LIBRARIES GOT GAME

Aligned Learning through Modern Board Games

Brian Mayer & Christopher Harris

Designer Games

There is a rich history of board games in American culture. We seem to share fond memories of childhood games like Chutes and Ladders and an overwhelming drive to create a version of Monopoly for every possible theme. Put all of that aside, however, as none of it helps explain the types of games discussed in this book. Here we will talk about modern board and card games either directly descended from or inspired by a wave of European imports. As will be seen, these modern games bear little resemblance to the traditional American style of games involving rolling dice, moving a pawn, and seeing what happens on the square where you land.

There are many names for modern board games. To describe their style (not their place of origin), they are sometimes referred to as Eurogames or European-style board games. This acknowledges the game design renaissance in Germany that led to the recent surge in modern games. These new board games are also called *designer games.* Unlike older games, modern board games usually feature the name of the game designer on the box cover. Just like readers follow authors, gamers will follow game designers who may create games with multiple publishers. Throughout this book, we will use the term *designer games,* which also includes card games that don't use a board. The use of the term also emphasizes the important work of the master game designers who create these excellent resources for school libraries.

WHAT MAKES DESIGNER GAMES DIFFERENT

Think about the rules for the iconic American board games like Chutes and Ladders, Candy Land, Monopoly, Sorry!, or Life. In all of these, the primary mechanic for game play is rolling dice and moving the number of spaces shown on the dice. Based on the square where the player's pawn lands, something happens. This simple mechanic makes for easily learned

games but does not provide much in the way of intellectual engagement with the game play. Though there are some financial decisions to be made in Monopoly, all of those decision-making opportunities are established by the rolling of dice. Luck trumps every other mechanic in these games. Though many still include an element of luck, designer games are more often built around a series of shared characteristics.

Information-Rich Environment

While risking everything on a roll of the dice can be exhilarating, it does not offer much in the way of long-term engagement and repeat play value. Recognizing this, modern game designers present a range of options spaced along a continuum defined on either end by chance and strategy.

Examples of these two extremes can be seen in traditional games like war and chess. In the first, players randomly compare two cards from dealt decks; there is no opportunity for strategy, as the cards are randomly distributed and randomly drawn for comparison. On the other hand, chess is what is called a perfect information game. Both players have access to the same information about the current state of the game and all potential moves are known at all times. Games of pure chance can grow boring because there is no opportunity for improvement, while improvement in games of pure strategy can require a huge commitment to studying and mastering the actions and reactions found in established styles of play. There are passionate supporters of both extremes, but most casual game players are looking for something in the middle.

There are designer games available to accommodate many different levels of chance and strategy across a wide variety of genres. For example, players can choose between two racing games, Formula D and Bolide, for a game that meets their preferred style. In Formula D, players make strategic decisions as they shift up and down through gears to navigate the track. Movement of each player's car token is determined through the roll of a die for each gear; third gear, for example, is represented by an eight-sided die with the sides showing four, five, six, six, seven, seven, eight, and eight. This means that statistically you are much more likely to move six, seven, or eight spaces than the minimum of four, but the strong element of chance means a roll of four can lead to a drastic loss of position on the track. In comparison, Bolide provides a near-perfect information environment where players use vector movement rules to select each move. Instead of rolling dice, players use a momentum marker to determine their range of possible moves based on their current vector of motion. A car can be pushed as fast as desired, but a player's understanding of physics and Newton's laws will quickly be revealed as cars drift into corners with too much sideways momentum. Chance only enters the game in a few situations such as dice rolls to determine a fast, normal, or slow start or to resolve possible collisions between two cars. It is also important to note

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For schools and libraries, the continuum defined by chance and strategy probably has the most impact on how the game approaches the use of information. If Formula D had players roll simple six-sided dice with an equal chance for each number one through six, then there would be no need to process any information as the outcome would be decided purely by chance. Compared to mainstream American games, Formula D introduces a higher level of information processing by requiring statistical analysis to select a gear with a certain die roll range. Bolide demands a high level of information processing as players must constantly plan ahead for speed increases and decreases to address shifting vectors of momentum. Another way to look at these differences is to consider the role of chance in these games as a stand-in for knowledge. Instead of chance, Bolide requires an advanced understanding of physics, while Formula D uses the chance roll of a die instead of vector calculations. Therefore, the chance/strategy continuum in many cases can also be seen as a complexity continuum that defines the level of background knowledge and information processing required by a game.

Open-Ended Decisions

Another characteristic that is especially prominent in designer games with a strong use of strategy is complex decision making. Along with a high level of information, many games present players with a more open-ended play environment. Each turn in Puerto Rico, players select the role they want to take as they develop plantations and other buildings on their island. As with Bolide, Puerto Rico is a perfect information game dominated by strategy; the only thing left to chance is selecting the types of plantation crops available for development each round. Unlike the singular method of winning found in Bolide, however, Puerto Rico presents a rich selection of opportunities for success. As with real-world markets, some players in Puerto Rico will profit by growing and selling crops, while others will focus on building valuable real estate. The large number of possible building combinations, along with imposed scarcity for each building type, forces players to be flexible. Successful strategies have emerged, but players can experiment with new ways of interacting with the game and with new strategies.

