

# IMPLEMENTING

## REIGELUTH'S PARADIGM OF PEDAGOGY

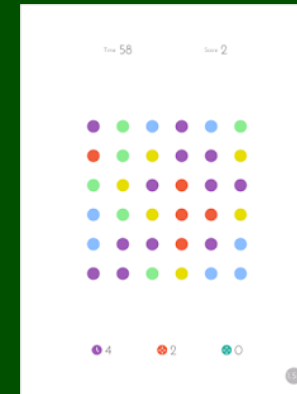
Katrin Becker

Thur. May 28th, 11:00 a.m. – 11:45 a.m.





# What am I playing Now?



# What are Schools For?

- Childcare so parents can work.
- Socialization (Entrainment to authority)
- Creation of an efficient underclass of workers.
- Teaching Good Test-Taking Behavior
- Schools are:
  - hierarchical
  - authoritarian
  - do not encourage personal agency



Brenda Laurel

# History of Major Paradigm Shifts

## Agrarian

- permanence
- communities
- specialization
- extended families
- slow transportation

1800s

## Industrial

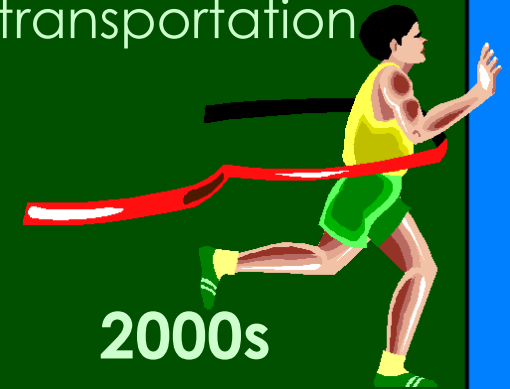
- mobility
- urbanization
- mechanization
- nuclear family
- rapid transportation

1900s

## Information

- extreme mobility
- urban > rural
- jobs shift
- family dispersal
- massive & rapid transportation

2000s



Reigeluth, C. M., & Karnopp, J. (2013). *Reinventing schools : it's time to break the mold*. Lanham: Rowman & Littlefield Education.

# A New Paradigm in Education?

## Agrarian

- 1-on-1
- personalized
- apprenticeship
- 1-room school house

1800s

## Industrial

- mass education
- age-determined
- trade schools
- grades

~ *current system* ~

1900s

## Information



2000s

Reigeluth, C. M., & Karnopp, J. (2013). *Reinventing schools : it's time to break the mold*. Lanham: Rowman & Littlefield Education.

# Intro to Reigeluth's Paradigm

Big changes in society cause (require) systemic changes in **all** societal systems.

Systemic change is fundamental **transformation**.



Reigeluth, C. M., & Karnopp, J. (2013). *Reinventing schools : it's time to break the mold*. Lanham: Rowman & Littlefield Education.

# A New Paradigm in Education?

## Industrial Age

- Bureaucratic organization
- Autocratic leadership
- Centralized control
- Adversarial relationships
- Mass production, etc.
- Compliance
- Conformity
- One-way communications
- Compartmentalization  
(Division of Labor)

## Information Age

- Team organization
- Shared leadership
- Autonomy, accountability
- Cooperative relationships
- Customized production, etc.
- Initiative
- Diversity
- Networking
- Holism (Integration of tasks)

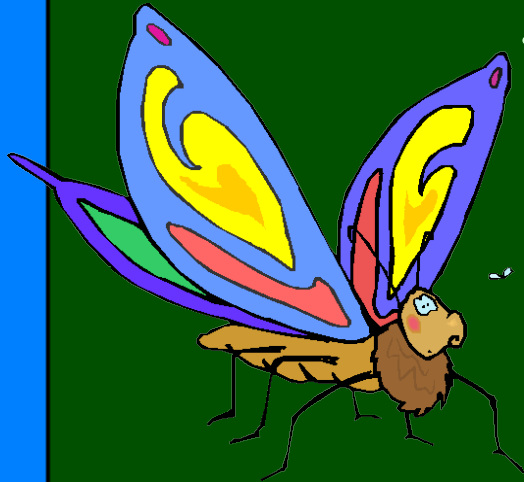
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# A New Paradigm in Education?

