Getting Serious About Games

Maximizing Game-Based Learning
Part I

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Introducing . . . Me!

- I earned my BS from Bowling Green State University (Summa Cum Laude, Honors) and MS from Purdue University (Andrews Doctoral Fellow).
- Following graduation, I gained 17 years of invaluable experience working as an SLP with preschool-age 22 public school students in the states of Ohio and Florida.
- I completed my PhD from Old Dominion University with research focused on effective identification and intervention for children with Developmental Language Disorder.
- I am a past President of the American Board Certified of Child Language and Language Disorders. You should BCS-CL, too!
- Following time as an Assistant Professor at Indiana University – South Bend, I moved to Michigan and opened a private practice that lets me "Play on Words" all day!

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Agenda

- Getting Started
  - The "What" of GBL (10 min)
  - The "Why" of GBL: Evidence and Rationale (20 min)
- Strategic Game Selection (30 min)
- Matching Games to Specific Goals (25 min)
- Wrap-Up and Preview of Coming Attractions (5 min)

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Learning Objectives

Participants will . . .

1. describe perceived benefits and challenges to game-based learning.
2. explain how SLPs use game-based learning in accordance with evidence-based practice.
3. recognize and use important features when choosing potential games for specific treatment goals.

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Getting Started
The "What" and "Why" of Game-Based Learning

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Therapeutic Use Defined

- The term game-based learning describes applying games and game features to learning opportunities or experiences (Brackenberry & Kopf, 2022).
- Mental health professionals define the related intervention of play therapy as "a systematic use of . . . the powers of play to help clients resolve psychosocial difficulties and achieve optimal growth" (Association for Play Therapy, 2023).
- Therapeutic Use can be defined by paraphrasing the ASHA Scope of Practice (2016) as the systematic use of a game or game feature to establish a new skill or ability or remediate an impaired skill or ability to improve an individual's quality of life.
- For SLPs, therapeutic use thus aims to achieve optimal communication.

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What is Game-Based Learning?

- Gamification
  - Adding game elements (points, leaderboards) to non-game activities
- Serious Games
  - Where learning is the primary purpose, embedded directly in the gameplay
- Commercial Games
  - Primarily designed for entertainment and sold to the general public

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- These terms mimic the familiar continuum of naturalness:

Natural Play	↔	Structured Practice
Child-led	Hybrid	Clinician-directed
Commercial Games	Serious Games	Gamification
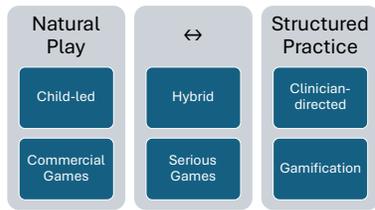
(Sources: Albertazzi et al., 2019; Brackenberry & Kopf, 2022; Wainwright, 2014)

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Why does Game-Based Learning Work?

- Increased engagement
  (Abdullahi & Adebayo, 2019; Avdiu, 2019; McKendree et. al., 2019; McKim et. al., 2020; Somen & Goksu, 2020; van der Westhuizen & Hannaway, 2021)
- Increased motivation
  (Chou et. al., 2020; Rahmadi et. al., 2022; Ryan & Rigby, 2019 Sánchez-Rivas et. al., 2019; Somen & Goksu, 2020)
- Collaboration, Creativity, & Sharing
  (Abdullahi & Adebayo, 2019; Bozkurt, 2019; Chou et al., 2020)
- Socialization
  (Bozkurt, 2019; Chou et. al., 2020; Hayak & Avidov-Ungar, 2020)
- Experiential Learning
  (Abdullahi & Adebayo, 2019; Jančič & Hus, 2018)
- Permanent Learning
  (Plass et al., 2015; Somen & Goksu, 2020; White et al., 2015 ; Yang et al., 2018)

(General Sources: Alotaibi, 2024; Brackenbury & Kopf, 2019; Folkins, et al. 2022)

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Different Types of Games

	Chance	Strategy	Action	Role-play
Analog				
Digital				

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What is a TARPG?

