets (Greene & Stellman, 2014).

- A5.4.1 Christensen, C. M., Hall, T., Dillon, K., & Duncan, D. S. (2016, Sep 1.). Know Your Customers' "Jobs to be Done": Is Innovation Inherently a Hit-or-Miss Endeavor? Not if you Understand Why Customers Make the Choices they Do. *Harvard Business Review*, 94, 54.

This article introduces the “jobs to be done” framework for business innovation. This framework argues that the research behind a new product should focus on identifying customer’s goals, instead of their characteristics. By thoroughly understanding the circumstances in which people are “hiring” existing solutions, the purposes those

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solutions fulfill, or the problems people are avoiding, you can effectively design a purposeful solution.

A5.4.2 Greene, J., & Stellman, A. (2014). *Learning Agile*. O-Reilly Media, Inc.

This textbook covers a variety of approaches to Agile project management. Agile is primarily a mindset that values collaboration, flexibility, and working products (rather than valuing documentation, predictability, tools, or contracts). A number of agile methodologies have been developed, which provide tools for working with the agile mindset. I rely heavily on Lean and Kanban methods in managing this project. Lean is a set of thinking tools to help teams see their whole processes and eliminate waste, such as pull systems, making decisions as late as possible, process tracking, and empowering team members. Kanban is similar, but more specific. It is a set of tools for seeing and improving work processes, primarily by tracking how work items flow through the system, and streamlining that flow with iterative change and work-in-progress limits (strict limitations on the number of work items allowed into a given group at once).

A5.4.3 Marrelli, A. F. (2005). The Performance Technologist's Toolbox: Process Mapping. *Performance Improvement*, 44(5), 40-44. doi:10.1002/pfi.4140440510

Although most of this article is focused on process mapping as a tool for process improvement, it also describes how process mapping may be used in instructional needs analysis. Process maps can take many forms from simple matrices to complex diagrams. The authors detail a step-by-step process for generating process maps through group input. The relevant steps for my work are as follows: 1. *Plan*. Define the process to be mapped, with specific boundaries. Who is included? What level and type of detail will the map include? How will the map be laid out? Will it be made using a particular software or physical medium? 2. *Create* Lay out the framework and fill it in iteratively. Show where the path diverges and converges, who controls each step, and other details as necessary. 3. *Refine*. Solicit feedback to repeatedly improve the map until it is as accurate as possible, and presented professionally.

A5.4.4 Simon, M. (2007). *Storyboards: Motion in Art (3rd ed.)*. Focal Press, Amsterdam; Boston. Retrieved from <https://search.lib.byu.edu/byu/record/lee.3868047>

This book is a guide to the business and art of storyboarding for film. Storyboards can have varying levels of detail from presentation boards (concept art used to show general scenes and elements, to production boards (detailed storyboards based on directorial instruction, including every camera angle and shot). Start with simple sketches as drafts and get the complete plan down before adding detail. Use arrows to show movement of characters, objects, and cameras. Frame objects and characters pleasantly and artfully. Supplement frame-by-frame drawings with drawings showing overall scene blocking and layout. Add useful notes.

A5.4.5 Svihla, V. (2018). Design Thinking and Agile Design: New Trends or Just Good Designs?. In R. E. West, *Foundations of Learning and Instructional Design Technology: The Past, Present, and Future of Learning and Instructional Design Technology*. EdTech

Books. Retrieved from [https://edtechbooks.org/lidtfoundations/design\\_thinking\\_and\\_agile\\_design](https://edtechbooks.org/lidtfoundations/design_thinking_and_agile_design)

Design thinking is an approach to design that emphasizes nonlinear iteration, and the user-designer relationship. The design process revolves around 5 essential tasks: empathize (understand user experiences), define (clearly state the problem to be solved), ideate (brainstorm many problem-solving ideas), prototype (create representations and experiences to realize ideas), test (get feedback from real users using the prototypes). These tasks are not necessarily completed in order, and insights at any point should lead designers to cycle back to earlier steps and refine their understanding.

## A6 Content Analysis and Prototyping Process

Content analysis is the first step in each video's creation. Prototyping follows closely, and in many cases these steps occur simultaneously or cyclically. This section presents the various sub-steps and decisions made throughout these early phases for each video. This process relies heavily on regular user testing and feedback, and early steps are often revisited as each iteration of the video progresses.

### A6.1 Content Analysis

Content analysis begins with reading the game's rulebook (multiple times) and annotating it to identify important components that could be included in my instruction (such as rules, pieces, terms, steps, abilities, or actions). I also look for input from any other available sources that can teach me the game, such as existing videos, blog posts, online tools, or friends who know the game.

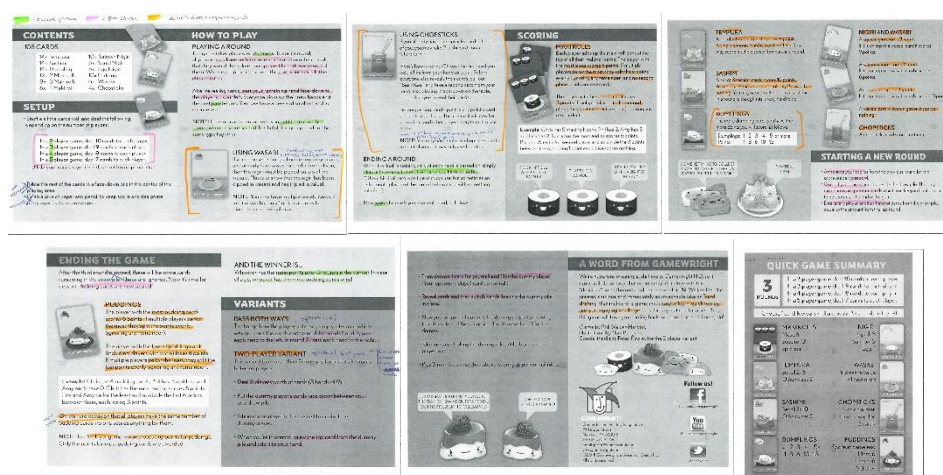


Figure 28. The *Sushi Go!* Rulebook, with my annotations.

Using the pieces identified in those notes, I create a detailed visual process map of the game's play.





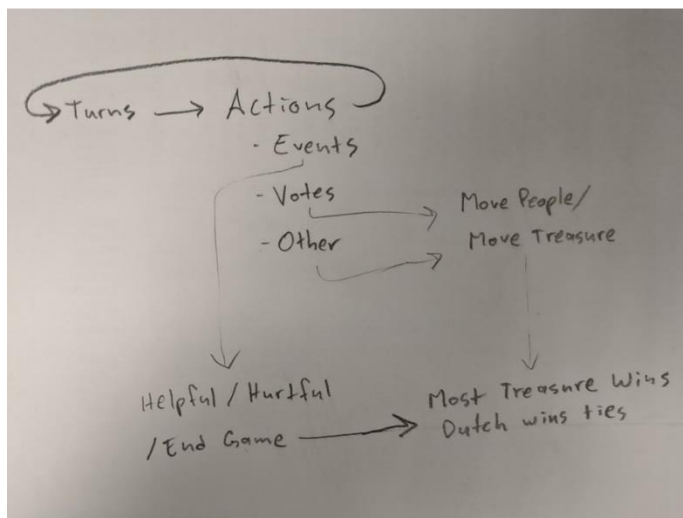


Figure 32. The simplified process map for *Tortuga 1667*.

## A6.2 Script and Storyboard

From these process maps, I develop my video scripts and storyboards. Initially, I used an online tool called WriterDuet for my scripts, based on the recommendation of an experienced filmmaker friend. This tool turned out to be too focused on advanced features I didn't need, however, so I soon switched to Google Docs. All my storyboards have been created on paper templates with a simple setup of rectangles for each frame and lines of notes under each.

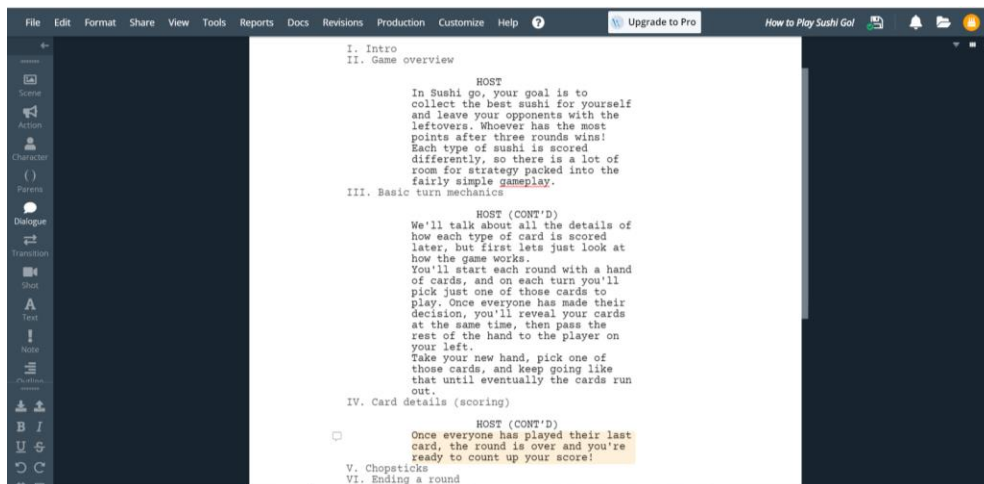


Figure 33. The beginnings of the script for my *Sushi Go!* video.