NEW vs OLD

problem-solving	vs	factual knowledge
cooperation	vs	competition
initiative	vs	compliance



Reigeluth, C. M., & Karnopp, J. (2013). *Reinventing schools : it's time to break the mold*. Lanham: Rowman & Littlefield Education.

# What does this new paradigm look like?

Learning-focused	vs	Sorting Focused
Learner-centered	vs	Teacher-centered
Learning by doing	vs	Teacher presented
Attainment-based	vs	Time-based progress
Customized	vs	Standardized instruction
Criterion-referenced	vs	Norm-referenced
Collaborative	vs	Individual
Enjoyable	vs	Unpleasant

# What does this new paradigm look like?



## Learning-focused

Learner-centered

Learning by doing

Attainment-based

Customized

Criterion-referenced

Collaborative

Enjoyable

vs

## Sorting Focused

vs

Teacher-centered

vs

Teacher presented

vs

Time-based progress

vs

Standardized instruction

vs

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# Learning vs Sorting

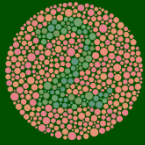
Anyone who meets the criteria gets the grades.

Quest:	2.01	Website Mission		
Score:	0			rubric source:
Max Score:	55	Note: Spelling, grammar, and punctuation ALWAYS count.		<a href="http://www.cedu.nyu.edu/pf3/center/">http://www.cedu.nyu.edu/pf3/center/</a>
Your Score	Max	#		Comments
5	5		ON TIME BONUS	
	5	1	Content: The Web site has an exceptionally attractive and usable layout. It is easy to locate all important elements. White space, graphic elements and/or alignment are used effectively to organize material.	
	5	2	Accuracy: All information provided by the student on the Web site is accurate and all the requirements of the assignment have been met.	
	5	3	Navigation: All of the menus, navigation links and all internal links and sections of the website connect back to the home page and/or sitemap. All external links to connecting websites are active and functioning. A sitemap/index is provided to make the site easy-to-access.	
	5	4	Layout: The Web site has an exceptionally attractive and usable layout. It is easy to locate all important elements. White space, graphic elements and/or alignment are used effectively to organize material. Must show evidence of customization.	
	5	5	Copyright: Fair use guidelines are followed with clear, easy-to-locate and accurate citations for all borrowed material. No material is included from Web sites that state that permission is required unless permission has been obtained.	
	5	6	Graphics & Media: Graphics are related to the theme/purpose of the site, are thoughtfully cropped, are of high quality and enhance reader interest or understanding. All images and videos, especially those that are used for navigation, have an ALT tag that describes the image and its link so people who are visually impaired can use the Web site well.	
	5	7	Typestyle: The fonts are consistent, easy to read and point size varies appropriately for headings and text. Use of font styles (italic, bold, underline) is used consistently and improves readability. Must show evidence of customization.	
	5	8	Colours: Colors of background, fonts, unvisited and visited links form a pleasing palette, do not detract from the content, and are consistent across pages. Background is exceptionally attractive, consistent across pages, adds to the theme or purpose of the site, and does not detract from readability. Must show evidence of customization.	
	5	9	Completeness: Contains all necessary information for course quests and for portfolio. Includes a wide variety of items - documents, spreadsheets, folders, and other gizmos in appropriate places and with appropriate settings.	
	5	10	Highlights: Includes a page that highlights the website, including the name of the theme, how it was modified, and the sources of all images and other assets.	