Role-Playing Games (RPGs)
- Role-playing games are collaborative storytelling games that include Dungeons & Dragons®, Pathfinder®, Pokémon®, and World of Warcraft®.
  - They work within shared rules, called game mechanics, and consist of a Game Master (GM) and players
  - The GM describes the world the story is set in and enforces shared rules
  - Players determine and describe how their characters interact with the story elements
- Role-playing games (RPGs) have been specifically investigated as effective tools for motivation in learning (Bawa, 2022).
- Young adults with ASD specifically identify gaming to have a positive impact on their lives and development (Finke et al., 2018).

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Games in Speech Language Pathology

- Early guidance (Black & Ludwig, 1956): Games should support—not replace—therapeutic goals, be relevant to the child, and offer frequent, developmentally appropriate practice.
- Treatment expectations (Roth & Worthington, 2016): Emphasis on meaningful communication, individualized and culturally appropriate materials, and maximizing client engagement and response time.
- Integrating digital features (Folkins, et. al., 2016): Focus on functional improvement, addressing daily experiences, balancing risk and reward, and structuring sessions for skill generalization.
- Designing games for ASD (Tang, et. al., 2019): targeted skill scaffolding, age-appropriate narratives, mini-games for practice, engaging visuals, real-life scenarios, and opportunities for individualization.

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Strategic Game Selection

For SLPs and Teachers

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Considering Game Use

Game Consideration	What They Said
Appropriate for Level	SLP 4: "I definitely would base it on age, and… cognitive level, making sure that it's not too complex."
Focus on Fun	Teacher 1: "I would love to be able to do a game that is so engaging that they forget that they're actually learning the material."
Learning Vehicle	SLP 2: "The game is not the central focus… It's your vehicle to get to where we want to go."
Modifications	SLP 4: "No matter what the game is, I always have to modify it." Teacher 1: "I absolutely modify the complexity… for the audience that I've got."
Proof of Effectiveness	Teacher 1: "I'm required to go back to the I CAN statement… to make sure everybody realizes exactly what it is they're trying to learn."
Size of Group	Teacher 2: "It's pretty much all large group for me." SLP 1: "My schools are smaller, so our biggest groups are like 3."

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Considering Game Components

Game Consideration	What They Said
Content	SLP 4: "I don't usually care if there's any instructional content to my games."
Feedback & Interaction	SLP 1: "We're definitely gonna jump in by that feedback." SLP 3: "I am providing feedback." Teacher 1: "If they're doing the wrong one… and they're having a debate… it's gonna stick better if they do it themselves."
Game Dynamics – Time	SLP 3: "Short and sweet so we get multiple trials."
Game Mechanics	Teacher 2: "Ones we do interactively through devices." SLP 3: "Like Don't Break the Ice."
Instructional Strategies – Embedded Realism	SLP 1: "We're going to have all these aspects that work into their everyday lives."
Instructional Strategies – Solving Problems &	SLP 3: "'Oh no, the part is falling off. How can we fix this?'… It's such a great learning opportunity."
Narratives	Teacher 1: "Using some narrative to help with the social emotional learning."
Player Experience	Teacher 1: "All the kids being involved 90% of the time." SLP 4: "One person does a lot of things… everyone else is waiting and getting squirmy."

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Choosing the Right Games: The Obvious

1. Appropriateness Comes First
   - Games must match students' age, cognitive level, and linguistic demands.
   - Overly complex or visually busy games are immediately ruled out.
2. Fun Is Essential, but *Purposeful*
   - Engagement is valued when it supports learning, not distracts from it.
   - "Fun" is treated as a motivational engine, not the instructional goal.
3. Flexibility Drives Selection
   - Both SLPs and teachers expect to modify rules, pacing, complexity, or materials.
   - Games that can't be adapted shouldn't be chosen.
4. Learning Evidence Matters
   - Teachers look for alignment with curricular goals and observable outcomes.
   - SLPs look for practice opportunities, feedback loops, and measurable responses.

