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# Proceedings of the 1st Annual CUNY Games Festival

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# Proceedings of the 1st Annual CUNY Games Festival

## January 17 - 18, 2014

The Graduate Center
City University of New York
365 Fifth Avenue
New York, NY 10016

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# Proceedings of the 1st Annual CUNY Games Festival

The CUNY Games Network, City University of New York

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# Contents


About CUNY and the CUNY Games Network 1

Summary Itinerary 2

Full Schedule 3

Abstracts 8

General Statistics 42

Event Map 43

Schedule of Sessions 44

Acknowledgments 45

# About

## About CUNY

The City University of New York provides high-quality, accessible education for more than 269,000 degree-credit students and 247,000 adult, continuing and professional education students at 24 campuses across New York City.
The University is an integrated system of senior and community colleges, graduate and professional schools, research centers, institutes and consortia. From certificate courses to Ph.D. programs, CUNY offers postsecondary learning to students of all backgrounds. It provides the city with graduates trained for high-demand positions in the sciences, technology, mathematics, teaching, nursing and other fields. As CUNY has grown, the University also has strengthened its mission as a premier research institution, building an array of modern facilities and expanding the ranks of its world-class faculty. Throughout its history, the University has been an integral part of the city and state through partnerships with public schools, economic development initiatives, immigration aid and financial advice services and other community outreach programs. Today, CUNY faculty and staff members continue to benefit New York City — as well as the entire nation — by serving as policy experts to business and government, advisers to nonprofit institutions, civic organizations and community groups. Students, too, are strongly encouraged to experience the cultural, educational and community-based opportunities of the five boroughs, through a network of internships and fellowships, to embracing the city as their campus.

## About the CUNY Games Network

We connect educators from every campus and discipline at CUNY who are interested in games, simulations, and other forms of interactive teaching and inquiry-based learning. We seek to facilitate the pedagogical uses of both digital and non-digital games, improve student success, and encourage research and scholarship in the developing field of games-based learning.

# Summary Itinerary

## Friday, January 17th, The CUNY Graduate Center

| | |
|---|---|
| 8:15 AM | Coffee |
| 8:30-9:10 AM | Icebreaker/Opening remarks/Micro-Keynote |
| 9:15-10:35 AM | Session 1 |
| 10:35 AM | Break |
| 10:45 AM – 12:05 PM | Session 2 |
| 12:05 PM | Lunch |
| 1:30 PM – 2:50 PM | Session 3 |
| 2:50 PM | Break |
| 3:00 PM – 4:20 PM | Session 4 |
| 4:20 PM | Break |
| 4:30 PM | Plenary Panel with John Black (*Teachers College, Columbia University*), Joey Lee (*Teachers College, Columbia University*), Anastasia Salter (*University of Baltimore*), and Eric Zimmerman (*New York University*). Moderated by Robert Duncan (*York College, CUNY*). |
| 5:30 PM | Prizes, Farewell |

## Saturday, January 18th, Borough of Manhattan Community College

On this more informal day, we will be playing popular board and card games, offering feedback to educational games that attendees have created, and networking. Feel free to bring games of your design. Besides educators, we will have professional game designers on hand to offer advice!

| | |
|---|---|
| 10 am – 5 pm | Game Day<br>Richard Harris Terrace |

# Full Schedule

## Friday, January 17th
## The CUNY Graduate Center
## 365 Fifth Avenue between 34th and 35th Sts, New York City

8:15 am - Coffee
8:30 am - Icebreaker
9:00 am - Opening remarks and Keynote

| Session 1 - 9:15 to 10:35am | |
|---|---|
| Topics in Game Design 1 (20 min Presentations) Room C201 | Moderator: Leah Potter<br>"Fun and Usable: Making Better, More Intuitive Games" Catt Small, Code Liberation & Bedrocket Media Ventures<br>"Teaching the Art and Sound of Video Games Across Two Disciplines" Tom Zlabinger and S. Gillespie, York College CUNY<br>"Choices in Games" Ethan Ham, City College CUNY |
| Teaching with Virtual and Augmented Realities (20 min Presentations) Room C202 | Moderator: Kathleen Offenholley<br>"Virtual Field Trips in Health Education" Xin Bai, Joanne Lavin, and Renee Wright, York College CUNY<br>"Geolocation and Fear: Horror on the Ridges" Rebecca L. Fischer and Seann Dikkers, Ohio University<br>"The Instrumentality of Virtuality: The Perceived Real-world Value of Video Gaming" Luther Elliott, G. Ream, E. McGinsky, and E. Dunlap, National Development and Research Institutes |
| Writing with Games (20 min Presentations) Room C203 | Moderator: Francesco Crocco<br>"Journaling the Zombie Apocalypse: Minecraft in College Composition"Jeff Kuhn, Ohio University<br>"Adventures in Writing: Composition, Pedagogy, Video Games, and a Lot of Questions" Luke Thominet, Wayne State<br>"What's in a Game?: Teaching Online and Face-to-Face Composition Classrooms with Game-based Pedagogies" Mikayla Zagoria-Moffet, Graduate Center CUNY |
| Breaking the Magic Circle: Games & Real Life (10 minute Shorts) Room C198 | Moderator: Robert Duncan<br>"Playing Together: Teamwork in Online Games" Christian de Luna, Teachers College Columbia University<br>"Marriage Equality in Games: What Are Games Teaching Us?" Karen Schrier, Marist College |

| | |
|---|---|
| | "Monster Appetite" Maria Hwang, P. Chantes, G. Tedaldi, and A. Lomboy, Teachers College Columbia University<br>"Cool School: Where Conflict Resolution Is Fun" Mark Young, Rational Games<br>"Developing Game-based Learning Apps" Deborah Sturm and B. Ploog, College of Staten Island CUNY |
| What's Your Game Plan? Rooms C204 & C205 | Moderator: Joe Bisz<br>80 minute Interactive Game Design Session |

10:35 am – Break

## Session 2 - 10:45 to 12:05 am

| | |
|---|---|
| Designing Ethical Games (20 min Presentations) Room C201 | Moderator: Leah Potter<br>"Using Indie Games to Teach Ethics" Karen Shrier, Marist College<br>"The Integrated Problem: An Example of Social Science Gaming" James R. Garfield, Queens College CUNY<br>"The Challenges of Developing an Educational Board Game: Balancing Content and Gameplay" Christian de Luna, C. Vicari, T. Toynton, M. Luna-Lucero, and J. Lee, Teachers College Columbia University |
| Games and Gender (20 min Presentations) Room C202 | Moderator: Maura Smale<br>"Video Games as Feminist Pedagogy" Samantha Allen, Emory University<br>"Woman Up!" Phoenix Perry, Jane Friedhoff, Nina Freeman, and Catt Small, Code Liberation Foundation<br>"It's How You Play the Game: What Playtesting Taught Us about Game Design" Lisa Rosner and John Theibault, Stockton College |
| Gaming English Language and Literature (20 min Presentations) Room C203 | Moderator: Joe Bisz<br>"Play as an Invitation to Learn: Teaching Grammar with Games" Amy Baskin and Rawlslyn Francis, Florida State College-Jacksonville<br>"Jekyll & Hyde the Board Game: Using Game Design to Teach Literature" Chamutal Noimann, Borough of Manhattan Community College CUNY |
| Game, Narrative, Literacy (10 minute Shorts) Room C198 | Moderator: Carlos Hernandez<br>"Rules and Rhetoric: Unfair Games in the Composition Classroom" Brian Keilen, University of Wisconsin – Milwaukee<br>"Game Design as Life Design: A Deck of Cards" Brooke Allen and Marshall Poe, University of Massachusetts<br>"Games and the Re-play of Game Play: Rendering Deleuzian Memory" Kimberley Garcia, Graduate Center CUNY<br>"Choose Your Own Fairy Tales?: Electronic Literature and Game-based Learning" Eva Lupold, Rutgers University<br>"The Role of Video Game Glitch in Emancipated Learning and New Literacy Acquisition" Beatriz Albuquerque, Teachers College Columbia University |

| | |
|---|---|
| Teaching with Games<br>Rooms C204 & C205 | Moderator: Francesco Crocco<br>80 minute Chat Session |