# What does this new paradigm look like?



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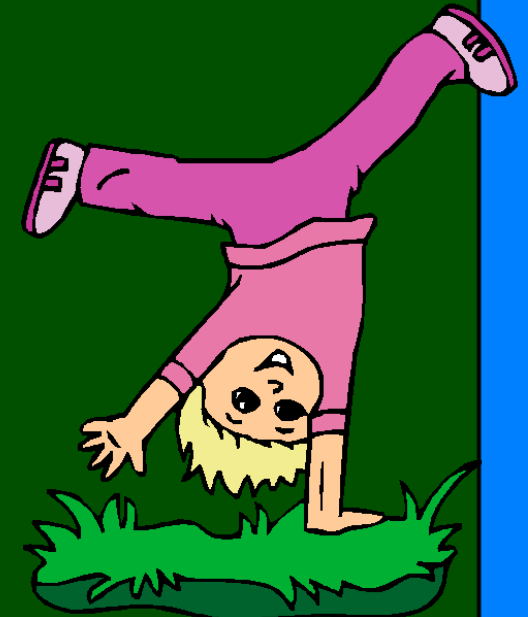
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# Doing vs Listening & Watching

## What can successful learners do?

The collage displays various educational resources:

- Achievement Quest Cards:** Examples include "1.0: IGNITE SP" and "2.02: Profiling Mission".
- Class Mission Card:** Titled "8.10: In-Class Mission".
- 1103 Leaderboard:** A table showing student performance across 15 weeks, with columns for Week, Score, and Grade.
- Grade & GPA Table:** A table used to calculate student grades on the Gradebook sheet, showing Score, Letter Grade, GPA, and Level.
- Quest Card:** Titled "Quest 3: DGBL Game".





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# Attainment vs Time

What you did more important  
than how long (or even if) you  
were in class.

## 1103 Leaderboard

Week	1	2	2.1	3	3.1	4	4.1	5	6	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	End Game	
(date posted) Current mean where you should	Sept 12	Sept 18	Sept 21	Sept 23	Sept 27	Sept 30	Oct. 3	Oct 7	Oct 14	Oct 21	Oct. 24	Oct 28	Oct. 31	Nov 4	Nov. 6	Nov 11	Nov. 15	Nov 18	Nov 21	Nov 25	Nov 28	Dec 2	Dec 6	Dec 9	Dec 13	Dec 22	FI GR
	30	34	45	48	61	64	77	92	100	114	142	168	189	204	231	274	286	319	339	375	459	472	493	497	569	690	
	XP	40	50	80	110	150	175	200	270	340	370	400	435	470	500	540	580	620	660	700	740	780	820	850	850	1000+	
	Level	0	0	0	0	0	0	1	1	1	1	2	2	2	3	3	4	5	5	8	8	10	10	12	12	13	
1	40	50	71	71	99	99	135	231	231	235	369	429	459	459	577	722	722	769	769	824	916	936	952	952	956	1165	A+
2	40	40	50	55	95	95	134	164	170	231	280	325	350	447	509	622	647	716	726	794	903	903	903	923	952	1127	A+
3	30	40	50	50	75	93	130	160	164	204	251	322	332	382	459	572	604	670	672	726	820	870	880	880	923	1044	A+
4	30	40	50	50	71	87	128	138	160	194	235	307	327	350	439	509	592	657	670	695	789	839	870	870	897	1003	A+
5	30	30	50	50	67	75	99	117	139	160	197	245	307	332	332	449	474	474	597	607	767	767	789	789	890	956	A+
6	30	30	49	50	67	71	89	99	138	151	194	235	256	256	256	363	363	459	474	506	605	605	767	767	870	925	A
7	20	30	40	50	65	69	87	99	117	148	186	197	255	255	255	275	314	400	400	400	545	576	630	685	789	924	A
8	20	30	40	50	50	67	87	97	99	109	141	171	244	244	244	244	244	329	359	397	482	502	527	527	695	890	A
9		30	40	49	50	65	67	70	97	97	103	146	146	181	204	244	244	244	268	359	476	475	475	475	638	853	A
10		30	40	40	50	60	65	67	67	67	85	103	103	107	191	191	191	201	244	244	333	383	428	428	603	769	B
11		20	40	40	50	50	50	65	65	66	81	85	87	103	103	103	103	189	189	239	328	328	328	328	413	551	D+
12			40	40	50	50	50	50	50	65	67	67	85	85	85	85	85	85	124	189	267	267	267	267	349	530	D
13			40	40	40	50	50	50	50	58	58	58	67	67	67	75	75	85	85	172	264	264	264	264	267	374	F
14			30	30	30	47	47	47	47	50	50	50	60	60	60	67	67	58	85	85	134	134	134	134	264	349	F
15					30	40	40	40	40	40	40	40	58	58	58	58	58	50	58	85	85	85	85	85	85	178	F
16					20	37	37	37	37	37	37	37	50	50	50	50	50	37	50	50	85	85	85	85	85	85	F
17						20	37	37	37	37	37	37	37	37	37	37	37	0	0	0	0	0	0	0	0	0	F

