

Exploring Table Games and Literacy in Preschool, Kindergarten and First Grade Classrooms

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Abstract: Foundational literacy skills are highly important to future academic success, as language skill gaps tend to increase with time. Affordances of table games for literacy in early childhood classrooms have not yet been adequately studied. The purpose of this study is to seek insights from early childhood educators about experiences with games in the classroom. Interviews were conducted with preschool through first grade teachers. This led to the themes: Builds Good Social Skills, They Keep Repeating It and Its Not Boring, Intentional Teaching, They Think—Oh! It's Fun!, We Don't Get to Use Games Like We Used To, and All They Know of a Game is a Handheld Video Game. This study demonstrates importance of games in early child education and concerns to monitor. Exploratory qualitative research also provides feedback for developing and evaluating table game interventions with benefits for early childhood educators, curriculum developers, and table game enthusiasts.

Purpose and Research Question

There is a substantial existing body of research on games and education, however the majority of this research has been primarily focused on affordances of video games, especially in math or science, and targeted toward middle or high school students. These research findings may or may not extend to the unique needs and challenges of table games as literacy instruction tools for younger children. The purpose and central qualitative research question guiding this qualitative research is to explore affordances of table games as perceived by early childhood educators. The central qualitative research question guiding the qualitative exploratory phases is: "What are the perceptions about affordances of table games for early literacy education?" Specific issues that I planned to address included:

- What are attitudes and practices about games in early education classrooms?
- What are perceived benefits or challenges regarding games in the classroom?
- For what purposes are instructors using games (educational, social, recreational)?

Literature Review

Play

Play facilitates learning, stimulates imagination, provides opportunity for social interaction, and increases motivation through power or praise (Blanchard & Cheska, 1985; Csikszentmihalyi, 1990; Pellegrini, 1995). However, seductive details in games have potential to be distracting to learning if content and game mechanics are not closely integrated or players focus on doing well, rather than on educational content (Mayer et. al., 2001; Sweller, 1994).

Motivation

Motivated students are more likely to engage and persist at tasks and improve with increased effort and practice. Activities perceived as appropriately challenging and meaningful can lead to increased motivation, however activities viewed as boring or irrelevant lead to decreased motivation for elementary and college students (Pajares & Valiante, 2006). Research on competition is varied, some researchers stress negative impacts of academic competition (Deci et. al., 1999; Vallerand et. al., 1986) while other researchers view it in a more positive light (Burguillo, 2010). Specific implications of this research for preschool age children may need to be considered more fully.

Development

Children in preschool and early grade school, when awareness of written language begins to develop, often learn best by experiencing, playing, and actively engaging in tasks. They may have difficulty understanding complex logical rules or distinguishing other people's symbolic viewpoints, concepts requiring abstract thought (Müller et. al., 2009). Social interaction and cooperation are also essential to development of cognition (Vygotsky, 1986). Clear and simple rules may help children in preschool or early grade school who are still developing social skills to understand acceptable social interaction (AAP, 2004).

Literacy Skills

People need to learn essential early literacy skills such as print awareness, alphabetic principle, grapheme relationships, phonics, blending, segmentation, rhyming, and vocabulary in order to read, comprehend text, and write successfully. Practice decoding words phonetically and increased vocabulary knowledge both increase word recognition and improve reading fluency (ALA, 2004). Word games allowing children to manipulate letters and sounds in words, or games focusing on rhyming and word families could teach or give children opportunity to practice decoding, spelling, and phonetic skills and learn new vocabulary words especially if targeted to the specific student abilities.

Qualitative Data Collection and Analysis Methods

My overall philosophical worldview is pragmatic, however I view qualitative research through a social constructivist paradigm (Denzin & Lincoln, 2011). Methodology for conducting this case study was influenced by the work of Creswell (2013) and Stake (1995). Participants were selected using an opportunistic, typical case, purposeful sampling approach, primarily due to convenience and gatekeeper access. To increase variation, participants from multiple institutions were approached. Participants included three preschool instructors, two child development administrators, four kindergarten teachers, four first grade instructors, and one public elementary school administrator. Participants were asked:

- What is your general opinion about games in elementary classrooms?
- Are there benefits you've experienced or anticipate with games in the classroom?
- Are there concerns you've experienced or anticipate with games in the classroom?
- What are your thoughts about games to teach or promote early literacy skills?
- What are your thoughts specifically about board or table games in elementary classrooms?
- Have games impacted your work or teaching?