12:05 pm - Lunch

## Session 3 - 1:30 to 2:50 pm

| | |
|---|---|
| Games, Storytelling, and Narrative<br>(20 min Presentations)<br>Room C201 | Moderator: Carlos Hernandez (and Leah Potter)<br>"Beyond the Multiplayer Classroom: Story" Lee Sheldon, Rensselaer Polytechnic Institute<br>"Teaching Fiction Writing Using Role-Playing Games" W. Trent Hergenrader, Rochester Institute of Technology<br>"History Games" Leah Potter and Carlos Hernandez, Graduate Center CUNY and Borough of Manhattan Community College CUNY |
| Games and STEM (20 min Presentations) Room C202 | Moderator: Robert Duncan<br>"Designing Futures with Games: Game-framed Math & Science at Hostos Community College" Rees Shad and C. Cannon, Hostos Community College CUNY<br>"#scienceFTW" Barry Joseph, American Museum of Natural History<br>"Iterative Design and Implicit Bias: What We Learned from Making FairPlay" Dennis Ramirez, B. Gutierrez, S. Chu, C. Samson-Samuel, A. Salmon, K. Squire, and M. Carnes, University of Wisconsin- Madison |
| Learning by Design (10 minute Shorts) Room C198 | Moderator: Kathleen Offenholley (and Joe Bisz and Francesco Crocco)<br>"Playing to Learn: Games, Engagement, and Deep Learning in Higher Education" Kathleen Offenholley and Francesco Crocco, Borough of Manhattan Community College CUNY<br>"Complex Mechanics" Joe Bisz, Borough of Manhattan Community College CUNY<br>"Using a Card Game to Teach Circuits" Jeffrey Schwartz, Queensborough Community College CUNY<br>"College Quest: An Achievement-based LMS" Francesco Crocco and Joe Bisz, Borough of Manhattan Community College CUNY<br>"Gold Stars and Badges" Kristana M. Textor, Video.Art.Games. |
| What's Your Game Plan?<br>Rooms C204 & C205 | Moderator: Maura Smale<br>80 minute Game Design Session |

2:50 pm – Break

## Session 4 - 3:00 to 4:20 pm

| | |
|---|---|
| Topics in Game Design 2 (20 min Presentations) | Moderator: Maura Smale (and Joe Bisz) |

| | |
|---|---|
| Room C201 | "Using Meaningful Gamification and Playful Design Instead of Rewards for the Classroom" Scott Nicholson, Syracuse University<br><br>"Liminal Space Between Fun and Educational Impact: A Post Mortem" Ira Fay, Hampshire College<br><br>"Modding an Interdisciplinary Card Game: The Evolution of What's Your Game Plan?" Maura Smale, Joe Bisz, Charlie Edwards, and Jody Rosen, NYC College of Technology and Borough of Manhattan Community College CUNY |
| Students as Game Designers (20 minute Presentations) Room C202 | Moderator: Robert Duncan<br><br>"From Game Player to Job Search Pro" Michelle Wang and Don Wei, Borough of Manhattan Community College CUNY<br><br>"The Education Arcade" Michael Smith, York College CUNY<br><br>"The Transformative Games Initiative: Learning by Design" Robert O. Duncan, York College CUNY |
| Experiencing Reality in Popular Games (20 min Presentations) Room C203 | Moderator: Kathleen Offenholley<br><br>"World of Warcraft: Experiencing Reality in a Virtual World" Amanda Rosen, Webster University<br><br>"Entertainment Games for Education: Self-Motivated Education and EVE Online" Christopher Vicari, Teachers College Columbia University<br><br>"What Can Chess Teach Us about Sociology" Michael W. Raphael, Graduate Center CUNY |
| Making Educational Games, Rooms C204 & C205 | Moderator: Leah Potter<br><br>80 minute Chat Session |

4:20 pm - Break
4:30 pm - Plenary Panel
5:30 pm - Prizes, Farewell

## Throughout the day, Room C197

**Posters**

"Murder Mystery Challenge! Engaging First-Year Students in a Game-based Library Investigation" Robin Davis and M. Bladek, John Jay College CUNY

"Analyzing Procedural Learning and Emotion Recognition in Children Using Serious Games" Jonathan Parziale, Ed Peppe, Deborah Sturm, B. Ploog, and P. Brooks, College of Staten Island CUNY

"Lerpz Behaves: A Game to Teach Applied Behavioral Analysis" A. Hamid and Robert O. Duncan, York College CUNY

"Unbiased: A Game to Reduced Errors in Cognitive and Social Biases" H. Mehta and Robert O. Duncan, York College CUNY

**Arcade Demos**

"Argument" Andrew Y. Ames, Robert Morris
"The Game of College" Melissa Barlett, Mohawk Valley Community College

"Project CONSTΔNT: A Gesture-Based Game That Teaches Calculus" Brian Moriarty, E. Lennon, M. Zivkovic, Stevens Institute of Technology

"Salty Dogs" Jon Molina and Matthew Bethancourt, Hostos Community College CUNY

"SlashDash" Reynaldo Vargas, Adnan Agha, Vivian Allum, Alexandre Gresh, and Armand Silvani, Nevernaut Games

"The Fluid Ether" Kevin A. Miklasz and T. Chklovski, Iridescent

"Using a Board Game to Teach Students About Divided Attention" S. Dhar and Robert O. Duncan, York College CUNY

"Improving Decision Making for Extreme Prospects Using a Board Game" X. Lin and Robert O. Duncan, York College CUNY

"Computational Thinking Via Visual Game Coding" Deborah Sturm and S. Imberman, College of Staten Island CUNY

"iSketch: A Digital Art Therapy Game to Improve Self-Esteem" A. Aponte and Robert O. Duncan, York College CUNY

"Saving Mikey: A Digital Games to Educate At-Risk College Students About Depression" H. Flores and Robert O. Duncan, York College CUNY

"Critical Thinker: A Digital Game that Teaches Critical Thinking Skills to College Freshman" E. Restitulio and Robert O. Duncan, York College CUNY

"Restaurant Rockstar: A Digital Game that Teaches Student How to Read Nutritional Fact Labels" S. McIntosh and Robert O. Duncan, York College CUNY

"Monster Appetite: To Eat or Not To Eat, That Is the Question" Maria L. Hwang and P. Chantes, Teachers College Columbia University

"A Language Learning App for International Students Preparing for Higher Education in the U.S." Hsu Shuyi, Teachers College Columbia University

"Mind Reader and Forty Eight" Ryan Courtney, Stony Brook

"Government in Action" David McCool and Chris Parsons, Muzzy Lane Software

"Off the Page, Onto the Classroom Stage: Discoveries Through Play with Text and Language" Katherine M. DiMarca, Middlesex Community College

"Stellar Chemist: A Work in Progress" Eric Church, University of Baltimore

"Cool School" Mark Young, Rational Games
"Gametron7000" Kristana M. Textor and Josh Knowles, Video.Art.Games.

