

Teaching intellectually diverse students through games

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Definitions

- What is GBL?
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What is GBL?

- Games-Based Learning is using a game to provide context to a learning activity
- GBL uses games' characteristics like competition, strategy, rewards, and goals to create engagement in the learning process
- Active, “hands-on” learning, that encourages practice and proficiency

What is a game?

- An activity where decisions result in risks and payoffs
- Immediate feedback on decisions made
- A simulation bounded by rules but with no 'real-world' consequences
- Often where learning the rules develops in stages and with experience
- Some say a game should be voluntary

What is gamification?

- The use of rewards, badges, and points to:
 - encourage participation and continued engagement
 - demonstrate completion of tasks and progression of skills

A bit about myself...



The image shows a screenshot of a personal website for K. Clark Burt. The browser address bar shows the URL www.clarkburt.com. The website has a dark blue header with the initials "CB" on the left and a navigation menu with links for "My Research", "Games", "Conferences", "Bio", and "Contact Me". The main content area features a large, stylized portrait of K. Clark Burt with the text "K. CLARK BURT" in large white letters. Below the name, it says "Researcher of transmedia and video games to teach literacy". There are two buttons: "LEARN MORE ABOUT THE RESEARCH" and "Start Exploring his Projects". At the bottom, a bio states: "Clark is a special education teacher and PhD researcher in Melbourne, Australia."

www.clarkburt.com

My Research Games Conferences Bio Contact Me

CB

K. CLARK BURT

Researcher of transmedia and video games to teach literacy

LEARN MORE ABOUT THE RESEARCH

Start Exploring his Projects

Clark is a special education teacher and PhD researcher in Melbourne, Australia.

What is transmedia?

- Transmedia learning is the use of multiple forms of medium to teach a topic
- Forms include: videos, video games, classroom games, movies as well as traditional worksheets, books and lectures
- Important: the content in each of these mediums must be designed to work together as part of a unit of work (lesson plan)

Transmedia storytelling/narrative

- is the technique of telling stories across multiple platforms and formats using current digital technologies.
- My plan was to focus on teaching students how to write “A Hero’s Journey” story through multiple mediums (videos, video games, worksheets, colouring, etc...)
- “A Hero’s Journey” also helps create a context so students can link existing knowledge to the new task

My Classroom

- 12 students
- Aged 13-15
- Diagnosed with a mild to moderate intellectual disability
- Numeracy skills vary from counting on to division
- Literacy skills in Grade Prep to 7 range

Reading Recovery Levels	Rigby Catalog Reading Stages	Grade Level Equivalent	Rigby PIR Plus Levels	Fountas & Pinnell Level	Domino Levels	Wright Group McGraw-Hill			
A,B	Emergent	Beginning Kindergarten	Starters 1	A	1	A			
1		Middle K	Starters 2	B**	2	B			
2	Early	End K	3-4 red	C	3	C			
3					4	D			
4		Beginning Grade 1	5-6 red/yellow	D	5	E			
5					6				
6					Middle Grade 1	7-8 yellow	E	7	F
7								8	
8		9-10 blue	F	9				G	
9				10					
10		End Grade 1	11-12 blue/green	G				11	H
12								12	
14	13-14 green				H	13	I		
16						14			
18	Early Fluent	Beg. Grade 2	17-18 turquoise	J	15	J			
20					16				
22		Middle Grade 2	19-20 purple	K	17	K			
					18				
24	End Grade 2	21 gold	L**	19	M				
				20					
26	Fluent	Grade 3	23 silver	N	21	O			
					22				
24					24 silver	O**	23	Q	
							24		
26		25 emerald	P	24	R				
				25					
28		Grade 4	26 emerald 27 ruby	Q,R	25	S,T			
					26				
30		Grade 5	29 sapphire* 30 sapphire	U,V,W	27				
					28				
32	Grade 6		X,Y	29					
				30					
34	Grade 7		Z	31					
				32					
					33				

http://title1.spps.org/uploads/text_correlation_chart.pdf

Teach to the bottom, then extend upwards

First...

- Teach a storytelling unit by first letting students learn a video game
- Over several lessons, as they play the game, teach them about simple narrative elements (character, setting, etc)
- The game creates a context for learning

Teach to the bottom, then extend upwards

- A video game can be used as a context to teach skills (storytelling, spatial awareness, etc)
- Context is important for understanding new concepts
- Context allows the student to relate what is being learnt to something tangible.