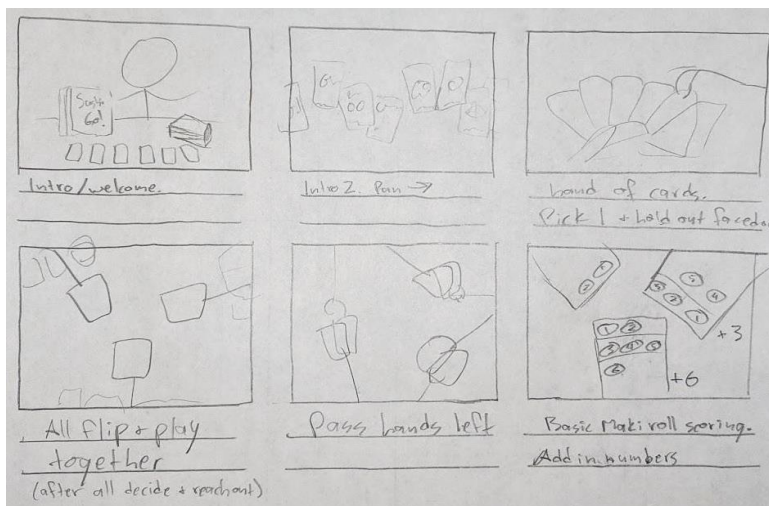


Figure 34. Some early storyboard sketches of possible shots to use in my *Sushi Go!* video, on a hand-drawn template. I have used printed templates since.

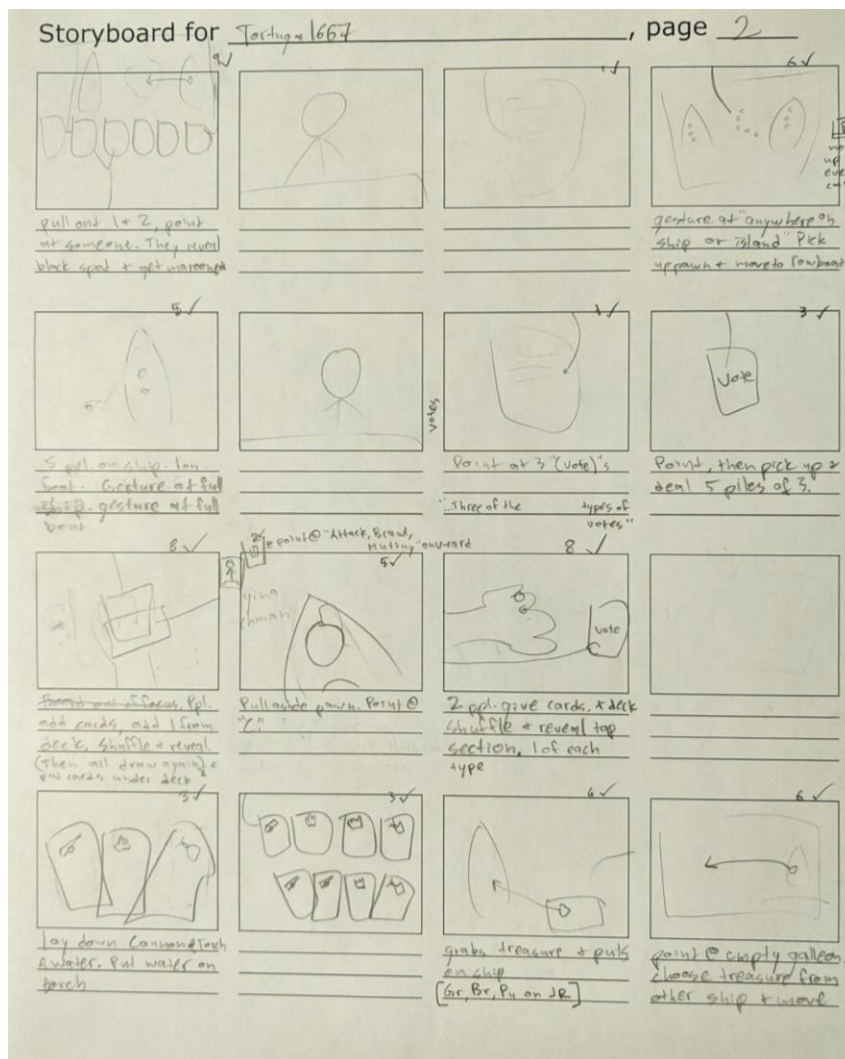


Figure 35. A page from the first-draft storyboard for *Tortuga 1667*.

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## A6.3 Prototyping

Regular prototyping and testing is a critical part of the development process. Early and often delivery of working prototypes is a central tenet of agile design, and a useful practice that informs designs.

Each video is tested at several points in its development, progressing from low- to high-fidelity prototypes. When time permits, I have learners play the game after instruction and note the issues and questions that come up as they play. If time is restricted, I just ask learners what questions they expect they would have during gameplay, or I ask them to try a first turn. Points when each video can be tested include:

1. Script outline. This is the earliest point at which the content is laid out in a plan for instruction, so it is the first point at which I test the instruction. I teach the game to an individual or group in-person, using the outline as a strict guide for the order in which topics are to be presented. Feedback at this point helps me ensure I cover topics in the best possible progression, and audio recordings of these tests are helpful as I script natural-sounding video narration.
2. Script and storyboard, performed. Once I have a complete draft of the script and storyboard (or a large enough section to warrant feedback) I test it by reciting the script and acting out the storyboard. This experience mimics the video format as much as possible. Learners ask questions as they come up, but I avoid answering those questions until after the “video” is over and I’ve seen what they understand.
3. Rough cut. Feedback on the minimally-edited footage allows me to change and re-record clips that testers find confusing, boring, or otherwise low-quality, before I have invested much time editing them.
4. Edited footage. Edited footage is at or near the point of being a presentable final product. Testing at this phase is the last chance to identify instruction that needs to be re-recorded or re-edited before the video is finalized. It is also a critical point for feedback on video presentation elements, such as lighting, color, graphics, and editing.

If major edits are needed, I may cycle back in this process and repeat some of these tests or create others as needed. For example, I may get feedback from players reading a script themselves, watching unedited footage, or watching alternate cuts of roughly edited video.

The process for tracking these tests is described in the following section about project management.

Many preliminary prototypes were subsumed into the later versions of the product, but each complete video draft was posted (unlisted) on YouTube. These can be found with the following links:

- How to Play Sushi Go! (full rules) Draft 1: <https://youtu.be/14A7ykoM6NE>
- How to Play Sushi Go! (full rules) Draft 2: <https://youtu.be/TKatX8NJbyY>
- How to Play Sushi Go! (2-player rules) Draft 1: <https://youtu.be/2AhI57DFIUA>
- How to Play Tortuga 1667 Draft 1: <https://youtu.be/kYy47qVCrpe>

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## A7 Design Narrative

This section chronicles the development of each video and the Game Point channel.

### A7.1 Sushi Go!

The rules for *Sushi Go!* are fairly simple. But there are a few specialized cards that introduce exceptions to the basic rules. The rulebook teaches these exceptions alongside the rules they relate to (chronological order), but learner analysis suggested this structure would confuse players who didn't yet understand why a given exception might matter. I chose to cover these exceptions briefly at the end of the video instead. This way, they were accurately presented as relatively minor rules, and they provided opportunities to review the basic structural rules that had been covered at the beginning.

The order of topics and number of examples was largely established in early tests with the outline and script, so I only needed to make minor additions and edits in late drafts, to simplify, re-emphasize, or demonstrate rules learners struggled to grasp in previous tests. The most critical way the content of the final draft differed from previous drafts was its improved clarity on which rules *always* apply with two players, and which are part of the optional 2-player variant. This improvement was facilitated by the fact that I was scripting the 2-player variant video while working on the final draft of the base video. My video production strategies, however, needed a great deal of iteration during the filming and editing phase, meaning the aesthetic quality of the various drafts differed greatly.

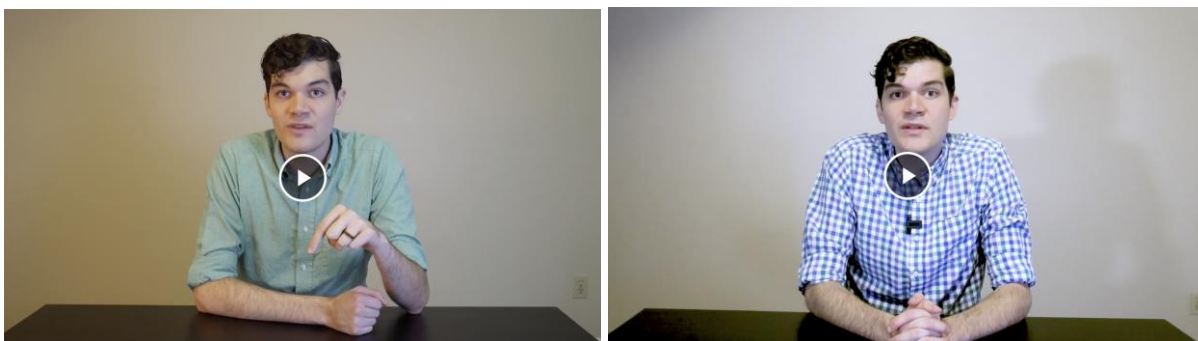


Figure 36. Two narration clips from the first (left) and final (right) drafts of the main *Sushi Go!* video, which show improvements in lighting between drafts.

For the 2-player rules video, this pattern continued. The content was simple and changed little after being established with early tests during outlining, scripting, and storyboarding. But the video and audio quality needed significant work after the first draft.