# Saturday, January 18th

### Borough of Manhattan Community College
### 199 Chambers Street, New York City
### Richard Harris Terrace

Game Day, 10 am to 5 pm

On this more informal day, we will be playing popular board/card games and offering feedback to educational games that attendees have created. Feel free to bring games of your design. We will have game designers on hand! During this time we will get to know each other better and hopefully discover opportunities for future collaborations.

# Abstracts

## THE ROLE OF VIDEO GAME GLITCH IN EMANCIPATED LEARNING AND NEW LITERACY ACQUISITION

**Beatriz Albuquerque**
TEACHERS COLLEGE, COLUMBIA UNIVERSITY
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This study examines the viability of different approaches to learning through digital media, specifically a video game glitch without teacher interaction. The research in progress will examine both the user's experience and the scholar's point of view. At its center the study will show whether and how video games, and more specifically arbitrary glitches within video games, serve as Art emancipator so that while users are trying to solve a technological problem, they simultaneously acquire new literacy skills and expand their proficiency in critical thinking.

## VIDEO GAMES AS FEMINIST PEDAGOGY

**Samantha Allen**
EMORY UNIVERSITY
*samantha.allen@emory.edu*

In my presentation, I argue that video games are powerful but overlooked tools for feminist pedagogy. I review three game-based teaching activities that I teach in my Introduction to Women's, Gender and Sexuality Studies courses at Emory University. In the first activity, I open a transgender studies unit with the independent games dys4ia, Lim and Mainichi. In the second activity, I teach the feminist theory of intersectionality through Halo, a popular first-person shooter series. In the third activity, I swap Bastion for Halo because of its greater degree of accessibility. With reference to Ian Bogost's notion of procedural rhetoric, I argue that video games are uniquely equipped to teach college students about interlocking and overlapping systems of oppression because games themselves are composed of and defined by interacting systems. My presentation will make thorough reference to existing existing literature on feminist pedagogy (e.g. Briskin and Coulter, 1992; Fisher, 1981; Sandell, 1991; Shrewsbury, 1997), particularly bell hooks' classic Teaching to Transgress (1994).Video games are uniquely well-suited for feminist pedagogy because they dismantle traditional structures of classroom authority, re-spatialize the classroom and require active student engagement. In the conclusion, I will attempt to address fears that feminist instructors might have about implementing game-based teaching activities in their own classrooms.

## GAME DESIGN AS LIFE DESIGN - A DECK OF CARDS

**Brooke Allen[1]* & Marshall Poe[2]**
[1]COLUMBIA UNIVERSITY AND [2]UNIVERSITY OF MASSACHUSETTS
*brooke@brookeallen.com*

The presenter (Brooke Allen) was struck by the fact that Jesse Schell's book, The Art of Game Design, can be seen as a handbook for designing a life. A principle insight is that, rather than imagine scripting your future so as to force a story on yourself, it is better to design your life as a story generating machine – a game you get to play just once. See an interview with Jesse on this subject here: http://www.noshortageofwork.com/pages/2899. Inspired by Jesse's "Deck of Lenses" that accompany his book, Brooke created a set of 54 questions for designing a life and mapped them onto a standard poker deck. See this: http://brookeallen.com/pages/archives/938. In the fall of 2013 these decks will be used by a class at the University of Massachusetts that will help students

create a philosophy of life. The class will help build a website (http://www.Q54Club.org/network) that will provide supporting materials along with a social network where students can post their philosophy and collaborate on projects. The website will incorporate certain gamification elements to increase enjoyment and motivate students to completion. We will present the deck, briefly describe the experience with the class, and invite the audience to join the social network and play with our "Design Your Life Deck of Lenses."

## ARGUMENT

**Andrew Y. Ames**
ROBERT MORRIS UNIVERSITY
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Argument is a table game that allows three players either to collaborate or to compete—the players decide. The players sit at a round board that has 144 circles inlaid on the top. They take turns moving their own game pieces from circle to circle. The pieces stack, and a player who creates a stack of three pieces, removes and collects the pieces. In competitive play, the person who removes all of his or her pieces and collects the most pieces, wins. In collaborative play, everyone can win, but only if all pieces are removed from the table. Setup and play are easy; winning is not. Each player receives six of each type of piece and lays the pieces out between three rows. The symbol on top of each piece shows its movement. Each of the three pieces moves like a familiar chess piece: a knight, a rook, and a bishop. In addition, each type will only stack on a specific type of piece, and the relationships are similar to Rock, Paper, Scissors: rock over scissors; scissors over paper; paper over rock. Players do not have to remember the relationships because a hole in the bottom of each piece matches the top of the specific type of piece on which it stacks. The physical structure of the game was intended to foster collaborative play. Players sit at a round board as equals. Watching people play the game has shown that players often choose to compete, and the competition reveals something about human behavior: when players collaborate, they are talking to one another; when they compete, they talk much less or not at all. These behaviors seem to increase as players become more familiar with the game. When playing collaboratively, the game is more like a puzzle than a board game, for players must have open communication to plan a strategy to clear the board. People enjoy playing the game, and because it requires three players, it does bring people together. Players decide how to play, and the decision changes how they interact with the game and one another.

## VIRTUAL FIELD TRIPS IN HEALTH EDUCATION

**Xin Bai*, Joanne Lavin, and Renee Wright**
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Health education focuses on the preparation of graduates who are able to think creatively, critically, and accurately in a myriad of situations. Healthcare errors and communication failures call for educators to include interdisciplinary team training and/or drills. There are many reasons why nurse educators have embraced the use of simulation: to foster self-confidence; to encourage team building and communication; to allow for student practice in a safe environment; and to promote clinical reasoning skills. More research is needed documenting positive impacts on cognitive learning from simulations. Our research investigates how learners can effectively acquire knowledge and skills via virtual field trips. Thirty-nine undergraduate students participated in the study in April 2013. They were recruited from the department of Nursing at an urban public university. The 130-minute study is comprised of four conditions created by crossing the two factors of Case Study (CS) and Role-Play (RP). Each factor has two levels: text vs. simulation. For the CS factor, students either read a text-based case or watch a simulation-based video case; for the RP factor, students role-play

either via text chatting online or in a simulated virtual environment. Data analysis is based upon four data sources: (a) pretest regarding students' prior knowledge on the topic of Stroke or CVA, which consists of 20 multiple-choice questions assessing students' knowledge retention and understanding of the subject domain; Each question is 1 point. Some questions have multiple answers while others have only one answer; 2) posttest, the same as pretest, which has been used with Nursing students for learning assessment in the same college; 3) survey regarding students' attitude towards 3D teaching vignettes and other alternatives: text-based cases, real clinical experiences, or role play in 3D simulations; The questions are in the format of 5-point Likert Scale, multiple-choice questions, and open-ended questions; 4) observations by three researchers of participants' engagement throughout the research session. Also collected are students' ages, years in college, and ethnicity. In this presentation, we describe a design-based research process of developing a virtual learning environment that immerses students in a typical role-play games in the healthcare field. Study participants follow a story of a stroke patient at her virtual home and in a virtual hospital. They then get on a virtual trip playing the roles of a patient, a doctor, or a nurse in a similar virtual context to experience the emotional, physical, or social impacts those stakeholders may go through. A quasi-experimental study confirms the authors' earlier finding that learners overwhelmingly prefer virtual to text-based learning format and they gain significantly in cognitive skills. Analysis of students' learning outcomes and in-depth discussions of important issues implied are included to help understand what kind of knowledge and skills can be better represented in a virtual world and whether learners acquire such knowledge and skills differently.