Teach to the bottom, then extend upwards

Then...

- Have them write their own stories – starting with repeating what they know about the game
- For those of higher ability, extend their tasks by having them incorporate original ideas and/or make creative changes to the games' story

Games and Storytelling

- But not all games are alike – choose games that have a narrative component (e.g. a “Quest”)



The Legend of Zelda



- <http://i.kinja-img.com/gawker-media/image/upload/uddtluxgjagwtur7x8h7.jpg>

The 'Quest'



Simple 'Quest' characters

Hero



Villain



Goal

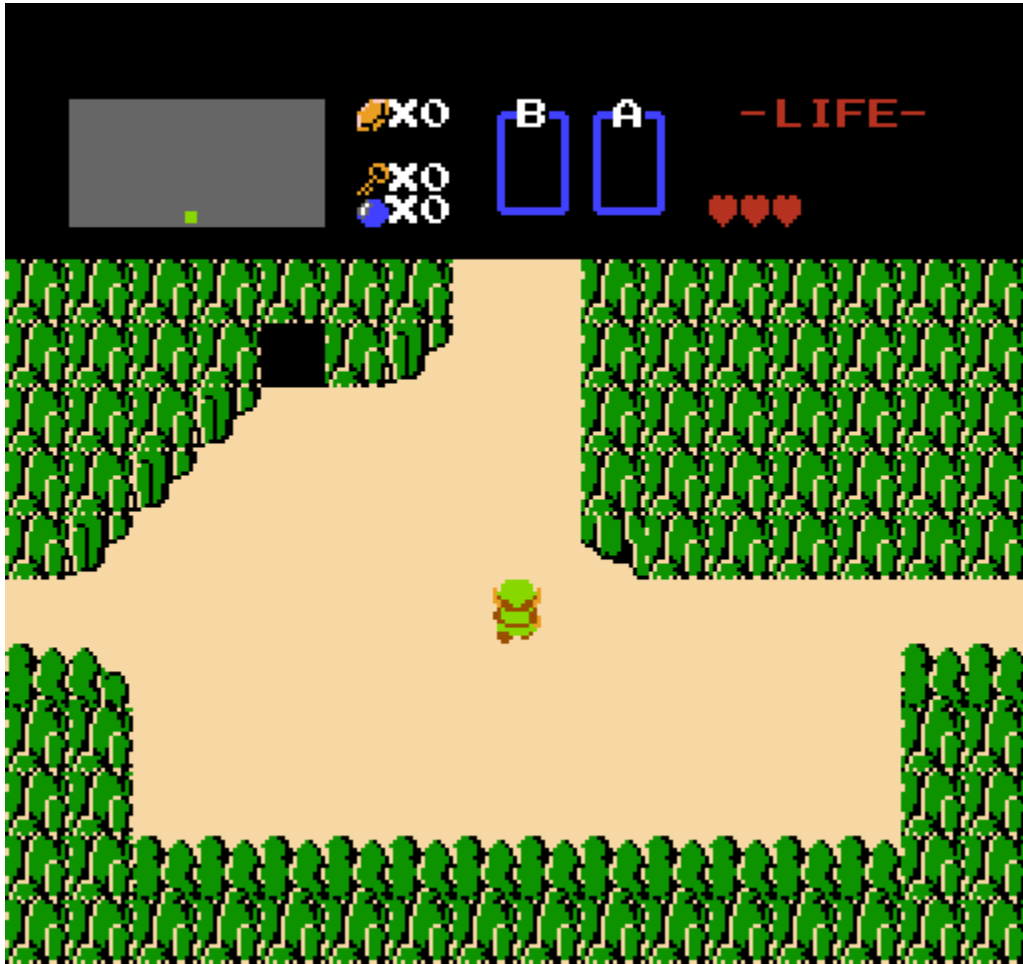


http://fc09.deviantart.net/fs71/i/2010/029/a/f/Nes_Link_by_BKiceman77.jpg

http://static.giantbomb.com/uploads/original/9/95666/1892493-link_ganon_legend_of_zelda.png

http://orig07.deviantart.net/f21e/f/2012/220/8/e/nes_zelda_by_eri_tchi-d4mc3m6.png