# What does this new paradigm look like?

5

Learning-focused

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**Customized**

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**Standardized instruction**

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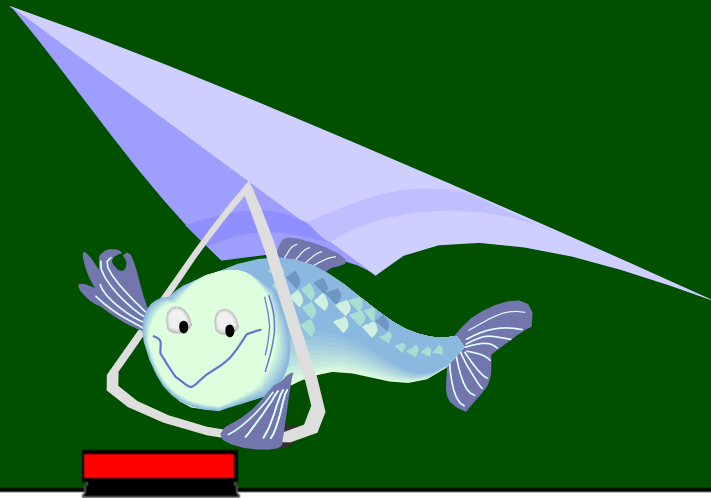
Enjoyable

vs

Unpleasant

# Customized vs Standardized

You determine range of possibilities.  
*THEY* get to choose.



3.0 The Game		Please note that 'Max Items' * 'Max Score' totals > what you need. You are responsible for keeping track of your own score.														
Avatar:	<your avatar>	Max	count	Max	Max	total	1	2	3	4	5	6	7	8	9	10
Solo	0	Items		XP /	Score											
Quests	735			Item												
	Max Score															
	3.01	Timed Quest [Posting A self-Introduction]	1	0	20	20	0	0								
		Includes appropriate 'sharable' personal information.														
		Includes what you hope to get out of the course														
		What field you think you want to go into (and why)														
		o What you like to do in your spare time o What games (if any) you are playing now														
	3.02	Persuasion Quest [Editorial Response/Reflection]	4	0	20	80	0	0	0	0	0	0				
		Appropriate Style & Length (250-500 words)														
		Connection to course and article is clear														
		Thoughtful response														
		Your opinion or argument is clear, and supported.														
	3.03	Defend Quest [Respond to someone else's comment on your post.]	10	0	10	100	0	0	0	0	0	0	0	0	0	0
		Comment shows thought and consideration and is on topic (2-5 sentences).														
		Connection to item you are commenting on is made clear (2-5 sentences).														
	3.04	Talk To Quest [Comment on a post made by another player. ]	5	0	10	50	0	0	0	0	0	0	0			
		Comment shows thought and consideration.(2-5 sentences).														
		On topic.														
	3.05	Collection Quest [Create a class poll.]	4	0	25	100	0	0	0	0	0	0	0			
		reasonable objective (main question)														
		online poll questions and style appropriate for objective of poll														
		collect results and download to excel														
		chart type and format suits poll and helps visualize results														
		report summarizes results and comments on limitations; possible improvements														
	3.06	Craftskill I [Create an Avatar]	2	0	10	20	0	0	0							
		use drawing program or character/avatar creator; add to profile														
		avatar is in someway representative (looks like, symbolic of interests/characteristics)														
	3.07	Craftskill II [Screenshot]	5	0	10	50	0	0	0	0	0	0	0			
		usable capture (good resolution/format,etc.)														
		nicely cropped and placed somewhere (like in a post)														
	3.08	Craftskill III [Image Editing]	4	0	15	60	0	0	0	0	0					
		download, crop														
		edit (change by adding drawing, text, effects,...)														
		nicely cropped and placed somewhere (like in a post)														