## THE GAME OF COLLEGE

**Melissa Barlett**
MOHAWK VALLEY COMMUNITY COLLEGE
*mbarlett@mvcc.edu*

Come play a game that we have been using at Mohawk Valley Community College as part of our College Seminar course. It is loosely based on the Game of Life, but instead shows our students what it takes to make it through two years of community college. The game includes character creation, the gauntlet of admissions, financial aid, and placement testing, and a variety of useful things to help you out and harmful things that slow you down. It emphasizes the importance of using all available resources and good decision making. Take a look - maybe you'll want to try a version out at your school!

## PLAY AS AN INVITATION TO LEARN: TEACHING GRAMMAR WITH GAMES

**Amy Baskin**
FLORIDA STATE COLLEGE AT JACKSONVILLE
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Ask college students to learn grammar, and they jump to attention and eagerly await a teacher-centered lecture with some examples on the board. Bazinga! No… no, they don't. Instead, they show symptoms of PTLGSD (post-traumatic learning grammar stress disorder) which involves entering a coma-like state of mental and emotional shut-down as they brace for the familiar pain and boredom they are about to endure. As an alternative, create a game-centered learning space in which students take on combined kinesthetic and intellectual feats: A Grammar Olympics. Set up booths with carnival games in which students face grammar challenges, and they will take risks, open up to social educational opportunities, experience positive emotions, and laugh while learning. They will work with peers collaboratively, teach others and accept instruction from coaches for a double pay-off: first, they get to understand grammar concepts, which they genuinely want to do, and secondly, they earn an external reward (sticker or badge). When the educational environment feels safe and even playful, students' perceived barriers to learning dissolve. These

strategies lead to authentic breakthroughs in comprehension. (Oh! Now I understand!). Grammar Olympics is a fun, low-tech, low-cost, old-school approach to social interactive learning. Players (learners) have no negative high-stakes consequences. Instead, a "fail" leads to second chances, tutoring and peer assistance. In other words, they work even harder to succeed with more depth, more practice and stronger connections to people and the school environment. Game-based grammar education transforms students into Grammar Olympians who leave the event with enhanced knowledge, a happy disposition, better writing abilities, positive ties with their peers, and a gold medal.

## STELLAR CHEMIST - WORK IN PROGRESS

**Eric Church**
UNIVERSITY OF BALTIMORE
*eric.church@ubalt.edu*

Stellar Chemist is a work-in-progress game designed to teach how stellar nucleosynthesis occurs and how the laws that govern nuclear fusion shape the distribution of elements in the universe. The game is intended to be integrated into undergraduate level astronomy, chemistry and physics classes as a part of teaching about the role of stars in element formation. In Stellar Chemist you control the normally random process of nuclear fusion that occurred in the first seconds of the big bang and continues inside stars. Controlling fusion provides players insight into the chain reactions that control what elements get made and the relative proportions of these elements. In addition, by hand-constructing more complex elements from smaller ones, the player gains a more fundamental understanding of the patterns behind the Periodic Table of Elements. Stellar Chemist seeks to address fundamental concepts that are traditionally only taught as abstract rules and by memorization of chain reactions. Not all content is a good match for representation in a game. Identifying and targeting those areas where games can have the most impact is an important part of figuring out how to use games as a part of teaching. Stellar Chemist is envisioned as the first of a series of games that seek out college level science content that is most suitable to for games and matches content to mechanics. One area that is a good match for game-based learning is the understanding of complex, conceptual systems that occur in nature, but are unobservable as anything other than theory. The approach that Stellar Chemist seeks to investigate is how games can be used to allow students to interact with complex systems and if interacting with those systems provides a more complete understanding of the system being studied. Further, Stellar Chemist's designer is interested in how to integrate games into standing curricula as part of an effort to keep the less motivated students engaged. Stellar Chemists' visual style is based on scientific chalk talks inspired by the undergraduate lectures of Richard Feynman; animated, semi-improvisational lectures that rely on simple visuals to teach. Chalk talks serve as both an aesthetic guide and a guide to the content most appropriate to representation within games. The use of a simple line-drawn 2-d style makes the game accessible to a wide range of audiences and also makes it very compatible with web delivery using HTML5. The visual style extends to the gameplay. Stellar chemist is seeking to use a very simple mechanic and build complexity using the increasing complexity of the chain reactions being taught. I'm interested in showing Stellar Chemist in the arcade in an effort to get further feedback on recent playability improvements. I want to be able to watch more people play the game to improve usability and fun. In addition, I'm looking for input on how learning is integrated into game structure. Lastly, I'm looking for partners who may be interested in experimenting with different approaches of integrating content into a class.

## MIND READER AND FORTY EIGHT

**Ryan Courtney**
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Mind Reader is a one vs one or two vs two competitive game, using Sifteo cubes attached to headbands, that focuses on creating a more intimate gameplay experience by having players playing face to face which helps make the game a more engaging studying tool. The game is based on collecting items from your set and trying to discover your opponent's set while trying to disguise your set from your opponent. The currently has five modes but will eventually allow for users to create their own sets so that they can study the topics they need. Forty Eight is a two vs two game also using Sifteo cubes. This game takes advantage of the tactile interface provided by the Sifteo cubes as players must physically combine their cubes in various ways as well as trade cubes with their teammates. Loosely based off of the 24 card game, players race to manipulate their starting number using addition, subtraction, multiplication, and division until their team can combine (through a/s/m/d) their base cubes to forty eight. Teammates must communicate with each other throughout the game in order to quickly reach the goal of combining to 48. This game, like Mind Reader, is a learning game that has a focus on social interaction and competition in order to make learning more engaging.

## MURDER MYSTERY CHALLENGE! ENGAGING FIRST-YEAR STUDENTS IN A GAME-BASED LIBRARY INVESTIGATION

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The Lloyd Sealy Library at John Jay College of Criminal Justice created and coordinated a Murder Mystery Challenge to familiarize first-year students with basic research skills. The Challenge followed a murder case narrative based on a real 1921 crime. Students used historical resources and were exposed to some of our unique Special Collections materials that were related to the murder, competing in teams to complete tasks like searching in online newspaper archives, finding a book in the stacks, and citing a scholarly source properly. The Challenge took place in the library but was almost fully online, created and coordinated with very little overhead. The game-based assignment facilitated active team learning by coordinating with the existing 'peer mentor' social structure at John Jay, contributing to the game's popularity. Over 75 first-years participated—an unprecedented number. In feedback, all surveyed students noted that they learned at least one of the basic research skills listed in our goals. About half of the students thought the activity was fairly to very 'fun'; this ratio reflects both the complications of teaching routine library skills in a game and the excitement of 'investigating' a historical crime with a group of friends. Our poster will feature sample clues from the Murder Mystery Challenge and will focus on three areas: 1) Balancing walking through mundane library tasks with creating an emotional/social connection to the game-based assignment; 2) How we as a library mined our unique collections to create an experience relevant to first-year students' interests; and 3) Outcomes of the game and improvements we plan to incorporate for next year's Murder Mystery Challenge.