Simple Settings & Objects



http://3.bp.blogspot.com/-zMtkRD00JYQ/TdDCFNcsi5I/AAAAAAAAE3Q/V9MPZQoCulc/s1600/Legend_of_Zelda_NES_05.png

<http://3.bp.blogspot.com/-jCBF--H-6aY/U2jYugkHGFI/AAAAAAAAABq4/99vaaYHFIXQ/s1600/legendofzeldasheet1.gif>

Engagement

The Legend of Zelda Project

The Legend of Zelda Project Game information and downloads here: <http://www.zeldaclassic.com/>

YouTube documentaries

The timeline and story of the Legend of Zelda by Game Trailers:
Part 1 of 3: <https://www.youtube.com/watch?v=fgzPeVe5P0Q>

The history and creation of the Legend of Zelda:

Part 1 of 5: <https://www.youtube.com/watch?v=B0jkt7cqkp0>

My unit plan (in brief)

1. Whole Group preview of the game on the IWB
2. Students individually played it
3. Lesson on the characters, setting, and story.
4. Showed YouTube videos about the history
5. Students played the game again
6. Then students played a new map downloaded from zeldaclassic.com

(I chose “A Hero’s Story” because it was a bit more linear)

Before Play Discussion

Making School

A GAME WORTH PLAYING

DIGITAL GAMES IN THE CLASSROOM

Before Gameplay Questions: *The Legend of Zelda*

Players will form predictions and evaluate after gameplay.

1. How can a player keep track of the map they explored, destinations they have visited, and experiences they have endured? How can this learning be transferred to the real world with real people and in real places?
2. How can a player keep track of the sequence of their experiences?
3. What are cardinal directions?
4. Why would cardinal directions be used during a video game?

Ryan Schaaf
Nicky Mohan

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After Play Discussion

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A GAME WORTH PLAYING

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Post Gameplay Debriefing: *The Legend of Zelda*

Players will discuss and answer after gameplay.

1. Explain how the player used cardinal directions during the game.
2. How will the use of cardinal directions help if you are working with a team?
3. Name three tools or weapons Link used during gameplay.
4. What resources did Link use during gameplay? How do you think these resources were produced?
5. Did you have to give up a resource or did you lose a resource during gameplay?
6. Did you purchase or collect anything during gameplay?

Ryan Schaaf
Nicky Mohan

production by Jason Olier

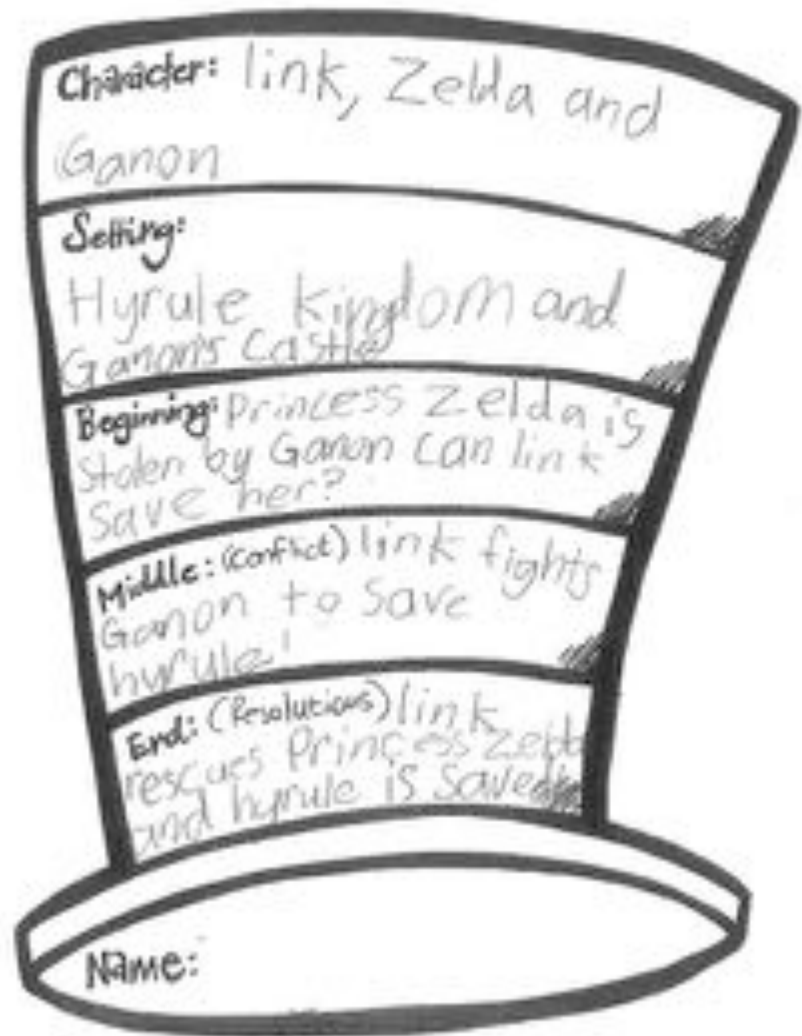
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Storytelling Lesson