I also hadn't finished developing the channel brand when I initially made these videos, so I had nearly-finished drafts waiting for a week or two before I could add brand elements and post them.

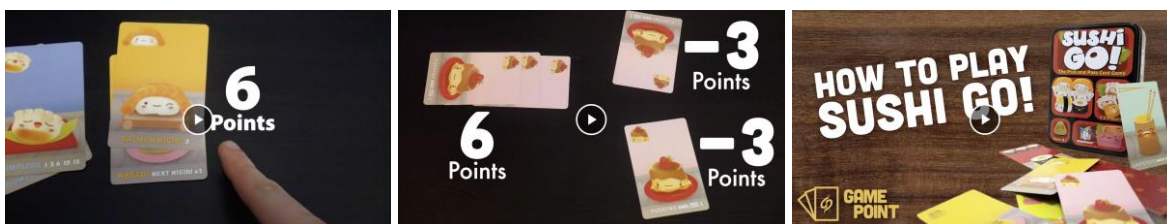


Figure 37. Changes between the second (left) and third/final (center, right) drafts of the *Sushi Go!* video. The fonts used in the final version match the channel logo.

## A7.2 Tortuga 1667

The time it takes to learn *Tortuga 1667* meant that it was more difficult to test than the shorter *Sushi Go!* video. However, this was balanced by the fact that I had access to the game's designer and publisher (who gave me excellent feedback on the video's accuracy and design) and by the fact that I had taught this game many times before.

Making the details of the event deck optional viewing was a critical early decision that significantly shaped the design of the video. This structure meant the event cards had to be taught last, so the broad outline of topic order was mostly locked in during early drafts. Subsequent versions of the script included additions and clarifications but left the topics in mostly the same order as the first draft. Later drafts added new examples in a few places and reworded many portions for improved clarity and accuracy. I also replaced some of the demonstration clips in later drafts to make them simpler or improve video quality, and I added demonstrations in portions where the uninterrupted narration went on too long.

Working with a client meant I had to balance his opinions with mine and decide what was best for learners without regard to either of our egos. This was a helpful driving force in the improvement of the video. For example, the decision to introduce each section of the video was based on his suggestion and I initially disagreed, but I tried it to see and found that it would be helpful and could be done unintrusively. On the other hand, he made a suggestion to move setup to the beginning of the video which I ended up disregarding after learners said they preferred it to come later.

## A7.3 Game Point Brand

Creating a successful YouTube channel requires much more than just an account. It needs a meaningful and consistent brand that viewers can easily interpret and trust. First, I revisited and expanded my learner analysis to deeply understand the reasons people play games, and the reasons people learn new games. I found that learning time is seen as an obstacle to gameplay, a burden that detracts from players' ability to share games with one another. So I chose to brand the videos as a relief to that struggle. Using these videos lets gamers offload teaching and learning so their gatherings can focus on the social interaction for which they were intended.

I created a word-web of terms related to gaming and community building, and from this web generated 27 potential channel names. Through discussions with gamers and faculty members, I settled on the name "Game Point," signifying a gathering place (a point where gamers meet), instructional content (learning the point of a game), and competition (scoring the game-winning

point). One challenge this name choice heightened, however, was the need to clarify that the channel was about tabletop gaming and not sports or video games. The phrase originally comes from sports, and multiple YouTube channels called “Game Point” or something similar already exist in the sports and video game communities.

I sketched a number of potential logos, then created five mid-fidelity prototypes based on the two best concepts in Adobe Illustrator. I gathered feedback on these designs from my friends on social media, a group that includes a number of gamers and designers.



Figure 38. Sketches of logo ideas (left). My facebook post soliciting logo draft feedback (right).

Based on this feedback I selected a design to pursue further and developed it into a final logo and style to be used on the YouTube channel art, profile picture, and video thumbnails. A few people who had commented that the earlier drafts reminded them of video games or sports have expressed pleasant surprise that the final draft did not do the same. Once this brand had been established, I created a template for video thumbnails in Adobe Photoshop, and set up the YouTube account.



Figure 39. The finished logo and brand identity as it appears in channel art (left), channel profile picture (center), and video thumbnail (right).

# A8 Project Management Plan, Budget, and Timeline

This section details my agile project management approach and other managerial aspects of the project. It includes descriptions of how these plans have changed throughout the project's development.

## A8.1 Project Management Plan

The foundation of my project management approach is Kanban, an agile toolset used to organize, track, and improve the flow of work processes. [This Kanban board in Trello](#) shows the pipeline each work item flows through as it progresses from “backlog” to “done.”

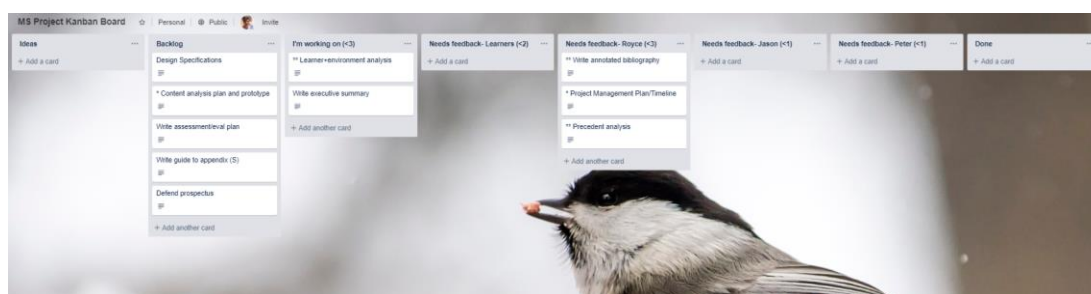


Figure 40. My Kanban board On April 30th, with various tasks for my prospectus in progress.

On this board, cards represent chunks of work. Each card represents roughly 10-15 hours of work, and includes a detailed description of the criteria that will determine when that item is done. The nature of these criteria depends on the type of work included in the card. Early cards mainly included chunks of my prospectus. These had criteria based on the prospectus template and adapted after conversations with my committee. Later cards representing project tasks have had criteria based primarily on my prospectus's learner, environment, literature, and precedent analyses, as summarized in the design specifications.

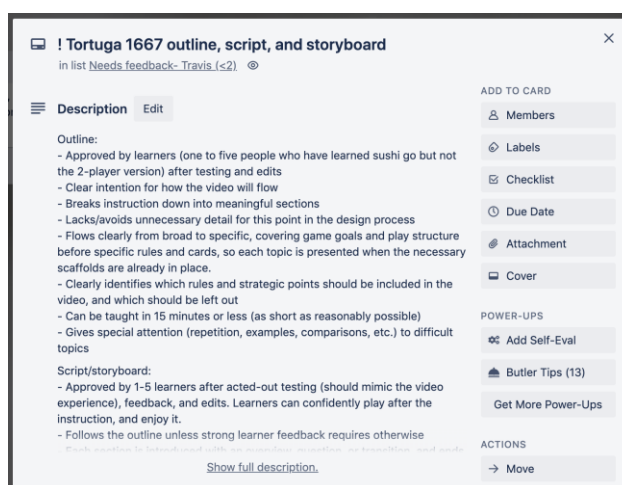


Figure 41. Card details describing success criteria for the outline, script, and storyboard for my *Tortuga 1667* video.

Items begin in the “ideas” list as vague intentions written down without much detail. I regularly revisit this list and add details to each card, then place it in the “backlog,” which is prioritized so items at the top should be completed first. Items are then pulled out to the right as they move along in progress.

Items on which I have received feedback (from users or committee members) bump back to the backlog with updated criteria to represent the feedback received, and are marked with an asterisk (\*). Initially, I intended that most items would receive two or three rounds of feedback before they reach “done” with final approval from Royce and learners. This is still the case for most work items, but I have chosen to split some larger work items (like recording and editing each video) into separate cards for each draft instead, since having a single card that looped through the board several times would make that one card represent much more than the allotted 10-15 hours of work.

Strict work-in-progress (WIP) limits on each work column force me to identify and resolve bottlenecks, and prevent team members from becoming overburdened, so items can flow smoothly through the system. These limits also help me keep things moving, since I can’t pull new items into my workload until I have stopped working on something and moved it over to pursue feedback on it.

Regular reviews of this project management system allow me to continually refine my processes based on new information, changing circumstances, or the type of work being done. I have a scheduled reminder in my personal calendar to review my plans once a month. This is a regular time to review my progress, identify roadblocks, find solutions, and tweak my Kanban approach. I also keep a running list of potential risks that may impact the success of the project, and I revisit this during each monthly review. I also make impromptu changes to my plans as needed.