## THE CHALLENGES OF DEVELOPING AN EDUCATIONAL BOARD GAME: BALANCING CONTENT AND GAMEPLAY

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At Teachers College, Columbia University, the Games Research Lab has created Arctic Saga, an educational board game designed to simulate marine spatial planning, a negotiation technique used to resolve stakeholder spatial interests in disputed geographical areas. In the game, players negotiate stakeholder economic interests while working together to maintain the Arctic environment. The overarching goal for this game is to provide an accessible, enjoyable, and informative experience for players interested in learning about the current Arctic environmental and economic climate. As a game designed with educational goals in mind, Arctic Saga has met a number of challenges from both game and instructional design perspectives. Developing any game is a long, embattled process. Designing mechanics and heuristics, balancing gameplay, and measuring engagement are part of a short list of what goes into any game design project (Salen and Zimmerman, 2004). Designing any instructional technology involves determining the effectiveness of the educational content, implementing learning theories, striking a balance between engagement and learning theories. Developing an educational game involves finding harmony between these two, often conflicting, design processes. Not only do the designers have to call upon the same skills and practices required to produce an engaging game, but they must also consider how to effectively relate learning goals without inhibiting learning via interference from those game mechanics (Mayer, 2005). Additionally, designers must also determine how to balance fantasy with realism in order to accurately convey content while still providing players an enjoyable experience. This article describes a number of the game and instructional design difficulties encountered in the design of Arctic Saga and relates how those challenges were resolved. By discussing such difficulties, the authors hope to contribute to the growing canon of educational game design cases and assist educational game developers in examining and troubleshooting their own designs.

## PLAYING TOGETHER: TEAMWORK IN ONLINE GAMES

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In today's working world, no one person can accomplish everything by him or herself. Collaborative skills are in high demand by employers, and educators in recent years have been researching ways to foster such collaborative skills in students. Some researchers have turned to online game environments as potential training grounds for leadership and training skills development. This study investigates the elements of teamwork exhibited and inhibited in Riot Games' League of Legends, a multi-player online battle arena, and suggests how those observations may help inform the development of online game environments intended to promote teamwork skills.

## OFF THE PAGE, ONTO THE CLASSROOM STAGE: DISCOVERIES THROUGH PLAY WITH TEXT AND LANGUAGE

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Academically competent college students are able to incorporate vivid detail in their writing as well as interpret and evaluate meaning in their reading of texts. Using the precepts of drama pedagogy, I

will facilitate one or two games that engage learners through multiple intelligences including (but not limited) to kinesthetic, visual, and auditory intelligences. I will lead participants through "Eagle Eye," an on-your-feet game that strengthens observation skills and can be used to teach narrative writing with vivid language and sensory details, and "Line Toss," a seated-in-a-circle game that strengthens reading comprehension and critical thinking skills though speaking aloud / "tossing" quotations to determine an article's thesis and support. In "Eagle Eye," participants role-play detectives to notice subtleties in appearance which will improve their abilities to note details and incorporate them into their writing. In "Line Toss," participants role-play talk show guests taking part in an animated dialogue to come to a better understanding of an important social issue discussed in a particular article. I will provide participants with a packet that includes game instructions, learning objectives, and a list of resources for further information about drama pedagogy. I developed these two games recently for use in English Composition and Developmental Writing courses, but they can be used by any instructor seeking to improve students' abilities in writing with descriptive details ("Eagle Eye") and evaluating and interpreting scholarly articles ("Line Toss"). My studies in Emerson College's M.A. in Theatre Education program inform my teaching as Interim Chair of General Humanities and English instructor at Middlesex Community College in Bedford and Lowell, Massachusetts.

## iSKETCH: A DIGITAL ART THERAPY GAME TO IMPROVE SELF-ESTEEM

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Art Therapy is a variation of psychotherapy used to promote self-expression and self-confidence through drawing, sculpture, or painting. When used in conjunction with traditional therapies, it may alleviate pain associated with various pathologies or painful treatments like chemotherapy. While there is a paucity of research on the subject, art therapy appears to be more effective for subjects when used as a method for distraction. College freshmen are known to be at-risk for depression. Learned helplessness and pessimism are thought to contribute to this depression, and thus therapies that bolster self-esteem are known to help. Consequently, we developed a game where college freshmen learn to draw as preemptive therapy. We seek to improve self-esteem by demonstrating that difficult drawings can be accomplished with practice. It is predicted that reports of self-esteem will be enhanced because our drawing game can adapt to user performance in real time. Volunteers from the York College Research Subjects Pool will play a game where they have to complete several drawings in response to photographs or creative challenges. Upon completion, subjects will rate the success of their attempt. The self-reports of quality will be used to adjust task difficulty in succeeding trials using psychophysical staircase procedure. If this program is successful, we will consider developing a method to include exposure therapy in a game. Under proper supervision, a therapist might use our game as a safe way of introducing potentially stressful content to a patient. The therapist can use the game to regulate exposure therapy in a quantitative manner.

## LERPZ BEHAVES: A GAME TO TEACH APPLIED BEHAVIORAL ANALYSIS

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Inexperienced parents may have difficulty encouraging desirable behaviors in their children. Even though applied behavioral analysis (ABA) is widely used in education and healthcare to shape the behaviors of healthy and developmentally challenged children, many young parents are not offered formal training in ABA. Parents of children with autism spectrum disorders, who are generally knowledgeable about ABA, also have problems encouraging verbal expression in their children

because the child's internal desire to communicate is difficult to identify. Game-based learning is known to be effective for teaching lessons that require practice. Consequently, we developed a game where potential parents could learn and practice ABA. Relative to text-based methods of teaching ABA, it is predicted that game-based methods will result in better retention of core ABA concepts. Volunteers from the York College Research Subjects Pool will play a video game presented in a web browser. In the game, players will apply ABA to a character that needs to complete tasks in the game world. The character will display desirable and undesirable behaviors along the way. Players will be required to shape the character's behavior to complete the tasks. Game mechanics will be used to promote player engagement, sustain attention, and facilitate learning. Control subjects will spend an equivalent time with the core concepts of ABA in a web browser, but with no game mechanics. If game mechanics demonstrate improved learning relative text-based methods, we will broadly distribute the game to universities across the country.

## UNBIASED: A GAME TO REDUCED ERRORS IN COGNITIVE AND SOCIAL BIASES

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A vast amount of information bombards our senses, and selective attention must be used to filter out information that is not behaviorally relevant. Similarly, heuristics are cognitive short cuts that allow us to make decisions quickly. Heuristics prevent us from being mired in deliberations that would halt everyday progress. However, the use of such short cuts is automatic and comes at a price. Cognitive Biases are untoward effects created by using heuristics. Cognitive psychologists have identified over 100 such biases. For example, the "confirmation bias" occurs when an observer forms opinions based only on affirmations of their schema, as opposed to evidence that falsifies their schema. College freshmen are at-risk for making poor decisions that could impact their academic careers as well as their professional careers. Consequently, we set out to create a game where students could learn about cognitive biases and practice avoiding errors in decision making. Game-based learning is particularly effective when students need to practice a skill again and again. Our game allows students to practice making judgments in the presence of false statements. Players observe non-player characters (NPCs) interacting in a game world. Several of the NPCs engage in conversation, and one of the characters makes statements that reveal a cognitive bias. The player must identify the NPC making the error and label the cognitive bias in order to win valuable resources. Performance on a post-game assessment of decision making is predicted to be better for students who played our game relative to those who learned about cognitive biases from text-based sources.