As will be seen later, the open nature of many designer games is one of the characteristics that makes them especially powerful in schools and libraries. When players are making complex decisions, they have to process more information and use higher-order thinking skills. This use of information literacy skills is the foundation upon which game/curriculum

alignments can be developed. Puerto Rico forces players to investigate a constantly shifting game environment, use an inquiry-like process of considering options, and evaluate both their game play and the play of others. Contrast this to the decision making and information processing in a game like Monopoly, where rolling dice and moving a pawn leads to one of the few decisions in the game: to buy the property or not.

End-Game Scoring

Many designer games are created to engage players in a shared community of play that allows for ongoing development. In most cases, these games are not a race to eliminate players so that the last player surviving can be named the winner, as is found in so many traditional American games. Instead, designer games tend to feature end-game scoring based on victory points gained through the completion of goals or gathering of resources. This means that players can be part of the game play throughout the game, as opposed to being forced to withdraw from the experience to sit as spectators on the sidelines. In a school or library setting, those players who were eliminated early present a challenge: Will their being removed from the game create a disruption when they are left with nothing to do?

Ticket to Ride is a train game often used as a gateway game—an accessible game that serves as an introduction to designer games. In this game, players work to build train routes across America that connect cities and meet individual goals. Throughout the game, points are scored on a track around the edge of the board—an increasingly common feature in many designer games—but the real victor may not emerge until the hidden objective cards are revealed at the end of the game. Even if a player feels she might not be in the running to win, she can still have a huge impact on the outcome of the game by completing critical train routes to block other players. Unlike elimination-style games, designer games that use an end-of-game scoring mechanic like this can keep everyone engaged, reducing the potential for disruptions from disengaged (and perhaps even disheartened) participants, and also facilitating moving groups through a series of games as a cohesive unit.

Balancing the Theme

The most complex feature of many designer games is an intricate interplay between mechanics and theme. There are a number of common game mechanics—the process by which game play proceeds—found in designer games. Designers often use theme (the setting, characters, and general concept behind a game that establish a purpose for playing) to create a unique game that extends the mechanics to new levels. Some games achieve a harmonious balance of mechanics and theme, but often there is one attribute that is more dominant. This does not diminish the game in

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At first glance, Oregon is a game that offers a very strong westward expansion theme. Players establish communities in Oregon by taking turns placing building tiles and people in groups on the board. The thematic links to a social studies curriculum are, however, tenuous at best. There is no in-depth consideration of why people are moving to Oregon or why communities form where they do. Oregon, it turns out, is a math game. Tiles are placed on the board by collecting sets of cards that match symbols along the sides of the board. By playing two cards, players define a pair of Cartesian coordinates where tiles can be placed. This mechanic is certainly not the primary selling point of the game from the publisher's standpoint, though it does make the game well suited for use in schools and libraries.

Even though Oregon may not be selected for use in a school library on account of its theme, that theme is still a critical part of the game. The theme creates a context for play that helps explain the rules. One of the more powerful building tiles in the game is the train station; playing this tile is naturally limited to map spaces that have train tracks. By providing thematic support for rules or play mechanics, designers invite players further into the experience of playing the game. This immersion is what makes games such a powerful tool for learning. Unlike a so-called educational game that might have been designed to teach Cartesian coordinates, Oregon was designed for strong play value within a richly themed environment that just happens to use Cartesian coordinate mapping as a mechanic.

Game Mechanics

Given the complexity of many designer games, it helps that they often make use of common mechanics; this makes it easier for players to learn new games. Schools and libraries can use this as a scaffold to prepare students for more complex games.

Roll-and-Move. Though certainly not as common a mechanic as in traditional American board games, there are still designer games that use dice to control movement. The difference is that the designer games often give players a higher level of control over either the dice being rolled or what happens as a result of the roll. Based on the results on two regular six-sided dice, players in Enchanted Forest can move in any direction in any combination of the two results (four forward, complete an action, five backward, for example).

Open Movement. Some games remove the dice completely in favor of movement points or action points that may be used to move or complete

other actions. This gives the player a much higher level of control over his character in the game. This point is illustrated by comparing two different dungeon-crawling role-playing games: The traditional American game Talisman has players roll a die, trying to get the one number needed to land on the spot that allows them to move forward in the game. Such a high level of chance introduces a great deal of frustration as players bounce back and forth around the one spot they need to hit. In contrast, Prophecy is a designer game that uses open movement to give players control over the game. Players can move one space in either direction for free, pay coins for a horse to move two spaces, pay a few more coins to take a ship from one port to another, or even use coins to travel through portals.

Worker Placement. Another common mechanic found in designer games is worker placement. For example, in Stone Age, a worker placement game that uses a strong element of chance to re-create the struggles of an early tribe to gather resources and thrive, players are not moving around a board. Instead, players are placing pawns into certain areas on the board to receive benefits during a resolution phase, thus the concept of worker placement. In this case, small wooden figures representing the members of a Stone Age tribe can be assigned to various gathering tasks that can result in food or other resources.