Risk	%	Impact	Score	Tactic	Details
Difficult to find test subjects, whether at home or on-campus	0.7	0.8	0.56	Mitigate	Bring the game with me everywhere I go. Recruit freshmen at lunch in the WILK, Recruit classmates and coworkers. Teach my family whenever I visit them.
1-person team limits time and feedback	0.7	0.4	0.28	Mitigate	Put early feedback from committee in process plan for every work item
Unable to reserve equipment for the dates when I plan to fill	0.7	0.4	0.28	Mitigate	Look regularly at backlog and plan weeks ahead to reserve equipment for when it will be needed.
Computer crash, lost project data	0.3	0.8	0.24	Mitigate	Keep project data in cloud forms like google docs, or box drive files
Scope creeps up	0.5	0.4	0.2	Mitigate	Track my time spent on this project to keep my work in perspective
Conflict between my needs and committee requirements	0.5	0.4	0.2	Embrace	
Perfectionism, so I avoid asking for feedback	0.5	0.4	0.2	Mitigate	Put early feedback from committee in process plan for every work item
I avoid boring/hard tasks	0.5	0.4	0.2	Mitigate	Use a pull system and prioritized product backlog. Account weekly to Royce
Perfectionism, so I don't call things done and move on	0.5	0.4	0.2	Mitigate	Put early feedback from committee in process plan for every work item
Jason has really high learner analysis standards, might war	0.5	0.4	0.2	Mitigate	Work with Jason from beginning of learner analysis
Complications with YouTube monetization (subscribers, CP)	0.5	0.4	0.2	Mitigate	Talk to Tyler and Ezra, my expert friends
Lack of external client deadlines allows slacking	0.5	0.4	0.2	Mitigate	Plan on December completion, regular meetings with Royce, weekly time goal
Unable to reserve the same equipment repeatedly	0.5	0.4	0.2	Accept	
Conflict between Travis's needs and committee's	0.5	0.4	0.2	Mitigate	Offer to continue working with Travis after project ends if needed
Peter is super busy and can't give feedback	0.9	0.2	0.18	Accept	
Slow laptop can't edit video	0.7	0.2	0.14	Accept	
Don't have animation skills	0.7	0.2	0.14	Embrace	
I'm poor and can't pay for equipment, software, testers, etc.	0.7	0.2	0.14	Accept	
Lighting changes when re-shoots are filmed at different time	0.7	0.2	0.14	Accept	
Have to work on public computers	0.7	0.2	0.14	Accept	
I don't finish by December and have to graduate in April	0.3	0.4	0.12	Accept	
Erika gets sick/hit by a bus and I have to drop out of school	0.3	0.4	0.12	Accept	
I get a full time job and can't put in as much time	0.3	0.4	0.12	Embrace	
Unclear expectations on amount of work needed in prospect	0.3	0.4	0.12	Accept	
Jason is known to have very high standards	0.3	0.4	0.12	Mitigate	Work closely with Jason from the beginning so he's on my side
Committee confused by adapted template	0.5	0.2	0.1	Embrace	
Video footage problems, reshoots needed	0.7	0.1	0.07	Embrace	
Users at testing already know game	0.3	0.2	0.06	Accept	
Can't find users for testing	0.3	0.2	0.06	Accept	
Nobody responds to survey	0.3	0.2	0.06	Accept	
Other people don't follow through on commitments	0.3	0.2	0.06	Accept	
Time wasted on formatting document	0.5	0.1	0.05	Accept	
Something harms relationship between committee member	0.1	0.4	0.04	Accept	
I get sick/hit by a bus and have to drop out of school	0.1	0.4	0.04	Accept	
Time wasted working adapting to the template	0.3	0.1	0.03	Accept	
Youtube stops being the best platform for video sharing	0.1	0.2	0.02	Accept	
Attacked by internet trolls in survey answers or youtube cor	0.1	0.2	0.02	Accept	

Figure 42. A screenshot of my risk list on November 26th. Each risk is rated with a % likelihood (either .1, .3, .5, .7, or .9) and an impact level (either 0.05, 0.1, 0.2, 0.4, or 0.8). These scores automatically generate an overall prioritization score for each risk based on a Matrix provided by Jason McDonald. I then select a tactic for each risk (either Embrace, Mitigate, or Accept) and add detailed plans for each risk I've decided to mitigate.



Pursuing the “pull” feeling in this system has not worked as ideally in practice as it should in theory. This is largely due to the fact that gathering feedback from learners is still a type of work that falls on my shoulders. It isn’t like I have people waiting for me to give them content if their WIP limit isn’t full. The feeling of a pull system is more authentic for tasks related to writing and presenting my work, since these have other interested parties (namely my committee) ready to give me regular input. This issue has occasionally led to periods of stagnation in my work, so tackling it has been an ongoing challenge I’ve had to focus on. I have been able to improve by scheduling weekly meetings with Dr. Kimmons in which I account on the work of the previous week and state my goals for the week to come. This meeting typically takes only 20 minutes, and has also been a great opportunity to get feedback on tasks currently in progress or ideas on tasks I’m about to start. When our scheduled meeting time occasionally doesn’t work, we communicate by email. Also, after a few weeks of forgetting what my stated goals had been, I began marking those stated goals with an exclamation point (!) on my Kanban board. This helped make the accountability more concrete, even in weeks when we couldn’t meet in person and I was just reporting in an email. These simple changes were a significant help in getting me back on track to meet my project completion goals, since it became much easier to always know what was the next thing I should be working on and how much work I had left to do—each week and overall.

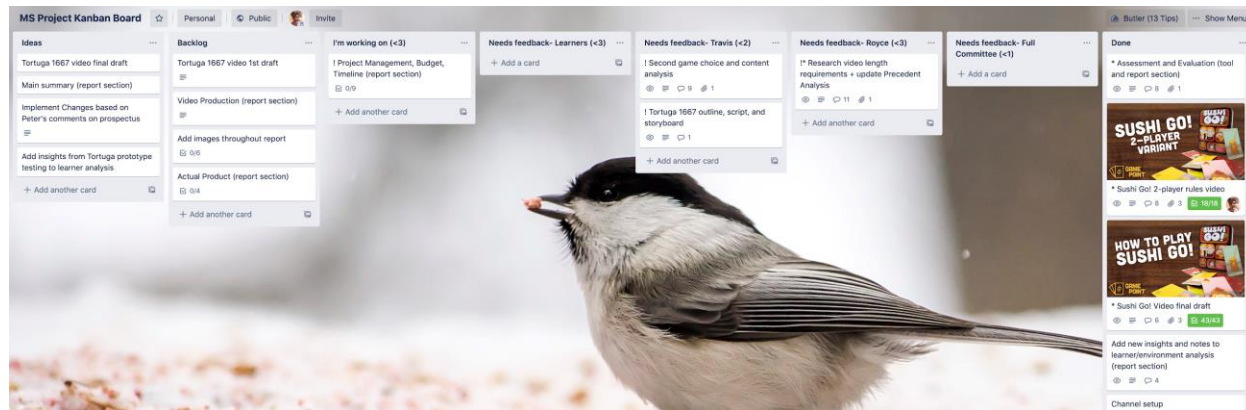


Figure 43. The Kanban board on November 26th, with various tasks for my final report and second video in progress. Changes to the process can be seen in comparison with Figure 40, such as the addition of a list for items needing client feedback, consolidation of lists for committee members into just 2 lists (one for my advisor Royce and one for the whole committee), the addition of exclamation points (!) for weekly goals, and changes to the WIP limits on each column.

Another late change I made to the Kanban board was to add a list labelled “Needs Feedback-Travis” for items on which I needed to pursue feedback from Travis Hancock, the creator of *Tortuga 1667* who sponsored that video.

I have also tracked my time spent on this project each day since it started. This was done partly to provide data for the budget section below, but also to motivate me personally as I set goals and schedule my time each week. I set a goal in September to work on this project about 15 hours a week. As I fell behind on this goal I also found I was falling behind on my overall progress, and it did not seem likely I would finish the project by December as I had planned. I made some changes to reprioritize my time, and added a large display of my weekly average at

the top of the spreadsheet, next to the count of total hours spent. Seeing this average improve each week was very motivating, and helped me get back on track to meet my goals.