## SAVING MIKEY: A DIGITAL GAMES TO EDUCATE AT-RISK COLLEGE STUDENTS ABOUT DEPRESSION

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The national dropout rate for college freshmen is alarmingly high (~30%), and evidence suggests dropout rates are even higher for urban colleges. Freshmen faced with several new challenges are prone to depression and anxiety, and poor coping strategies might contribute to the dropout epidemic. While much research has been conducted on young adults with depression, few diagnostic techniques and therapies are designed to affect this at-risk population via their affinity groups. Young adults diagnosed with depression are known to spend more time playing video games than their healthy peers. Consequently, we developed a video game to educate incoming

freshmen about the behavioral indicators of depression. It was predicted that students who played an interactive game would be more likely to diagnose depression in a virtual case study than students who participated in a text-based case study. 64 volunteers from the York College Research Pool served as participants. The first group (GAME) played a video game designed to teach students about depression, and the second group (NON-GAME) participated in a paper version of the game. The video game consisted of a simulation with two non-player characters (NPCs), one with depression and one without depression. The two NPCs were depicted in conversation with each other, and subjects were instructed to make qualitative judgments about the mood of the NPCs. Subjects in the GAME condition could accurately identify behaviors associated with depression. While a final analysis between experimental and control groups is pending, there is evidence to indicate video games are a valid tool for instruction about depression.

## CRITICAL THINKER: A DIGITAL GAME THAT TEACHES CRITICAL THINKING SKILLS TO COLLEGE FRESHMAN

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First-year retention rates at American universities are quite low with the national average of dropouts hovering around 30%. Formal training in critical thinking is known to facilitate success in college. While the definition of critical thinking remains elusive, psychologists typically define the construct in terms of performance on task. Courses that are designed to foster critical thinking typically involve practice on such tasks, but few programs utilize technology to provide self-paced instruction with just-in-time feedback. Consequently, we developed a video game to teach college freshmen how to identify flawed arguments. It was predicted that students who practice critical thinking in a video game would identify flaws in logical arguments better than peers with traditional training. Subjects were recruited from the York College Research Pool and randomly distributed into two groups after informed consent was obtained. The first group played the video game, and the second group participated in a pen-and-paper version of the game that did not provide immediate feedback or a reward-punishment schedule. Both groups were presented with a series of conversations between two characters. For each trial, the subject had to determine which error in logical thinking was being made by one of the characters: the either-or fallacy, overgeneralization, or circular reasoning. Subjects could also select an option that indicated there was no error present in the dialog. Preliminary analysis indicates subjects could accurately identify the logical flaws in each argument when playing the video game. While a final analysis between experimental and control groups is pending, evidence suggests video games are a valid tool for teaching critical thinking skills.

## RESTAURANT ROCKSTAR: A DIGITAL GAME THAT TEACHES STUDENT HOW TO READ NUTRITIONAL FACT LABELS

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Obesity has reached epidemic proportions in urban youth. Poverty is known to be the single most reliable predictor of obesity in the United States. Yet, food awareness is another major covariate with obesity. Consequently, we designed a game to inform urban youth about the nutritional content of common food items. The game incorporated 100 randomly selected foods from the NDL/FNIC SR-25 Abridged Nutritional Facts database, which is composed of over 8000 food items and 53 macro- and micronutrients. It was predicted that students who played the game were more likely to score higher on a post-game assessment of nutrition than students who were merely told to

memorize the content. Participants were recruited from the York College Research Pool. York College is an urban college with a wide ethnic diversity of students whose average family income resides in the low to lower-middle income brackets. Half of the participants were randomly assigned to play the game, which offered feedback, a reward/punishment system, and competition. The remaining participants were given a text-based lesson on nutrition that included the same information as the experimental condition, but without game mechanics. In the game, subjects were asked to respond to challenges by preparing meals using the ingredients from the NDL/FNIC database. Challenges placed an emphasis on certain macronutrients to draw the students' attention to the relationship between the food (e.g., "fish") and the macronutrient (e.g., "protein"). Pilot data from this game will be used to inform the design of a digital game that can be widely distributed to urban youth via the Internet.

## USING A BOARD GAME TO TEACH STUDENTS ABOUT DIVIDED ATTENTION

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Because cognitive resources are limited, the brain must use attention to process information in one part of the world at the expense of another. People often operate under the illusion that they can multitask, but they are really just switching rapidly between tasks. Dual-task studies reveal interference between tasks (Pashler and Johnston, 1998; Lien and Proctor, 2002). Such tasks require a speeded motor response (Ruthruff and Pashler, 2009). Varying the stimulus onset asynchrony (SOA) determines if the tasks need to be performed concurrently. The first task is performed quickly at all SOAs. But response times to the second are delayed by several hundred milliseconds at short SOAs (e.g. 50ms) relative to long SOAs (e.g. 1000ms). This dual-task interference effect has been termed the psychological refractory period (PRP) effect. The term 'refractory period' came from the hypothesis that the interference stems from a temporary cognitive sluggishness immediately following an act of cognition (analogous to the neuronal refractory period). A game was designed in response to Ruthruff's and Pashler's ideas. This game tests how a person will function when given two more tasks to do. In this game, there will be observations of how a person functions during multitasking with a time limit. It was predicted that people cannot do two or more tasks that require sustained attention at the same time. It was further predicted that attitudes regarding the ability to multitask would shift toward the negative after experiencing the game.

## IMPROVING DECISION MAKING FOR EXTREME PROSPECTS USING A BOARD GAME

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As of October 2011, 68.3 percent youth age 16 to 24 who graduated from high school were enrolled in college (BLS, 2012). However, the national college first-year dropout rate is hovering around 30%. Teenagers are in a critical period of brain development that affects their ability to make judgments. And during the years where their ability to make important decisions is compromised, students are faced with a wide range of problems affecting academics, finances, depression, relationships, and future career decisions. Consequently, we sought to develop a game to teach students about decision making and probability. Games facilitate learning by providing by promoting collaboration, capturing attention, encouraging interactivity, offering immediate feedback, and adjusting task difficulty in real time. The educational objective of our game is to teach students better decision making skills under uncertain conditions using situations derived from prospect theory. Prospect theory is a theory of economics used to describe decision-making

(Kahneman and Tversky, 1979). In a typical scenario, people must choose between a sure bet (e.g., $100) and the prospect of winning a lottery (e.g., 50% chance of winning $214). The utility of each prospect is defined as the probability multiplied by the value. In our example, the prospect would be the wisest choice because the overall utility of the bet, $107, is higher than the utility of the sure bet, which is $100. However, people behave irrationally when presented with bets that have extreme probabilities or values. We utilized this theory in our game because prospect theory makes quantitative predictions about decision-making. By training students to improve their decision-making skills for extreme probabilities and values, we hoped to expose their decision making process and help them make more informed decisions in the future.