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Choosing the Right Games: The Challenges

1. Developmental Fit Is the First Filter
   - Games must match students' age, cognitive level, and linguistic demands.
   - Overly complex or visually busy games are immediately ruled out.
2. Fun Is Essential, but *Purposeful*
   - Engagement is valued when it supports learning, not distracts from it.
   - "Fun" is treated as a motivational engine, not the instructional goal.
3. Flexibility Drives Selection
   - Both SLPs and teachers expect to modify rules, pacing, complexity, or materials.
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Considering Collaboration

Bridging the Gap	Their Brainstorms
Learning/Teaching Skills	SLP 1: "SLPs are so used to modifying games… we might be able to help modify games in ways that teachers wouldn't think of."
Shared Experiences	Teacher 1: "If I had the SLP in the room… they could hang out with whichever clients they need to…"
Shared Games	Teacher 2: "If the SLP could set the scene for how they're useful… teachers would be happy to make more use of them."
Shared Time	Teacher 1: "Even just the simple act of saying, 'Hey, speech therapist, this is a game I'm using next week'… would be step one."

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Choosing the Right Games: Doing Better

- In a school setting:
  - Use your preservice days and your schedule to set up collaboration expectations and automations.

- In any setting:
  - Consider some Critical Questions as you modify, create, or purchase games.

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Critical Questions

Game Feature	Question
Appropriate Level	Is the game developmentally or age-appropriate in rules, procedures, and physical objects?
Player Experience	Does the game interface provide players with a sense of satisfaction and completion?
Modifiability	Is it easy to make changes to the game to meet the needs of the players?

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Critical Questions

Game Feature	Question
Group Size & Interaction	Does the game encourage peer collaboration to facilitate learning? *Is this a classroom game? Is there a storyline or narrative that can connect students to their learning?*
Practice Dosage	How often and for how long do you need to play the game to support player's acquisition of knowledge or skill? *When and where will your student(s) play the game?*
Feedback	Does the game allow for both natural feedback from game events and peer players, as well as target specific feedback from the SLP?
Embedded Realism	Does the game include or simulate real-life experiences to help learners generalize knowledge or skills?
Problem-solving	Are there opportunities for learners to engage in conceptual problem solving within the game?
Game Focus	How will you record the data to show learning? *Are you and the teacher looking for the same or different skills?*

Do Better!

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Matching Games to Goals

Thinking Beyond "Therapy Games"

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Games for Vocabulary

- Provide multiple encounters with target words (Blytheway, 2015; McKeown, 2019)
- Provide multiple encounters with target words (Blytheway, 2015; McKeown, 2019)
- Actively engage in a motivating context (Firliantama & Rokhayani, 2023; Saputra et. al., 2021)

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Games for Grammar

- Target grammar use in real communication (Fey, et. al., 2003)
- Focus on broad grammatical target categories, principles, or operations (Fey, et. al., 2003)
- Manipulate context of presentation to create frequent opportunities, using salient models in mature grammatical forms, with varying verbs, syntactic structure, and difficulty levels. (Fey, et. al., 2003; Finestack, et. al., 2023)
- Incorporate explicit instruction (Finestack, et. al., 2023)

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Games for Pragmatic Language

- Allows flexible practice with real peers (Mikami et. al., 2017)
- Incorporates visual supports (Hewitt, 2019)
- Curriculum-referenced (Hessling and Schuele, 2020; Pico et al., 2021; Ukrainetz, 2019)
- Frequent opportunities to engage in active learning (Joyner & Young, 2006)

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Takeaways

- Benefits and Challenges
  - GBL is associated with engagement, motivation, collaboration (creativity and sharing), socialization, experiential learning, and permanent learning.
  - GBL can be difficult to meaningful generalize without specific attention to practical selection and collaboration.
- Evidence-Based Practice
  - "Game" can mean gamification, serious games, or commercial games, positioned along a continuum from natural play to structured practice.
  - Therapeutic game use involves systematic consideration of how game/game features match student goals.
- Selecting Strategically
  - Use **Critical Questions** to evaluate appropriateness, player experience, modifiability, group size/interaction, practice dosage, feedback, embedded realism, problem-solving, and how you'll record evidence of learning.
  - Match game features to target skills: Vocabulary (multiple encounters + motivating context), Grammar (real communication + varied opportunities + explicit instruction), Pragmatics (peer practice + visual supports + curriculum referenced + active learning).

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Wrapping Up

Getting Serious About Games – Part II

Thank You!!

alisha@playonwordsllc.com

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