This style of game tends to focus on resource management. Not only must players plan ahead to receive maximum benefit from their limited supply of workers, but in most cases those workers are also producing goods that will be applied in various combinations for victory points. Stone Age's workers gather resources that can be turned in for special victory cards. At the same time, however, some workers will always need to be tasked with gathering the food required to sustain the tribe each turn. In addition to resource management, worker placement games also tend to feature higher requirements for time management. There are many more things in Stone Age that you will want (or even need!) to do than can be done in either a turn or the whole game. The placement of every worker ends up being more precious than expected.

Simultaneous Action. RoboRally is a chaotically fun game that teaches rudimentary programming as up to seven players simultaneously move their robots around the board. Games that use this mechanic are great for large groups, as it minimizes the downtime that comes with a player waiting for her next turn. In order to work, this mechanic also often requires a higher level of conversation between players. Not all games with this mechanic go to the extreme of RoboRally. Many designer games use some aspect of this by involving players in actions, reactions, and decisions during other players' turns.

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Role Selection. One way that some games implement simultaneous action is through the selection and resolution of roles. San Juan, a card game based on Puerto Rico, has players select roles in order to build, produce, or sell goods. Each round, every player has a chance to select a role from the available roles. All the players get to use that role, but the player who selected the role gets a bonus ability. This keeps everyone involved in simultaneous action but provides a more structured environment. The simplicity of San Juan also makes it a great scaffolding game to prepare students for the much more complex Puerto Rico.

Games that use role selection can be more open-ended in their play style. Despite the openness, or perhaps because of it, in many games using this mechanic there will often be a mathematically best choice of role for each player in a round to take. Just as in the almost scripted play of very high-level chess, there can be a game choice that will maximize profit and opportunities for victory while minimizing benefits for other players. Mixing players of different skill levels for role selection games is a potential source of problems. More experienced players can become frustrated as new players make less-than-optimal choices of role.

Cooperative Play. One way to accommodate players with different skill levels is to create a more casual, less competitive play environment using games that feature cooperative play. In this style of game, players are working together as a team against the game itself. Cooperative games range from very simple games for three-year-olds up to games that will provide a strong challenge for the most veteran players. This mechanic demands conversation, so don't plan to use cooperative games in a quiet space. On the other hand, the forced communication makes these games a great resource for speech therapy or English-language-learning classes. Depending on the desired outcome or group dynamics, it is important to note that there are two main subgroups of cooperative games: true cooperatives and traitor-based games.

As a true cooperative game for very young children, Max helps preschool-age children learn to work together toward a common goal. Players take turns rolling two dice with green and black dots on them. For each green dot rolled, that player moves one of the woodland creatures in the game closer to safety; for each black dot rolled, Max the cat creeps closer to the small creatures. The group needs to talk about which animal is the best to move, as they are all working together to control all of the animals. Sometimes, when the creatures are in immediate danger, players will need to not roll and instead use their turn to call Max back to the house for a treat. This can be a hard sacrifice for a very young child to make in that they are giving up their turn for the good of all.

To see the real power of cooperative games, try playing Max as a competitive game where three players are each controlling one of the

creatures. The conversation around the board immediately changes and a much darker tone sets in. Players are unwilling to sacrifice a turn to call Max back to save a competitor and so animals that lag behind due to bad dice rolls can quickly be eliminated.

Traitor-based cooperative games introduce some elements of competition while also maintaining the group play aspect of the cooperative mechanic. In some games, there is a chance that one or more players might be a traitor, while other games are designed so that at least one player in the group will definitely be a traitor. Battlestar Galactica ensures that someone will be a traitor, but that person may not find out that he is the traitor until halfway through the game. The inclusion of a traitor makes this already complex and engaging cooperative game even more compelling. The tension of working within a team knowing that someone is (or at least will be) a traitor can be quite appealing. It must be understood, however, that the traitor mechanic can reduce otherwise cooperative games into paranoid grabs for power as players struggle to trust anyone besides themselves. As this is a temporary game environment, the potential for interpersonal conflict is not necessarily something that removes a game from consideration. Simply be aware that not all cooperative games are as focused on team building; games with traitors can include a period of suspicion until the traitors are identified and the team can begin working toward a common goal.

GAMES FOR ALL

Designer games provide rich and engaging play experiences that easily match the level of complexity found in video games. With a variety of mechanics going well beyond the traditional roll-and-move, designer games force players to explore, inquire, interpret, and act upon information gathered from many sources. Perhaps more important for schools and libraries, these games provide a more social environment where players are interacting or collaborating as they play. As will be seen later in this book, many of the games can be aligned with library and information literacy skills and state content standards. Through a combination of game mechanics that reinforce skills and themes that provide context for learning about content, designer games are a valuable resource libraries can provide to support instruction. The introduction of games into schools, however, demands a higher burden of proof to overcome the misconception that playing and learning are separate and distinct states of being.

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