## THE TRANSFORMATIVE GAMES INITIATIVE: LEARNING BY DESIGN

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The purpose of this presentation is to bring the games-based learning movement into alignment with the national mandate for inquiry-based learning in higher education. The National Counsel for Undergraduate Research, in conjunction with the National Science Foundation, is working to infuse undergraduate research into the core curriculum. Inquiry-based learning is known to improve learning outcomes relative to traditional lecture-based teaching methods. Similarly, game-based learning methods utilize basic principles in psychology to create experiences that benefit learners and the lives of those connected to them. Games are excellent learning management systems that are capable of teaching and assessment. Games that use psychophysical staircase procedures can adjust task difficulty according to user performance, which facilitates sustained attention, engagement, and learning. This puts the user into a state of "flow," where time seems to pass very quickly and frustration is minimized. While there is already considerable effort devoted to making games for students, undergraduate researchers who participate in game development stand to learn even more. Student researchers benefit by designing, programming, collecting data, analyzing data, and presenting at research conferences. The Transformative Games Initiative at York College works closely with the Office of Undergraduate Research to give motivated students a chance to collaborate on projects with faculty mentors and domain experts in any field. By engaging in the process of design, students further their understanding of a subject.

## THE INSTRUMENTALITY OF VIRTUALITY: THE PERCEIVED REAL-WORLD VALUE OF VIDEO GAMING

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This presentation will detail our effort to create an augmented reality mobile learning game experience that would elicit emotional response in players. We chose the horror genre to try to generate a fear response in our players. We asked if a horror-based AR game had the potential to garner a player's motivation to play, engagement in the game and the effect of location on the experience? The game is set against the backdrop of the former Athens Lunatic Asylum in Athens, Ohio. This location was chosen as it is widely viewed in local lore to be haunted. The game puts the player in the shoes of a reporter covering the early days of the asylum's history and getting more than he or she bargained for. The design and development of Horror at the Ridges was conducted as a design-based research effort. The game was created using the ARIS editor to encourage rapid prototyping. The game was primarily tested by graduate and undergraduate students from Ohio University, a large research university in rural Ohio. It tried to use fear to teach these students about an important point of local history that they otherwise would most likely have only have known

about from whispers in dorm rooms and the views of the buildings that they could see from campus. Interviews, playtesting data and observations, gave insights for developing informal game-design projects that better engage the player using narrative elements, geographical and place-based elements, and encouraging social interactions. We tried to scare people into learning history and will detail the preliminary results of this effort as well as what we learned from the iterative design process. Addendum: This research is relevant to higher education. The ARIS game design process can be used by higher education instructors with no coding experience to create immersive AR games for their students. Additionally, the game designed in this study was primarily used to educate college students about the local history of the asylum. The area is popular with studentsbecause of the belief that it is haunted and this game tried to use some of that interest and belief to teach.

## LIMINAL SPACE BETWEEN FUN AND EDUCATIONAL IMPACT: A POST MORTEM

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Though the best game designers and teachers may make their craft seem effortless, any experienced practitioner knows that game design and teaching are extremely difficult skills to master. Creating a fabulously fun game or deeply engaging lesson plan, assignment, or course requires effort, iteration, skill, and some measure of good luck. Therefore, it is a double challenge to create a game that provides both fun and educational impact for the player. In this post mortem, we analyze both the development process and the final product of two games designed for educational impact. First, we consider The Tomes, a choose-your-own-adventure graphic novel game designed to help 6th grade students learn English vocabulary. Second, we discuss Food Web, a maze/infinite-runner game designed to help students learn about the food web or food chain. In both cases, we examine the liminal space between fun and educational impact. Good games are fun to play, which increases the engagement of the player; with increased engagement, students will likely increase their learning outcomes. Too often, educational impact comes at the expense of fun. A truly great game designed for educational impact will be both fun and educational. Overtly educational games are quickly detected by any student. While students may prefer such games to non-game alternatives, practitioners in the field of educational game design strive to go far beyond the rather low bar of "better than my other homework options." Through careful post mortem analyses of development processes and outcomes, game developers and educators can learn from previous mistakes and build on previous successes. Though the two presented games were designed with 6th graders in mind, the design principles and the lessons learned can easily be applied to game development for college level students as well. This presentation will lay bare the ins and outs of real game development with the benefit of insights from both the academic and industry perspectives.

## GEOLOCATION AND FEAR: HORROR ON THE RIDGES

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This presentation will detail our effort to create an augmented reality mobile learning game experience that would elicit emotional response in players. We chose the horror genre to try to generate a fear response in our players. We asked if a horror-based AR game had the potential to garner a player's motivation to play, engagement in the game and the effect of location on the experience? The game is set against the backdrop of the former Athens Lunatic Asylum in Athens, Ohio. This location was chosen as it is widely viewed in local lore to be haunted. The game puts

the player in the shoes of a reporter covering the early days of the asylum's history and getting more than he or she bargained for. The design and development of Horror at the Ridges was conducted as a design-based research effort. The game was created using the ARIS editor to encourage rapid prototyping. The game was primarily tested by graduate and undergraduate students from Ohio University, a large research university in rural Ohio. It tried to use fear to teach these students about an important point of local history that they otherwise would most likely have only have known about from whispers in dorm rooms and the views of the buildings that they could see from campus. Interviews, playtesting data and observations, gave insights for developing informal game-design projects that better engage the player using narrative elements, geographical and place-based elements, and encouraging social interactions. We tried to scare people into learning history and will detail the preliminary results of this effort as well as what we learned from the iterative design process. Addendum: This research is relevant to higher education. The ARIS game design process can be used by higher education instructors with no coding experience to create immersive AR games for their students. Additionally, the game designed in this study was primarily used to educate college students about the local history of the asylum. The area is popular with students because of the belief that it is haunted and this game tried to use some of that interest and belief to teach.

## GAMES AND THE RE-PLAY OF GAMEPLAY: RENDERING DELEUZIAN MEMORY

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Games in all forms celebrate repetition. The interaction of player and game produces distinct re-inscriptions (to invoke the Derridian sense of archive) in repetition, akin to reiterations of memory. Gameplay is a negotiation of activity and passivity, in both player and text, a synthesis of constructs producing meaning through différance. In this way, re-play renders memory as a type of game grounded in différance. This short talk examines games as a potential apparatus for understanding Deleuze's ideas. If we apply Deleuze's sense of time and virtual memory in which, "the present exists, but the past alone insists," games offer a discrete venue for a 'past' that "provides the element in which the present passes and successive presents are telescoped." Gameplay, in turn, models a system of memory or remembrance and, indeed, renders the différance that propels replay: the repetition of successive replayed-presents in attempting to reconstruct, or recollect, a complete 'pure' past. When addressing the telescoping (or conflation) of two presents, two inscriptions or reiterations of the present, metaphors of puzzles and game pervading Deleuze's explanation: "The echo of the two presents forms only a persistent question, which unfolds within representation like a field of problems, with the rigorous imperative to search, to respond, to resolve." The "echo," not unlike two game save files, unites a continuing impulse and the 'response', in terms of games, is on the part of the player interacting with the game-text, exploring the system of signifiers, of meaning. "The response", Deleuze argues, "always comes from elsewhere". Like "a noise or a scent, once heard or smelt, be heard or smelt again in the present and at the same time in the past, real without being actual, ideal without being abstract," a replayed game offers a space in which "immediately the permanent and habitually concealed essence of things is liberated and our true self which seemed . . . to be dead but was not altogether dead, is awakened and reanimated as it receives the celestial nourishment that is brought to it." Games offer an actual model for this process. The repetition is the search, with distinct rhythms and reiterations, not simply through "the contributions and sedimentations of memory, but by a series of discontinuous disappointments and also by the means employed to overcome them within each series." The active syntheses of memory and understanding are passive synthesis in the syntheses of time; here the nature of the experience—game and replay—the active synthesis of recognition is founded on the unconscious synthesis of the reproduction of the present. The succession of repeated gameplay, reminiscent of film (as much as

film techniques influence game development), interrogates the experience(s) of the past, of memory, and of time.