Time Spent on MS Project							
Total: 244:00      Fall Weekly Avg.: 11:51							
Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Week
					Mar 30	Mar 31	
					0:45	1:15	2:00
Apr 1	Apr 2	Apr 3	Apr 4	Apr 5	Apr 6	Apr 7	
2:30	5:15	2:00	3:00	1:15	0:00	1:30	15:30
Apr 8	Apr 9	Apr 10	Apr 11	Apr 12	Apr 13	Apr 14	
2:00	3:00	2:30	3:45	1:15	1:30	2:15	16:15
Apr 15	Apr 16	Apr 17	Apr 18	Apr 19	Apr 20	Apr 21	
2:00	1:30	3:30	0:30	1:30	2:00	0:15	11:15
Apr 22	Apr 23	Apr 24	Apr 25	Apr 26	Apr 27	Apr 28	
5:00	4:00	6:30	0:30	0:45	0:00	0:00	16:45
Apr 29	Apr 30	May 1	May 2	May 3	May 4	May 5	
0:00	5:30	3:00	1:30	2:00	3:00	0:00	15:00
May 6	May 7	May 8	May 9	May 10	May 11	May 12	
7:30	5:30	3:00	0:45	0:00	0:00	0:00	16:45
May 13	May 14	May 15	May 16	May 17	May 18	May 19	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
May 20	May 21	May 22	May 23	May 24	May 25	May 26	
0:00	0:00	0:00	0:30	0:00	0:00	0:00	0:30
May 27	May 28	May 29	May 30	May 31	Jun 1	Jun 2	
0:00	0:00	1:00	0:00	0:00	0:00	0:00	1:00
Jun 3	Jun 4	Jun 5	Jun 6	Jun 7	Jun 8	Jun 9	
0:00	0:00	0:00	0:00	0:00	1:00	0:00	1:00
Jun 10	Jun 11	Jun 12	Jun 13	Jun 14	Jun 15	Jun 16	
0:00	1:00	0:00	2:00	2:00	0:00	0:00	5:00
Jun 17	Jun 18	Jun 19	Jun 20	Jun 21	Jun 22	Jun 23	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Jul 1	Jul 2	Jul 3	Jul 4	Jul 5	Jul 6	Jul 7	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Jul 8	Jul 9	Jul 10	Jul 11	Jul 12	Jul 13	Jul 14	
0:00	0:00	1:00	0:00	0:00	0:00	0:00	1:00
Jul 15	Jul 16	Jul 17	Jul 18	Jul 19	Jul 20	Jul 21	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Jul 29	Jul 30	Jul 31	Aug 1	Aug 2	Aug 3	Aug 4	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Aug 5	Aug 6	Aug 7	Aug 8	Aug 9	Aug 10	Aug 11	
0:00	0:00	0:00	1:00	0:00	0:00	0:00	1:00
Aug 12	Aug 13	Aug 14	Aug 15	Aug 16	Aug 17	Aug 18	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Aug 19	Aug 20	Aug 21	Aug 22	Aug 23	Aug 24	Aug 25	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 1	
0:00	2:30	0:00	1:00	0:00	3:30	0:00	7:00
Sep 2	Sep 3	Sep 4	Sep 5	Sep 6	Sep 7	Sep 8	
0:00	0:00	1:00	2:30	0:00	0:00	0:00	3:30
Sep 9	Sep 10	Sep 11	Sep 12	Sep 13	Sep 14	Sep 15	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Sep 16	Sep 17	Sep 18	Sep 19	Sep 20	Sep 21	Sep 22	
0:00	2:30	0:00	0:00	0:30	1:30	0:30	5:00
Sep 23	Sep 24	Sep 25	Sep 26	Sep 27	Sep 28	Sep 29	
4:30	1:00	1:45	1:45	5:30	7:45	0:00	22:15
Sep 30	Oct 1	Oct 2	Oct 3	Oct 4	Oct 5	Oct 6	
6:00	0:30	2:30	0:00	2:15	2:00	0:45	14:00
Oct 7	Oct 8	Oct 9	Oct 10	Oct 11	Oct 12	Oct 13	
5:45	0:00	0:00	1:45	1:15	2:00	0:00	10:45
Oct 14	Oct 15	Oct 16	Oct 17	Oct 18	Oct 19	Oct 20	
5:00	1:15	0:00	0:30	0:00	0:00	0:00	6:45
Oct 21	Oct 22	Oct 23	Oct 24	Oct 25	Oct 26	Oct 27	
2:00	0:00	3:30	0:30	1:00	0:00	0:00	7:00
Oct 28	Oct 29	Oct 30	Oct 31	Nov 1	Nov 2	Nov 3	
2:45	2:15	1:00	1:15	0:00	0:00	0:00	7:15
Nov 4	Nov 5	Nov 6	Nov 7	Nov 8	Nov 9	Nov 10	
2:30	2:30	0:00	4:30	4:15	1:00	0:15	15:00
Nov 11	Nov 12	Nov 13	Nov 14	Nov 15	Nov 16	Nov 17	
1:00	5:30	2:00	4:45	2:00	1:45	0:00	17:00
Nov 18	Nov 19	Nov 20	Nov 21	Nov 22	Nov 23	Nov 24	
1:45	1:00	4:15	3:30	3:15	0:00	1:15	15:00
Nov 25	Nov 26	Nov 27	Nov 28	Nov 29	Nov 30	Dec 1	
5:30	5:00	0:00	0:00	0:00	0:00	0:00	10:30
Dec 2	Dec 3	Dec 4	Dec 5	Dec 6	Dec 7	Dec 8	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Dec 9	Dec 10	Dec 11	Dec 12	Dec 13	Dec 14	Dec 15	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Dec 22	
0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00

Figure 44. My time tracking spreadsheet on November 26th.

## A8.2 Budget

I am not currently being paid for this work, nor am I paying any of my testers, or buying any equipment or software. If I were, though, the project would cost approximately \$9,260. That estimate is based on the following costs:

- My time:** I originally estimated that the project would take about 365 hours to complete (200 hours writing my prospectus and final report, 140 hours making the videos, and 25 hours setting up and maintaining the YouTube channel). In the end, I spent about 330 hours working on the project. My time tracking spreadsheet did not detail which portion of the work each hour was spent on, but I believe that the differences between my original estimate and the final count come mostly from the writing work, which proceeded much faster than expected. Filming and editing also went slightly faster than expected, and channel branding and setup took slightly longer than expected. At a rate of \$20 per hour, I could charge \$6,600 for those 330 hours of my time.

- **Film equipment and software:** As a student, I have free access to all the equipment and software I need. If I needed to purchase those things, however, they could cost the following amounts:
  - \$500 for a used camera
  - \$200 for a basic lens
  - \$200 for other camera equipment (a basic tripod, SD cards, Cases, etc.)
  - \$1000 for a personal computer capable of editing video decently
  - \$600 for a 1-year subscription to the complete Adobe Creative Cloud
- **User testing:** It takes a group of at least 3 people up to 1 hour to learn a game, play it, and reflect on their experience. I need at least 2 rounds of testing on each video I produce. At \$10 per hour, that comes out to \$60 per video. Adding a few more hours for feedback on the scripts and storyboards brings that to \$80. For two videos that's \$160

## A8.3 Timeline

Agile project management does not rely on timelines, but for the purposes of this report it is valuable to present a general timeline and describe how my plans have adapted since my prospectus defense.

I initially aimed for a December graduation, as indicated in the timeline I included in my prospectus:

### GENERAL PROJECT TIMELINE

	PROJECT PHASE:	ESSENTIAL TASKS	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	<b>Prospectus</b>	Planning, drafting, feedback throughout, defense									
2	<b>First video (simple game)</b>	Analysis, scripting, storyboarding, recording, editing, feedback throughout									
3	<b>Second video (complex game) And maybe third</b>	Analysis, scripting, storyboarding, recording, editing, feedback throughout									
4	<b>Final report</b>	Planning, drafting, feedback throughout, defense, revisions, final submission									

Figure 45. The general timeline included in my project proposal.

I knew I would struggle to accomplish much while living across the country during a summer internship, but I underestimated the impact this would have. I ended up accomplishing almost nothing during the summer. I knew that the complex defense process would take up at least a month, but I still wanted to be free to pursue work opportunities in the new year. With these constraints in mind I changed my timeline to aim for project completion in December, and defense in early 2020:

## GENERAL PROJECT TIMELINE

PROJECT PHASE:		ESSENTIAL TASKS	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
1	<b>Prospectus</b>	Planning, drafting, feedback throughout, defense, revisions, final submission											
2	<b>First video (simple game)</b>	Analysis, scripting, storyboarding, recording, editing, feedback throughout, posting											
3	<b>Second video (complex game)</b>	Analysis, scripting, storyboarding, recording, editing, feedback throughout, posting											
4	<b>Final report</b>	Planning, drafting, feedback throughout, defense, revisions, final submission											

Figure 46. The second-draft general timeline I created in October 2019.

The reality was only slightly behind this second estimate, with the second video being finished in January and the defense happening in March.

## A9 Video Production

As I have progressed through several drafts of each video, I have learned a great deal about video production. This section describes how my setup (for camera, light, and sound), as well as my filming and editing process, has developed through each prototype.

### A9.1 Setup

As a student, I have access to a film studio on campus, but chose to film at home instead since this made scheduling and setup more flexible, made videos more welcoming and informal, and helped me prepare for a future when I no longer have access to student resources. The best location for filming in my home has consistently been the living/dining space. My basic setup—filming at the dining table, pulled away from the plain off-white wall it normally rests against—hasn't changed since my first prototypes, but a number of fine details have needed adjustment to get the best possible camera, light, microphone, and teleprompter setup.

For all videos, I have used equipment checked out from BYU's Harold B. Lee Library.

Figure 47 shows my current camera and light setup. The subsections that follow detail various other setups and processes I have attempted.



*Figure 47.* Current film setup. Table in middle of room with seating for host behind. 2 LED lights at right and left, each on a light stand. Diffuser disc in front of the right light, and the left light reflects off the white wall. Camera directly faces table, host, and plain wall (This position is used for wide shots. Close-ups have the camera closer to the table). Wireless microphone receiver is attached at top of camera.

### **A9.1.1 Camera and teleprompter**

For all videos, I have used a Panasonic Lumix G7 camera. This is the best video camera available to BYU students.

For close-up shots of game pieces on the table, camera setup has not been very complex. I have consistently been able to use either a small tripod resting on the table with the camera pointed down, or the normal-sized tripod leaning against one side of the table, as shown in Figure 48. Leaning the tripod lets the camera get closer to the table surface than it could while standing on the tripod's legs (which collapse to a minimum of about 15 inches long). It also keeps the table space directly under the camera clear, so the camera can point almost directly down if needed for a particular shot. This setup has worked well. The only problem it creates is that minor bumps of the table or tripod cause camera shakes. It has been tough to film quick movements, especially with multiple players, without bumping the tripod or table, but so far this difficulty has been resolved simply by being careful.