There is a wide selection of literature that details qualitative research in general. I have found Creswell's text on the subject to be particularly useful in thinking about how to qualitative research in an overall sense (Creswell, 2013). Researcher positioning and interpretations are critical, but a richer and more genuine picture can often be found when high priority is placed on framing the views, experience, and story as much as possible from the words or of the participants themselves. With this philosophy in mind I tried to use in vivo codes and themes, taken from participant quotes where applicable. Interviews were recorded, transcribed, coded with lean codes at the paragraph or sentence level, and then refined into cluster themes using in-vivo language. Validation strategies included peer review of codes to establish inter-rater reliability, member checking of themes and subthemes, and planned triangulation of data through planned future research including interviews, observations, and game play testing.

Vignettes

Location One

Soft music played in the background as young child-care staff encouraged children to nap, or at least play quietly. Classrooms in the facility were separated into cubicle rooms based upon age ranges. Most children were sleeping, but several infants and toddlers were awake and fussy. Although the facility had been in its new current location for a few months, it seemed that staff and administration were still in a process of getting settled into new settings and routines. Children in the facility were from diverse ethnic backgrounds, many of the children in the facility came from lower to middle SES families.

Location Two

This research was focused on the older classroom at the development center with children ages three to five years. The center also has a younger classroom with children a year-and-a-half to three years. Children's drawing lined the walls under painted slogans including "we are artists and scientists" and "we value learning". The central lobby and hallway included a puppet theater and nook with blocks, puzzles and toys. Laughter could be heard from children playing outside. Children in the facility come from diverse ethnic backgrounds, many of the children in

the facility are from middle to lower-upper SES background, where parents and families tend to be highly involved with the facility.

Location Three

Each grade in this public school is arranged into a pod or cluster of individual classrooms with a shared central space with tables and resources. Kindergarten and first grade teachers met at tables in the shared cluster space during their brief planning period while their students were involved in specials activities. Although the teachers were friendly and seemed glad to participate, there was an underlying sense of stress from too much to be done and too little precious planning and regrouping time. Some participants joined and left the group conversation as they needed to address other pressing class preparation concerns. Children from the school came from diverse ethnic backgrounds, many from lower to middle SES families.

There is a wide range of variability in the ages and rates for childhood social and literacy development. A few bright and gifted children are early fluent readers in preschool, while some children still struggle with early literacy concepts in first grade or beyond. Even looking at individual children, there is often rapid growth and changes in these areas during the age span from preschool to first grade. For future quantitative research it would likely be better to look at the impact of table games in a more tightly defined and narrowed context in terms of social context and age range. For the purposes of this qualitative study I wanted to look more broadly in terms of age and educational settings in order to gain a wider picture encompassing a larger spectrum of potential early literacy development emergence. Three substantially different locations, three different grade levels. What insights can be gained about uses, benefits, and concerns for games, or ways that games can be better tailored to support curriculum needs and schedules?

Themes and Subthemes

Builds Good Social Skills

Subthemes included “You Can Be a Good Sport”, “It Turns into a Game of *Calvin Ball*”, and “Fun Way to Connect With Families”. Participants viewed games as a way to teach and reinforce good social skills including following rules, sharing, taking turns, cooperating and interacting as part of a learning community, being a good winner and loser, and viewing losses and mistakes as opportunities for learning and improving. Without teacher intervention children have trouble taking turns and following rules, which can lead to bossiness, controlling, or fighting. Several teachers expressed concern with hurt feelings in competitive games and preferred to emphasize cooperation. Other participants were more positive toward competition. Most expressed strong nostalgia for board games with their families, and saw benefits in families playing table games together and for getting to know others.

“If they know the rules of the game then it works okay. Sometimes you do find with little kindergartners if you’re trying to have them play games individually in a group with no teachers there they have a tendency to try to make up their own rules. It turns into a game of *Calvin Ball*.”

“I think there’s also power in even if you don’t win *you can be a good sport*. I think that’s another lesson that is really powerful. Letting somebody else win... how are you going to win? How are you going to lose? How are you going to handle it? So I think games can be a *nice learning experience for social behaviors*.”

“If we could have a game night for families for family engagement. I think would be a *fun way to connect with families*. My grandparents played cards. Played bridge and pitch. It’s *kind of a lost activity*. You don’t see it that much anymore.”

They Keep Repeating It and its Not Boring

Subthemes included “Exposure and Practice to Literacy Skills” and “Act It Out”. Participants viewed games as a way to give multiple opportunities for review, repetition, and practice to build recognition for letters and words. Active involvement in games and hands-on activities was viewed as beneficial for increasing motivation and engagement. Some participants expressed a high degree of physical activity with games and activities, and mentioned that games can increase gross and fine motor skills, though some preschool teachers expressed concerns with losing small pieces or choking hazard.