1. Students learned about story structure (Beginning, Middle, End) – Story Builder
2. And started writing the Zelda story
3. I then did this as a whole group activity showing ways students could add to their story
4. Students try writing their own Zelda story (on paper, then on PowerPoint)

Visual Organisers

Top Hat Story Map!



Redesigning the Game (& the story)

- Then they started creating their own characters (villains & heroes), settings (a different village, new castles), and weapons & tools
- Students could then write a few sentences describing the new place, person, object
- Game Mashups - put things from two games together as a new game

Other Activities

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Media Product Examples: *The Legend of Zelda*

- Create a gameplay adventure map describing Link's travels, experiences, and directions in the form of a narrative or a role play. Have students create a video, podcast, slideshow, or presentation of their story.
- Write a story of a brief adventure or mission Link performs during gameplay. Use cardinal directions and clear, descriptive instructions to encourage other students to try and recreate the adventure. Players and writers will participate in an interview to determine if the story was accurately replayed.
- Players take on the role of a game designer and construct their own *Legend of Zelda* map using a digital art program or service such as Pixie, KidPix, or Google Draw. Next, the player creates directions for a player to perform a simple mission using cardinal directions and resources and tools used during the game.

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Nicky Mohan
production by Jason Olier

Numeracy activities

- Map & Spatial awareness
 - (Cardinal Directions)
- “Draw your own Zelda map”



Money & Shopping



- https://img1.etsystatic.com/000/0/6212639/il_570xN.222439301.jpg

Assessment

Making School A GAME WORTH PLAYING

DIGITAL GAMES IN THE CLASSROOM



Digital Game-Based Rubric Example: *The Legend of Zelda*

4

Student groups thoroughly examined and explored new pathways, using cardinal directions to fulfill student-generated missions (e.g., find a cave). The written game level narrative was compelling and included a detailed description of the adventure. The student group illustrated a detailed and accurate map of their new level with 100 percent of all map elements included. Student groups generated a long list of the resources acquired by Link during his adventure and determined how they were constructed.

3

Student groups examined and explored new pathways, using cardinal directions to fulfill student-generated missions (e.g., find a cave). The written game level narrative was interesting and included a fairly detailed description of the adventure. The student group illustrated a fairly detailed and mostly accurate map of their new level with at least 80 percent of all map elements included. Student groups generated a considerable list of the resources acquired by Link during his adventure and determined how they were constructed.

Ludology & Narrative

Two ways of looking at games:

- Games as a set of rules – Ludology
- Games as a story – Narrative

In education – I argue that you can bridge these two concepts together by focusing on ‘Quest’ games

Putting it all together

- For literacy learning, chose games that have a rich story: 'Quest' games
- Let students learn about the game (ideally by playing it)
- Then use it to explain new literacy concepts
- If possible, use it to teach other concepts (math, science, history)

Putting it all together

- But the game is only a context
- You are not teaching the game, you are teaching curriculum
- Everything comes back to the lesson topic

The future? Transmedia

www.clarkburt.com/transmedia/

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The Electric Company Project



The Electric Company Summer Learning Program:

- [Vocabulary Learning Program over 24 lessons](#)
- [Teachers Guide with Lesson Plans \(PDF\)](#)
- [YouTube videos for all 12 Summer Learning Episodes](#)

Questions? Resources:

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Institute of Play & TeacherQuest



What games do you play in your classrooms?