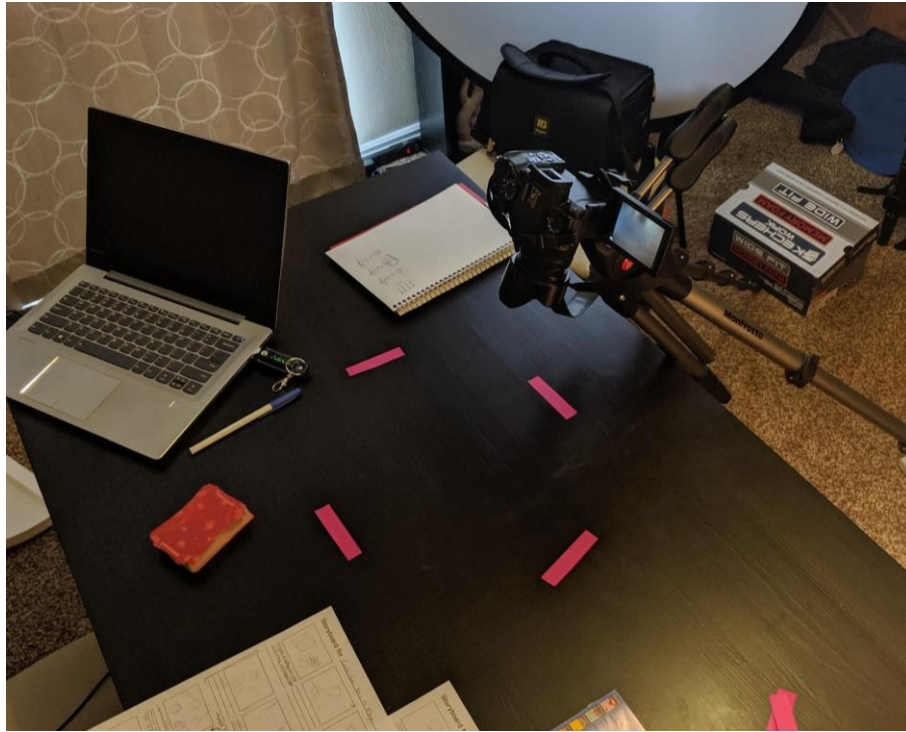


Figure 48. Camera setup for close-up shots, with tripod leaning against table.

Occasionally, I have also used small strips of post-it notes to mark the edge of the frame, as seen in Figure 48. However, I have largely discontinued this practice as I have found that the effort to set up and adjust these markers between each clip was greater than the effort of simply filming each clip multiple times until I get it right. I do still sometimes use this approach when filming clips with multiple people, since sometimes players on multiple sides of the table can't all see the camera screen clearly.

Positioning the camera right for wider shots that include the host has been more of a challenge. It's convenient to have the camera close since I'm filming on my own, and to avoid running it into other furniture or lights, but when it's too close the shots have to be zoomed out so far that outlets and shadows on the rear wall become visible. This is further complicated by the challenge of balancing lighting needs, as described below. Setting the camera about 6 feet from the host tends to work well. I've also experimented with the camera's height for these shots, to find an angle that pleasantly shows the host and table without also showing shadows and outlets on the rear wall. I've found that keeping the camera slightly below eye-level works best.

Since the first video, I have used an Android phone app called *Oratory* to display and auto-scroll each script as I film. After launching the app, I tape my phone so it hangs right below the camera lens, as pictured in Figure 49. The tape cuts across the phone screen and is only semi-transparent, so I intend to try other hanging tools in the future. This hasn't been a priority yet, though, since the tape works well enough.

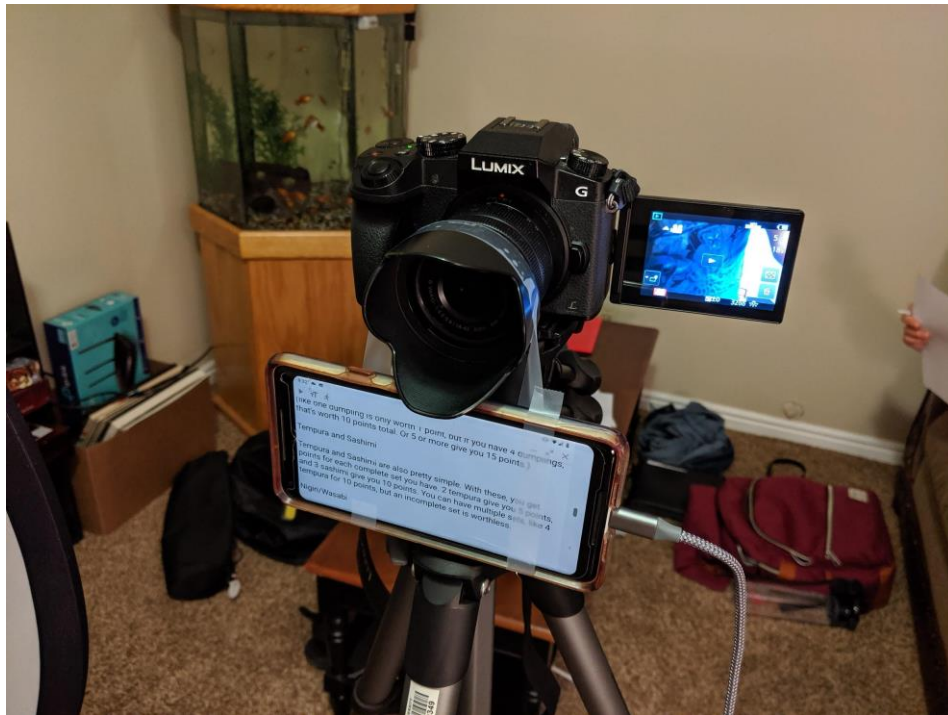


Figure 49. The Oratory teleprompter app, and setup with phone taped to hang below the lens.

With my first video draft, a number of testers noticed that I wasn't quite making eye contact with the camera. This was largely due to the fact that, when filming, I had the camera's screen flipped out to the side (as in Figure 49). This setup helped me check that the camera angle and focus were correct and the footage was coming out right, but it was visually distracting for me. I often glanced to the side while filming. Eliminating this distraction by flipping the screen to the back before I film has made it harder to ensure focus, angle, and color settings are correct, but allows me to look directly at the camera. The phone-screen teleprompter is close enough to the lens that I appear to make eye contact while reading from it.

### A9.1.2 Sound

The camera includes a native microphone, but this tends to pick up too much ambient sound. In lieu of a truly quiet space to film, I have tried two different microphone setups to capture clearer audio.

First, I used a Rode Wireless Go Lavalier Mic Kit. This setup uses a blocky square transmitter that clips onto my clothing and captures the audio, then a similarly-shaped receiver plugs into the camera. This system produced relatively clear audio as long as it wasn't rustling or moving on my clothes during filming. The only issues were its visibility in the final footage and the potential for battery death, which requires me to halt filming. So for one video I tried using a Rode Shotgun Mic instead. This microphone attaches to the top of the camera and points at the speaker to pick up audio from that direction. On more zoomed-out shots, I found that the microphone was sagging into view at the top of the screen, so I had to hang a weight on the back of it to point it further upward. I used a tripod bag with a shoe in it for this purpose, as seen in Figure 50. This worked somewhat, but the audio from this microphone wasn't as clear as it was

with the lavalier mic, so I have switched back. I also had some issues with lighting and color when using this microphone setup, which may have been influenced by the microphone shading the camera's light sensors, although most likely other causes were to blame.



*Figure 50.* An improvised weight used to keep the shotgun mic out of frame.

Another consideration in sound is the filming environment. Microphones significantly reduce the amount of background noise picked up, but eliminating it before filming is more reliable. I have been able to consistently reduce background noise by closing doors between the area where I film and my refrigerator, temporarily turning off the filter on my aquarium, filming when home alone when possible, and asking others to work in another room when necessary. Sometimes, I have also been forced to postpone plans to film because of unexpected noise from home heating, upstairs neighbors, or a neighborhood dog.



### A9.1.3 Lighting

Lighting has been the biggest struggle to get right. Even after I thought I'd found an approach that would consistently work while making the *Sushi Go!* 2-player video, I had unexpected issues with lighting on some of the first draft footage for *Tortuga 1667*.

My lighting journey started with the decision that I needed to control the lighting setup artificially so my filming schedule wouldn't be determined by natural light availability, and footage filmed at different times would appear consistent. In order to exclude natural light, though, I had to firmly close the curtains on the large glass sliding door next to my filming location. Usually, this has only required me to carefully spread the curtains out to the edge of the window and clamp them shut in the middle, but occasionally I've had issues with the sunlight changing in the middle of a filming session and creating glaring beams of light across the table or wall. My solution on one such occasion is pictured in Figure 51.



Figure 51. Various objects being used to hold curtains flat against the wall.

I can check out two LED light panels, two light stands, and one large diffuser disc from the BYU library. These LED lights can produce a bright white light, and the two stands have allowed me to experiment with various positioning options to find a placement that works well. But their light is rather harsh, and creates distracting and unappealing hard-edged shadows. The diffuser

disk can diffuse this light pleasantly, but the library limits each patron to just one of these. To diffuse the light of the second LED panel, I've had to try a few different approaches. Simply dimming the panel only produced uneven light, with the same harsh shadows just less strong. A white cloth thrown over the light accomplished nothing. Using a lampshade to diffuse the light gave it a strange orange tint that looked awful, but was somewhat repairable with color-corrections while editing. This is the approach I used on the first *Sushi Go!* video, as pictured in Figure 52. While filming the 2-player video, however, I found that it worked much better to simply point the light to the side so it reflected off of the nearby white wall instead of shining directly on the subject. This approach has produced significantly better lighting with less editing after-the-fact.



Figure 52. A photo taken of my computer screen while editing. Both pieces of footage are from the same filming session, using a lampshade over the left-side LED light. The footage on the right has been digitally color-corrected.

I have also experimented with whether or not to leave the installed ceiling lights in the room on or off. Leaving them on has proved significantly better since it adds ambient light to the room and softens any shadows the LED panels create. However, I found that in the first draft footage for *Tortuga 1667*, I had moved the table too far forward, which put the ceiling light at too steep an angle and created strange shadows across my eyes in narration clips. Moving the table too far back puts unappealing hard shadows on the wall behind me, but I was able to balance these needs for the final footage.