“We know that *children learn best through repetition* and so that board game of handing different kinds of pieces, whether it be cards or manipulatives, that they handle several throughout game gives them multiple opportunities to practice their understanding. So whether it be I drew an A card now I have to find the A on the board so there’s two times that they’re connecting to the letter A so that gives the repetition of practice over a short time to kind of build that schematic way of letter recognition.”

“I think it gets the kids reasonably excited to play and that helps them learn. Sitting down as reading books sometimes they don’t seem as interested...as they would by playing a game especially board games where they can actually interact with it.”

“We do matching games, flip letters over two at a time...jump on the letters, make letters out of the kids.”

Intentional Teaching

Subthemes included “You Are Going to Need to Individualize”, “It is Facilitated by the Teacher”, “Geared Toward Educational Merit”, and “Thinking is Definitely a Part of Games”. Participants focused on developmentally appropriate practice and suggested games are more effective when targeted toward the skill levels of individual children. Problems can arise when playing games with children with high differences in skill level. Many of the participants spoke about modifying commercially available games to meet educational needs or to work to tie in games with curriculum. Young children may struggle with game rules and interaction and the teacher facilitation is important for the games to go smoothly. Facilitation can also occur with peer learning groups. Participants viewed games as beneficial as long as they support and reinforce learning objectives. Especially in first grade, the teachers expressed that there is not a time or place for games in the classroom unless they align to the curriculum. A few of the participants mentioned that games cause players to think more deeply and solve problems and saw a major benefit of games that they can stimulate creative thinking and deductive reasoning.

“Every single child *you are going to need to individualize* for that child. I think today’s classroom, especially with integration of inclusion strategies in that now you have an inclusive classroom and so you have children at all *different levels or abilities* and you want to include children with disabilities in these social playtimes and so you’re going to have to think about how do I include...”

“Sometimes you need to watch when you have board games if they’re *really going to be learning* from them...You have to watch the ones that you purchase that have been made as to whether or not they’re really going to engage the kids and help them learn anything. I *wouldn’t really want to put games in here that are just busy time*”.

“Maybe a strategy, maybe *deductive reasoning*, even a math skill. I think if the games are *aligned to objectives* they can be very powerful and its just strategically thinking about how to use those games.”

They Think—Oh! It’s Fun!

Subthemes included “Positive Outlook of a Game”, “Not a ‘Game Game’”, and “They Don’t Realize How Much Learning”. Although several of the teachers mentioned modifying existing commercial games, at all levels teachers spoke more about playing game-like or hands-on activities than longer or more formal board games or games with a winner or loser. Several participants discussed the notion that with games children are having fun and learning without it seeming like a learning activity, allowing teachers to sneak learning in undetected under the children’s radar. Children were described as being more engaged when they perceived activities to be games rather than work.

“I think too that positive outlook of a game. We’re going to play game! You see every child smile once you say that. So if you can connect that social emotional feeling of we’re going to play a game with literacy I can see how much positive attitudes would change with literacy.”

“The games that I would use would be phonics games, maybe compound words those kinds of things and *they’re maybe more puzzlish* or a set of sequence cards and they put them together and tell me the story using words certain like first, then, next, and finally.”

“I use them as much as I can because just because kids like games. Anything you can turn

into a game is fun. Sometimes it can be a worksheet and you can turn it into a game. Sometimes it's just their *perception and they think it's a game*. They're like "we're going to play a game!" and...here's a worksheet."

We Don't Get to Use Games Like We Used To

Subthemes included "We Get So Busy" and "I Can Put it in the Workstations". Teachers have a lot of demands and expectations. Sometimes trying to meet curriculum, administrative, and schedule constraints leaves little time for playing games. This seemed to be especially true for the first grade teachers. Preschool teachers reported playing games frequently, as did kindergarten teachers, though in a more structured way. Although they were generally positive toward benefits of games, many of the first grade teachers expressed that there was not much time and support for playing games as they were perceived to take away from time for lessons and instruction. Although time for playing games was limited in some cases, especially in first grade, teachers specifically emphasized incorporating games into workstations and learning centers.

"I play games too more at beginning at the year. When I was a kindergarten teacher we played games all year but...*we don't get to use games like we used to*. Especially in math... We used to be able to do a lot of games more in math but we just don't anymore..."

"*Other than at their workstations* there is really not a time. We don't ever have a time that we can just play a game. There's just a lot that we have to do. So we make it our own way to make games with workstations."

"I think that would be fine as long as the focus is on literacy and *during workstations*. If you wanted to come during workstations and play with them I would be fine with that! That's really the only time. Its an hour and 20 minutes of the day. If they're not in reading groups they're in workstations. If you hung out at one station and taught the game and people rotated to you that would be so great! They would love that!"