# What does this new paradigm look like?

6

Learning-focused

vs

Sorting Focused

Learner-centered

vs

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Learning by doing

vs

Teacher presented

Attainment-based

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**Criterion-referenced**

vs

**Norm-referenced**

Collaborative

vs

Individual

Enjoyable

vs

Unpleasant

# Criterion vs Norm

Poor Norm.

Doesn't matter what anyone else can do.



Your quest will only be scored  
if you enter it in your quest log.



	LEVELS	FROM	TO
	0	0	0
	1	1	199
	200	200	499
	500	500	699
B-	700	700	749
B	750	750	799
B+	800	800	849
A-	850	850	899
A	900	900	949
A+	950	950	1000



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# Collaborative vs Individual

## Getting to know your students.

	A	B	C	D	E
1	Guild Quest:	1	IGNITE Presentation		
2	Avatar:		<your avatar>		
3	Guild:		<your guild name>		
4	Quest:		<your IGNITE topic>		
5	Score:	0	Note: Spelling, grammar, and punctuation ALWAYS count.		
6	Max Score:	215			
7	Your Score				
8		Max			
9		15	ON TIME BONUS (5 each for approval, documents, and post-mortem)		
10	0	60	1. Content (applies to both the document and the presentation)		these will be updated after the presentation
11		10	Approval Process on time and properly executed (including 3 links).		
12		10	Topic presented in appropriate form and depth. Highlights important information.		
13		10	Topic is relevant: relates to what we are doing in class, and relates to players' lives/futures.		
14		10	Quality of Research - Information is accurate and well presented. 5W addressed appropriately.		
15		10	Quality of Research - Evidence of reasonable selection of resources, didn't just choose the 1st hits, has variety of resources).		
16		10	Logical conclusion / close / call to arms. Conclusions are logical and reasonable and clearly relate to the topic as presented.		
17	0	60	2. Document		
18		10	Followed Specifications as outlined. Format of the document is appropriate for the topic.		
19		10	Appropriate Length.		
20		10	Grammar: There are no grammatical, spelling or punctuation errors.		
21		10	All relevant sources accurately documented and in the desired format.		
22		10	Information is very organized with well constructed paragraphs and point form. Content follows a logical sequence which adds clarity to reader.		
23		10	Comprehension: Extensive knowledge of topic. Members showed complete understanding of assignment. Accurately answered all questions posed.		
24		10	Visualizations are neat, accurate and clearly relate to the questions posed in the introduction they provide additional insight to the content.		
25	0	60	3. Presentation		
26		10	Overall Impression: Clean, clear, professional. Clear evidence of team collaboration.		
27		10	Length: Kept to the IGNITE format. Talk stayed with the Slides.		
28		10	Language Use and Delivery: There are no errors in spelling, grammar and punctuation. Visually appealing/engaging. Communicates ideas effectively.		
29		10	Layout & Balance: Individual slides have neither too much or too little information. Information is clear and concise on each slide. "icing on the cake" - aids added interest, style, were well integrated into the talk. Use of visual/audio aids: media, white-space, colour, positioning, etc.		
30		10	Presenter Form / Clarity of message. Coherence & Organization: Ideas presented clearly. The logic of the material was clear and easy to follow.		
31	0	20	4. Post Mortem		
32		10	3 Up (with explanations)		
33		10	3 Down (with explanations and improvements)		