#### A9.1.4 Thumbnail Photographs

To photograph each game for the video thumbnail, I photographed various game components inside a lightbox at the BYU library. For the *Sushi Go!* images I used the same Panasonic G7 camera I'd used for filming, but I found that the camera's color settings required extra editing to make the lighting on the photos look natural. With this in mind, I used my phone's camera to take pictures of *Tortuga 1667*.

## A9.2 Process

The filming and editing process has also come a long way since I started. This includes decisions about the order in which to film clips, how to store and organize video files, how to edit, and how to plan and carry out the necessary reshoots and re-edits for later drafts.

### A9.2.1 Filming

For my first video, I filmed all the narration first, then the demonstrations. For the demonstrations, I took a few passes through the storyboard, each time filming all the clips that used a single camera setup. For many of these clips, I listened to the narration video through headphones while filming the accompanying action, in order to ensure the timing matched perfectly. After I had captured a good take of each clip, I marked it with a check on the storyboard.

The strategy of setting up the camera, then filming all needed clips with that setup in a single pass through the storyboard worked well. I have continued to use this strategy on subsequent drafts and videos, but with some notable adaptations. Since the *Tortuga 1667* video was so much longer than previous ones, I expanded my system of storyboard notations to keep organized. In preparation for each round of filming, I went through the storyboard and marked each clip I intended to film using the current camera setup (I initially marked these with a number, but when I knew the number of clips being marked would require multiple rounds of filming I used an X).

Then I took several passes through the storyboard to film similar clips each time. I marked each completed clip with a check, *and* with the number of the pass on which it was filmed. With this strategy, I was subdividing not only by camera setup, but also by which game pieces were being used in each pass, which minimized setup changes. The numbers throughout the storyboard were also tremendously helpful for file organization and editing later on. This strategy of planning was especially critical since a number of clips in the video required a second set of hands. By carefully planning those two passes through the storyboard, I was able to minimize the time I required of someone else.

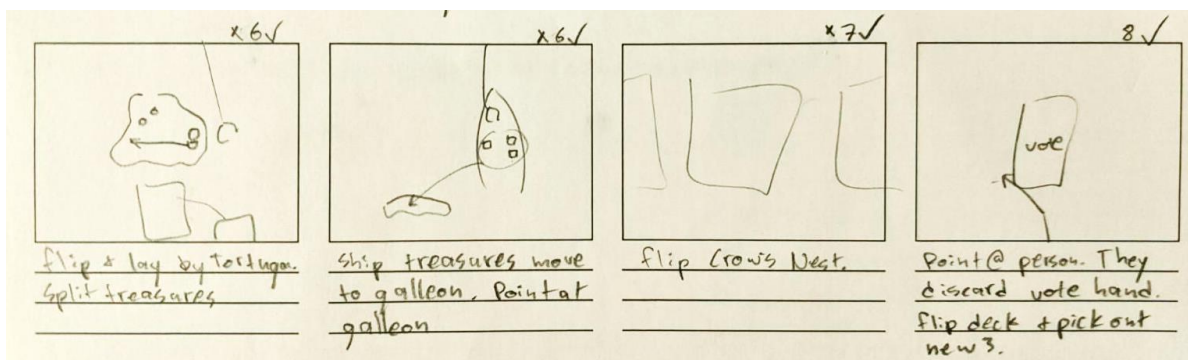


Figure 53. A line from the storyboard for the first draft of *Tortuga 1667*, annotated during filming.

The strategy of filming narration first, and listening to it while filming the corresponding action, was completely scrapped. I found that editing the timing of a clip (or even completely re-filming it) was only rarely necessary and minimally difficult. Moving files while filming, and listening to them with precise timing while filming was a much greater hassle. So for my last video I filmed the narration last. Unexpectedly, this also improved the narration itself. While filming the many demonstration clips, I referred constantly to the script so I could double-check my storyboard intentions and understand how the action should be timed, and I repeatedly rehearsed the narration in my mind. This led to a few last-minute script edits, and made recording the narration a much smoother process when its time came.

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### A9.2.2 Organization and Editing

Because my personal computer is too slow to reasonably edit video, I have been editing on BYU campus computers. I don't have a large external hard drive, so I have to carefully upload all files to the cloud each time I'm finished working. Whenever I move to a new computer, I have to re-download all needed files before I can pick up the work where it was left off. Particularly for the first video (which was poorly filmed and therefore had a lot of source material) and the last video (which was long), this was an important constraint to grapple with.

I limited the impact of this problem by taking the time to sort video clips into separate folders for high-quality clips (the takes I intended to use in my current draft of the video) and low-quality clips (takes I needed to store just in case, but wasn't likely to use). I did this before I started any editing. For the longer *Tortuga 1667* video, I also sorted the clips into numbered folders for each pass I made through the storyboard, filming similar clips. The use of these smaller folders was important so I could keep each folder within the maximum download size limit for Box.com (the cloud storage service I used), but also helped tremendously to streamline the editing process.

I edited the videos using Adobe Premiere Pro, by first cutting together the narration, then chronologically tacking on the demonstration clips and on-screen text for each piece. Then, finishing touches like audio adjustments and color corrections are added last (unless the footage is so painfully ugly that I can't resist color correcting it earlier). This editing process has been largely unchanging throughout the various videos and drafts of this project. The only major increase in efficiency has come from the numbered file folders described above. These allowed me to very quickly find each clip while editing, since the storyboard was marked with the same numbers. I briefly attempted renaming each file during the sorting process with a numeric code representing its page and position in the storyboard, but found this to be an unnecessary delay, since the folders were small enough that finding clips within each folder wasn't a challenge.

### A9.2.3 Reshooting and Re-editing

My first drafts have improved throughout this project, but are still far from perfect. Staying organized while I reshoot and re-edit was an important priority in order to ensure I don't become motivated to ignore these important steps on future videos.

While editing, testing, and analyzing test results, I compile lists of changes that need to be made. These may include script changes (major or minor), clips to recreate due to video or audio quality issues, new clips to film due to learning issues or script change, and various edits to video, audio, or effects.

For my first *Sushi Go!* videos, I primarily created lists of changes to make in a single burst after I was done gathering feedback. For the second *Sushi Go!* video, and the *Tortuga 1667* video, I tried instead to list ideas for changes earlier, starting with issues I notice myself while editing, and continuing to update as each piece of feedback comes in. Then I finalize that list of ideas into a complete plan once the feedback is done. This change has allowed me to put less effort into first drafts, since I'm already making a list of things I intend to change, effectively demonstrating to myself that it's okay for this video to not be perfect.

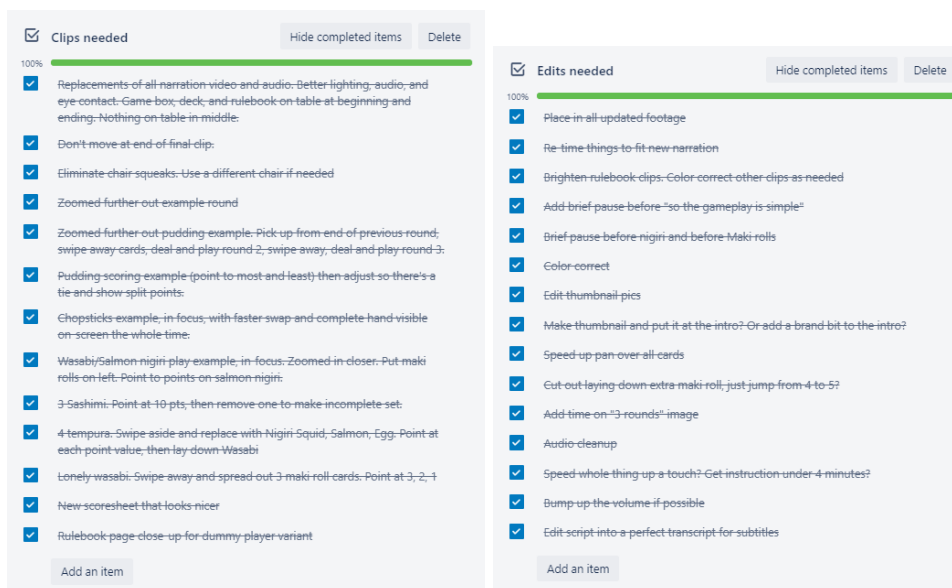


Figure 54. Checklists for filming and editing the final draft of the first *Sushi Go!* video.

Once I have a plan in list form, I make storyboards for any complex clips, and proceed to filming and editing, which is fairly straightforward.

## A10 Assessment and Evaluation

User satisfaction forms the bulk of my evaluation. User satisfaction is likely to be largely determined by the quality of their learning experiences: after watching this video, can they play the game they came to learn? Therefore, my assessment and evaluation were closely intertwined. This also makes sense since my audience is dispersed and casual, so formal assessment would be inappropriate. For *Tortuga 1667*, I also worked with an external client who needed to be satisfied by the product.

Using an iterative design process means each finished video was tested by a number of users during its development, to make sure they could effectively play the game after watching. This feedback was the most important form of assessment or evaluation I gathered. However, I also have some other feedback streams in place for gathering input on the finished videos once they are posted on YouTube.