All They Know of a Game is a Handheld Video Game

Some of the teachers did not think kids were playing table games at home, but many mentioned children playing games on electronic devices both at home and school. Several teachers mentioned good apps and learning programs available and many of the teachers were currently incorporating computer games into learning in addition to other forms of games and fun activities.

"I think it is easier for parent to just say go sit at the video game rather than get out the *Monopoly* game. Now if you're going to play a game we're going to get out the computer or iPad and we're going to play a game on there. It's not like they're not playing games, but I don't even think they own a board game."

"There *games that are on the computers* that the kids do... technology wise..."

Everyday at least one kid goes on the computer to the Wonders website which goes along with our new curriculum and they have all kinds of phonics games. They have to sort, grammar, they are fixing sentences by themselves."

Discussion

Games have the potential for many valuable experiences and benefits, including but not limited to tools for academic skills. Teacher participants, especially for preschool age, used games to teach and reinforce social skills and learning objectives. Often games used in classrooms could be classified more as activities than formal games, but teachers viewed the hands-on nature of games as a factor for increasing engagement and motivation. Children enjoy activities when they perceive they are playing a game and find the activity to be fun, and repetition of key concepts aids learning. However, since children have dramatically varied social and academic skills, the role of teacher as facilitator of games and to make sure that games reinforce learning objectives is critical. Participants viewed games as a good way for individuals and families to connect, but many participants did not think families were currently playing board games much at home, though they are often playing video games or apps. Participants saw benefits for both board games and electronic games to reinforce learning. Especially in first grade, however, constraints of time and curriculum do not allow much room for playing games. Instructors often tried to

include game-like activities as part of their workstations.

Findings from interviews fit closely with both existing research on literacy and play, as well as matching predictions based on personal experiences and observations. As expected, participants' views on competition was mixed. Interestingly, participants in administrative roles seemed more supportive overall of competition than participants with classroom instructor roles. Also as expected taking turns, and following directions were listed as potential problems, but games were seen as a way to improve and reinforce these social skills. Although unsurprising, I found it discouraging that as children entered first grade games and play were modes of instruction that were supported less in schedules by schools. I suspect that this view of games and play in classrooms, unfortunately, continues to trend increasingly less open toward games in older grade classrooms.

Limitations

One limitation to the study involved variation in interview methods. Most participants were interviewed in a one-on-one setting, however in order to accommodate the schedules of some participants, it was necessary for some interviews to take place in a focus group setting. Another limitation to the study involved the interview population. All participants in this study were Caucasian and female. It would be useful in future work to include interviews from more participants, especially to include observations from teachers who are male or from different ethnic backgrounds.

Future Research Plans

The next phase of qualitative research involves additional qualitative case study interviewing members of the game community who are involved with table games for classroom, library, or home learning purposes about experiences and views on affordances of board games for literacy instruction. I also plan field observation research in preschool through first grade classrooms involved with pilot play-testing existing literacy games. Observations will focus on qualitative themes and codes, motivation, competition, luck, social or emotional factors, and issues of seductive details or cognitive load involved in game play. These will be used as part of an exploratory sequential mixed methods framework to design a board game intervention (see figure 1). Instruments and interventions developed based on qualitative findings will be pilot tested on a small scale to evaluate instrument and intervention reliability and validity before conducting quantitative experiment on a larger scale with more participants. This study gives the benefits of allowing the voices and experiences of teachers of preschool, kindergarten, and first grade students regarding games and literacy to be heard, and is one step toward looking at games as a tool to support early literacy instruction.

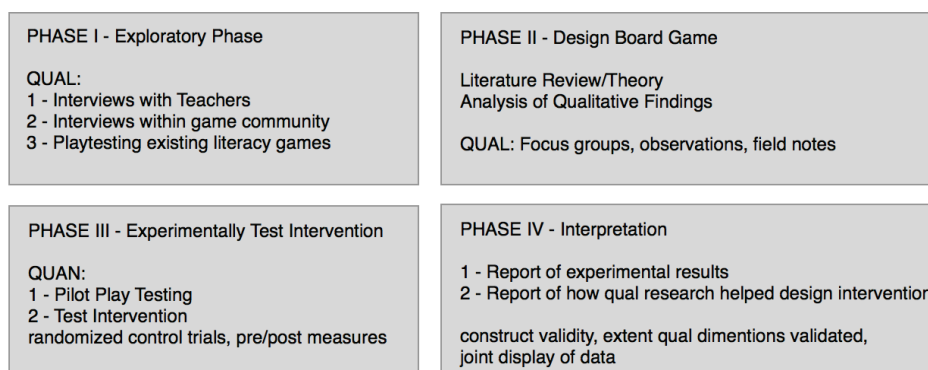


Figure 1: Exploratory Sequential Mixed Methods Framework

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