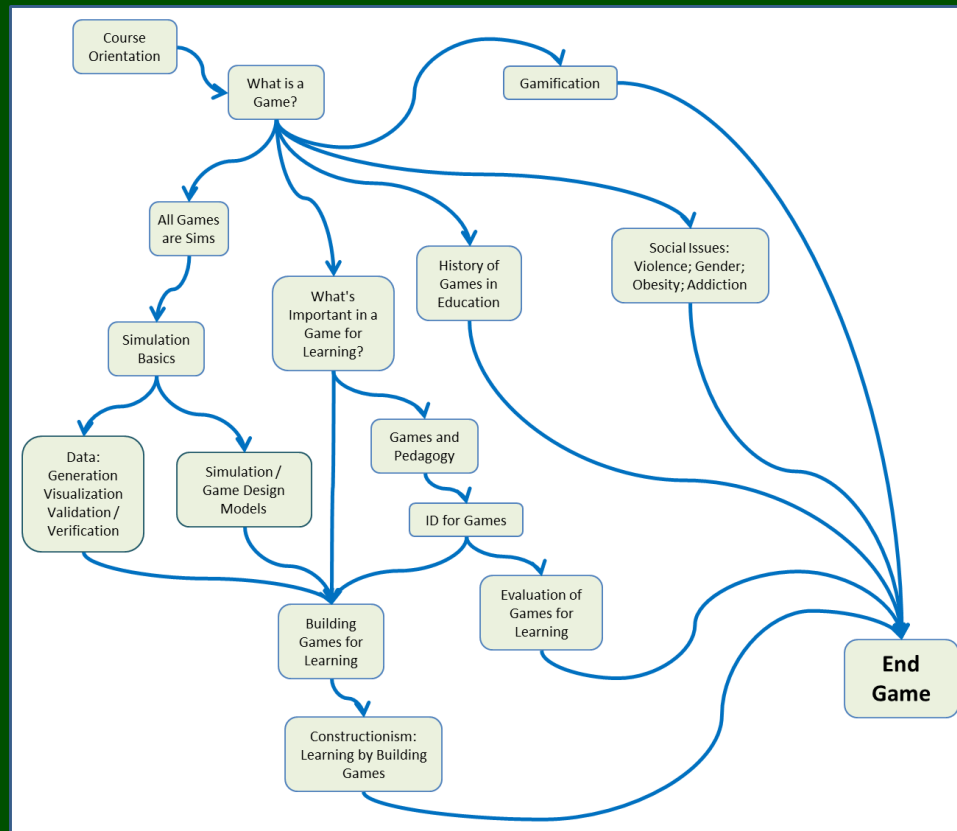
# What does this new paradigm look like?



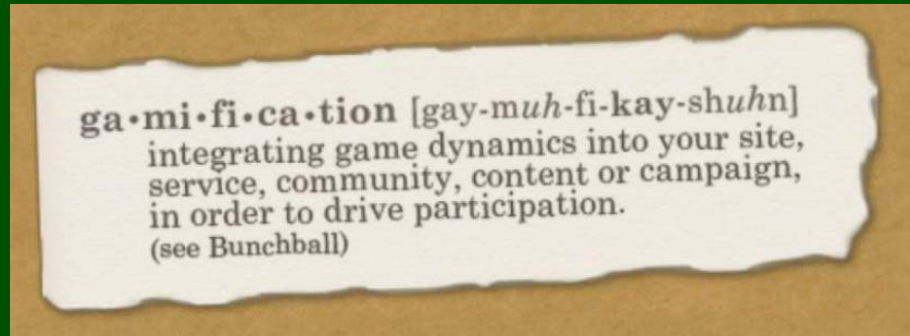
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# Enjoyable vs Not.