### A10.1 Viewer Survey

Establishing some form of summative feedback stream was critical to ensure that unrecruited viewers are able to provide feedback after the videos have been posted. This serves as a failsafe in case some critical error makes it into a finished video. Less pressing feedback won't lead me to edit and repost a completed video, but can influence my strategies on future videos. I invite viewers to take this survey at the end of each video, and encourage them to provide honest feedback to help the new channel move forward in the best direction possible. A link to the survey is provided in each video's description. The survey is hosted in Google Forms and appears as follows:

The figure shows three sequential pages of a Google Form titled "Game Point Video Feedback".

- Page 1:** Asks "What video are you giving feedback for?" with a text input field and a "NEXT" button.
- Page 2 (Instruction):** Contains several questions:
  - "Do you feel confident that you can play the game after watching this video?" with a 4-point Likert scale (1-4).
  - "The pace of the video was..." with radio button options: Much too slow, A little too slow, Just right, A little too fast, Much too fast.
  - "Were the examples in the video helpful?" with radio button options: Yes, Often, Sometimes, No.
  - "Were there times when you felt confused or overwhelmed while watching the video?" with a text input field.
  - "How many times did you have to pause, rewind, or rewatch the video to play confidently?" with radio button options: Never, 1-2, 3-5, 6+.
  - "Were there questions that came up that the video didn't answer?" with a text input field.
- Page 3 (Presentation):** Contains several questions:
  - "Were there any problems with the quality of the visuals?" with checkboxes for: Issues with lighting, Issues with size: too small to see details, Issues with size: too large to see context, Issues with resolution, Issues with on-screen text or visual aids, and Other: (text input).
  - "Were there any issues with the quality of the sound?" with checkboxes for: Issues with volume: too quiet, Issues with volume: too loud, Issues with sound quality, Issues with host's enunciation, and Other: (text input).
  - "I wish the host was more..." with a text input field.
  - "Do you have any other feedback?" with a text input field.

Figure 55. The three pages of the video feedback google form.

The questions asked in the survey are based on criteria used in previous research of instructional video quality, and important criteria identified in my learner analysis. They prioritize instructional quality, but also address presentation concerns. The format of each question is intended to balance the needs of user time and actionable results. Thus, most questions are multiple choice, but a few have space for free response. A draft of the survey was tested with a few learners, and a number of questions were rewritten to improve their clarity before the first video could be published.

To date, no viewers have responded to this survey.

## A10.2 Other Viewer Sources

The YouTube ecosystem also provides other sources for viewer feedback. Conversations in YouTube's comments section are an ideal place to ask viewers how they use the videos, which games I ought to teach next, and other useful marketing questions. If viewers point out errors in the instruction, I will take the videos down and fix these. Other comments will primarily be used to improve future videos, though.

YouTube's analytics also provide an excellent measure of the video's overall usefulness to my audience. View count, view length, likes, dislikes, shares, and channel subscriptions will all provide clear metrics of viewers' opinions. Some summary graphics from YouTube's analytics are presented in Figures 56 and 57. Since the videos were posted so recently, these figures are likely to change, but initial findings suggest that the most viewers find the channel while searching YouTube for a video teaching *Sushi Go*. Viewers who stay past the video introduction tend to stay until near the end. How many viewers stay past the introduction varies by video, near 70% for the *Sushi Go!* videos and 40% for *Tortuga 1667*. The reasons for this difference aren't clear, but may be related to video length, game popularity, or some other factor(s).

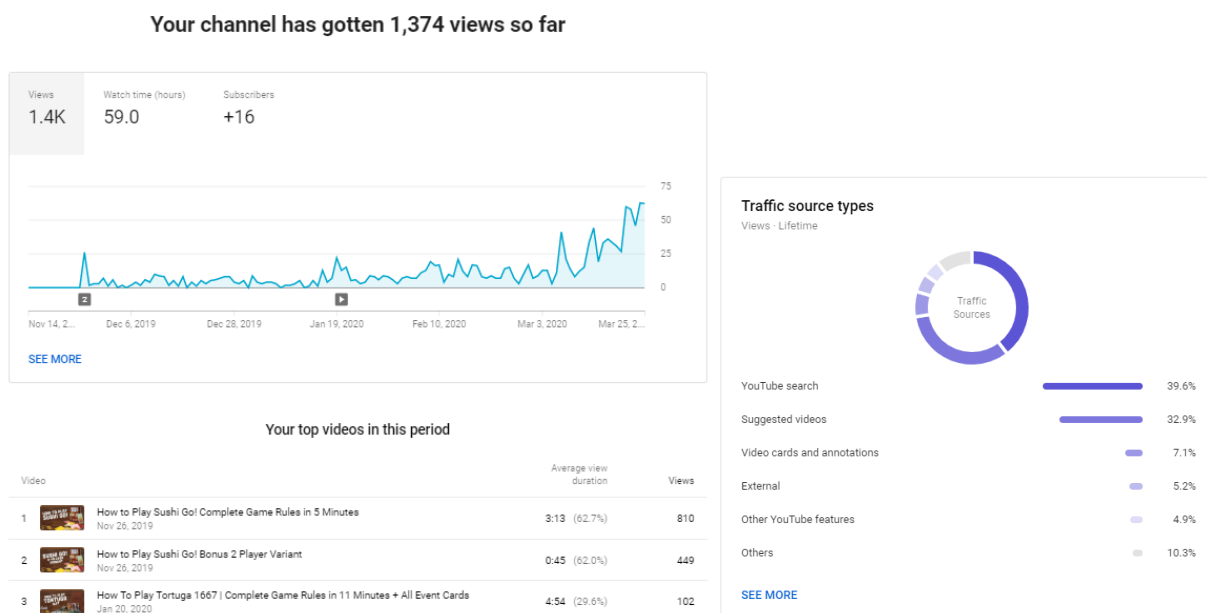


Figure 56. Channel analytics from YouTube on March 26<sup>th</sup>.

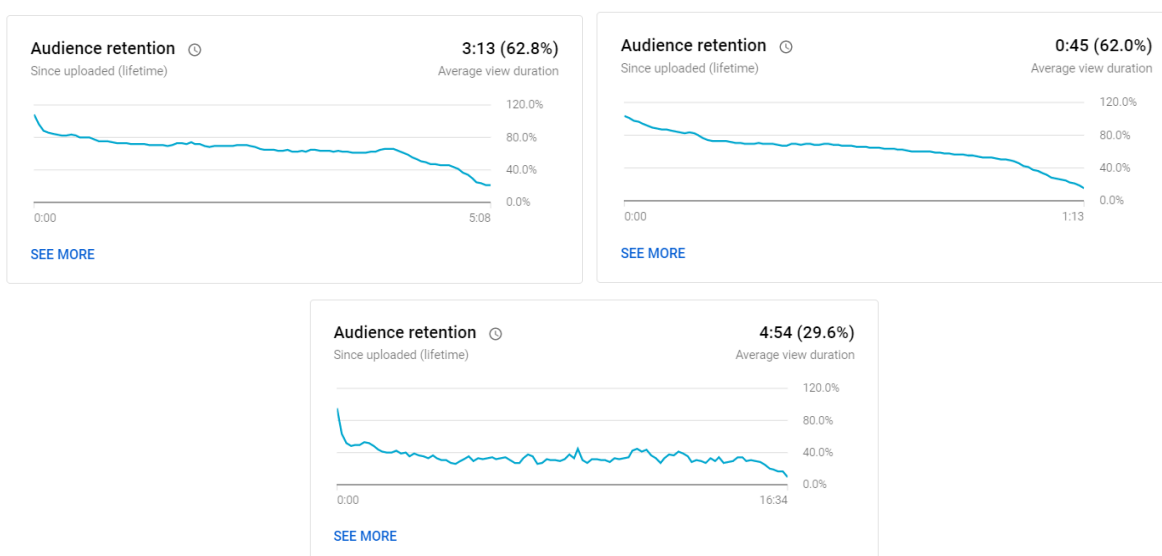


Figure 57. Audience retention over time for each video, retrieved on March 26th. Complete *Sushi Go!* rules (top left), 2-player *Sushi Go!* rules (top right), and *Tortuga 1667* rules (bottom).

I have also received some personal communications outside the YouTube system from friends and family who watched the videos, in the form of text messages and Facebook comments. It is likely this sort of feedback will continue.

## A10.3 Self-Evaluation

I also created a self-evaluation checklist to use during each video's creation. I refer to this checklist when establishing success criteria for each video draft on my Kanban board, and ensure each item is checked before posting the finished video.

Self-Evaluation Delete

0%

- Is the content covered complete enough for a new player to start the game?
- Is the video reasonably short?
- Is the content structured to present the big picture first?
- Do topics flow in a logical order?
- Are difficult topics given extra attention with reviews, examples, or visual aids?
- Are meaningful visuals used alongside narration whenever possible?
- Is the tone informal, positive, and exciting?
- Is video quality high?
- Is audio quality high?
- Are branding and audience interaction elements included?
- Does the video have a good title and the following tags: ("game point", gamepoint, "board games", "card games", tabletop, games, play, "how to play", "learn to play", tutorial, [the game's name], [the game's genre] [other game-specific tags])?
- Does the video have a clear description that includes all necessary links (affiliate, rulebook, survey, other visuals) and information?
- Does the video clarify points where detail is omitted and point players to the rulebook as necessary?
- Does the video have a good thumbnail?
- Does the video have a transcript?
- Does the video have all necessary cards and youtube settings applied?

*Figure 58.* Video self-evaluation checklist.

I have set up a button I can use to automatically copy this checklist onto cards in Trello, and I can update the checklist when my design specifications grow by changing that default version.