## What's wrong with having fun?



# A Name for This?



The use of game elements  
in non-game contexts.

Deterding, S. (2012). 9.5 Theses on the Power and Efficacy of Gamification. Microsoft Research. [Microsoft Research Video] Retrieved from <http://research.microsoft.com/apps/video/dl.aspx?id=174677&l=i> on 12 October 2012.

# Questions? Comments?



# Abstract of Presentation:

- **Implementing Reigeluth's Paradigm**

- In his landmark paper describing what the new post-industrial paradigm of instruction should look like, C.M.Reigeluth outlines 8 core ideas:
- Learning-focused vs. sorting focused.
- Learner-centered vs. teacher-centered instruction.
- Learning by doing vs. teacher presenting.
- Attainment-based vs. time-based progress.
- Customized vs. standardized instruction.
- Criterion-referenced vs. norm-referenced testing.
- Collaborative vs. individual.
- Enjoyable vs. unpleasant.

(Reigeluth, 2012)

- Most of us can agree that people learn at different rates and have different learning needs, but most of our courses continue to enforce a lock-step progression of topics and assignments that is much better suited to *sorting* students than to helping them learn. Reigeluth's new paradigm calls for radical transformation and while that may well be justified, it is unlikely to happen, at least not in the near future. What then can we do in the meantime? This presentation will examine Reigeluth's core ideas through the lenses of their effect on creating access and embracing diversity. The author will include case studies from over 35 years of experience teaching in higher ed.
- This presentation is targeted at all educators in higher education with a particular focus on the STEM fields.

# Resources

- Becker, K. (2004). Reconciling a Traditional Syllabus with an Inquiry-Based Introductory Course. *The Journal of Computing Science in Colleges*, 20(2), 28-37.
- Becker, K. (2006). How much choice is too much? *SIGCSE Bull.*, 38(4), 78-82. doi: 10.1145/1189136.1189176.
- Becker, K. (2007). Digital Game Based Learning, Once Removed: Teaching Teachers *BRITISH JOURNAL OF EDUCATIONAL TECHNOLOGY*, SIG-GLUE Special Issue on Game-Based Learning 2007, 38(3), 478-488.
- Bogost, I. (2012). *Persuasive Games: Exploitationware*. Gamasutra. Retrieved from [http://www.gamasutra.com/view/feature/6366/persuasive\\_games\\_exploitationware.php](http://www.gamasutra.com/view/feature/6366/persuasive_games_exploitationware.php)
- Charles, D., Charles, T., McNeill, M., Bustard, D., & Black, M. (2011). Game-based feedback for educational multi-user virtual environments. *British Journal of Educational Technology*, 42(4), 638-654. doi: 10.1111/j.1467-8535.2010.01068.x.
- Deci, E. and Ryan, R. (2004). *Handbook of Self-Determination Research*. Rochester, NY: University of Rochester Press.
- Deterding, S. (2012). 9.5 Theses on the Power and Efficacy of Gamification. Microsoft Research. [Microsoft Research Video] Retrieved from <http://research.microsoft.com/apps/video/dl.aspx?id=174677&l=i> on 12 October 2012.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: defining "gamification". Paper presented at the Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments, Tampere, Finland
- Kapp, K. M. (2012). *The gamification of learning and instruction : game-based methods and strategies for training and education*. San Francisco, CA: Pfeiffer.
- Nicholson, S. (2012). A User-Centered Theoretical Framework for Meaningful Gamification. Paper presented at the Games + Learning + Society 8.0, Madison, WI. on June 13
- Sheldon, L. (2012). *The Multiplayer Classroom : Designing Coursework as a Game*. Boston, Mass.: Course Technology/Cengage Learning.