## THE INTEGRATED PROBLEM SET: AN EXAMPLE OF SOCIAL SCIENCE GAMING

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The MV Sim (mvsim.ccnmtl.columbia.edu) is an online "strategy" game, (along the lines of SimCity), where students take on the role and attendant challenges of a poor family in sub-Saharan Africa. It was created as a targeted pedagogical intervention for the foundational course, "Challenges of Sustainable Development", in Columbia University's trans-disciplinary Sustainable Development Major. The MV Sim has been running successfully for 6 years and 7 course iterations, has been played by over 1000 students within and countless others outside of the course, and has become a fixture of experiential pedagogy in the program itself. In this presentation, as the project manager for and an original designer of the MV Sim, I propose to discuss the design, development, evaluation and iterative evolution of the game and its successful course integration since the first project discovery meetings in early 2007. In doing so, I will touch on the capacity of games/simulations to 1) increase student motivation and subject engagement, 2) serve a learner community of wide-ranging academic backgrounds, 3) provide individual control over the pace and direction of learning and thus increase student participation, 4) effectively represent complex subject matter in an integrated environment, 5) help students apply book knowledge to "realistic" situations and 6) provide intelligible narratives for complex ideas. While treating the interweaving of student assignments and their work in the simulation I will also explore issues of model modularity and how games like this can be built for wide-ranging educational applications. Audience members will be asked to play the game to get a feel for actual student experience, ask questions, draw connections to their own work and explore the possibilities of transposing the MV Sim model into their own contexts. More specifically, this presentation will demonstrate how the MV Sim implementation addresses distinct pedagogical issues that were preventing the course from achieving all of its critical goals. Since study in the field of global sustainable development (in particular the amelioration of extreme poverty) is not intended to stop at the theoretical dimensions of the mechanisms of poverty and ecology, the course and program designers felt it was of utmost importance that students develop the capacity to apply their knowledge when confronted with problems qualitatively similar to those awaiting them in the real world. Unfortunately, course constraints including class size (145-175), lack of prerequisites and sheer quantity of essential content, prohibited the instructors from effectively addressing this learning objective. Indeed, these challenges tended to relegate learning to the confines of disciplinary silos, rather than opening it to truly trans-disciplinary problem spaces. What these educators were looking for was an "integrated problem set" for the course itself, and a new, experiential way of teaching trans-disciplinary subjects in a classroom setting.

## CHOICES IN GAMES

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"Games are a series of interesting choices" is a widely accepted dictum by game designer Sid Meier. The proposed presentation begins with a brief overview of where this philosophy does not hold true; how games can be satisfying and fun even in the absence of player choice. After giving that perspective, the bulk of the talk explores how to design games that present players with meaningful gameplay decision making. The author has been teaching game design & production for the last

nine years. Prior to entering academia he worked in industry (most notably at Maxis Studio / Electronic Arts) as a game designer, programmer, & producer. The talk's material comes from the his forthcoming book, "The Building Blocks of Game Design," to be published by Routledge Press.

## TEACHING FICTION WRITING USING ROLE-PLAYING GAMES

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This presentation will focus on my experience using digital and tabletop role-playing games as a means for teaching principles of fiction writing in introductory creative writing classes. In traditional creative writing workshops, instructors often use published stories from literary magazines as models for student writers who then write and critique each other's stories. While this methodology has its benefits and drawbacks, creative writing instructors are well-served by breaking from the traditional workshop method and requiring students to analyze and produce different types of writing, including experimenting with networked writing, multimedia compositions, and collaborative projects. To these ends I have adopted role-playing games (RPGs), both digital and tabletop, to teach elements of fiction writing. Perhaps more than any other game genre, RPGs foreground issues of storytelling and player involvement in the creation of a unique narrative. Like any good story, RPGs begin with a detailed character with some motivation and a richly detailed world to traverse. Plot stems not from scripted storylines but rather from the characters' decisions, which become more nuanced and personalized through multiple play sessions. I will discuss two creative writing courses where students learned the craft of fiction primarily through a tabletop role-playing game. The process begins with "critical world building," or the collaborative construction of a fictional world through the use of polls, classroom discussion, and wiki entries that resemble RPG rule books and fan sites dedicated to popular digital RPGs. The items, places, and non-player characters are then placed on a Google map of a real-world location that becomes the game space for the role-playing campaign. In the next phase, students create characters that possess specific strengths and weaknesses and develop detailed backstories to give the characters a history, motivations, and to help round out their personalities. They then explore the world in small groups and write tightly-focused short fiction based on the most interesting aspects of their group's campaign. I will report on the results of the two iterations of the course, offering my observations about student engagement and performance, and sharing the results of an anonymous student survey asking them about the effectiveness of this non-traditional approach to creative writing. I will also discuss the significant challenges involved in undertaking a large, complex collaborative writing project based on a game—challenges that include institutional struggles, student participation, and assessment. The presentation will conclude with a discussion of best practices and my plans for future versions of this game-based course.

## A LANGUAGE LEARNING APP FOR INTERNATIONAL STUDENTS PREPARING FOR HIGHER EDUCATION IN THE U.S.

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A major academic challenge international students encounter in higher education is language issues (Andrade, 2006). Ramsay et al. (1999) found that international students in an Australian university had difficulties understanding lectures in terms of vocabulary and speed. The mobile language learning app assists international students by enhancing users' language comprehension ability in higher education. Long(1996) suggested receiving feedback from a language partner can refine a learner's language. Kessler (1992) argued that peer feedback in language learning could be more

powerful than teachers' feedback. In addition, an anxiety /uncertainty management (AUM) theory Gudykunst (1993) suggested there is more than language knowledge to consider but other factors may have influential impact on intercultural communication competence as well. The mobile language learning app tackles this issue by using video watching, and three phases of work examples (Renkl et al., 2010), which includes conducting asynchronous conversation with native speakers. A mockup and paper-based prototype explains the concept of the design. When a viable prototype is built, empirical studies will be carried out on newly enrolled international students at Teachers College.

## MONSTER APPETITE

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The obesity epidemic is one of America's largest public health challenges and a growing one in the rest of the world, one that creates disparities among race, ethnicity, region and income. Currently, there are over 12 million obese American children and adolescents and there has been an 82 percent increase of obesity in the last 20 years worldwide. Intrigued by the increase in young adult and childhood obesity, many awareness movements have been initiated throughout the country including New York City mayor Bloomberg's initiative to fight obesity through reducing the sizes of sugary drinks and the First Lady Michelle Obama's Let's Move movement to increase opportunities for children to become more involved in physical activities. In light of efforts to combat the obesity epidemic, Monster Appetite (MA) is a game that potentially remediates some aspects of the concern by promoting awareness of the content of food typically consumed by children. In initial testing kids responded well to the fact the game was more entertaining rather than preachy. The reverse factor (i.e., consuming high caloric content food items to make one's monster avatar fatter) enables them to think higher numbers, so when the nutritional aspect is taught to the students what their target caloric daily intake should be, they become more aware of the incredibly high numbers some foods have. Through play, children learn about the caloric amount in various food items that a child may select and intake daily. By ways of constant decision making and competitive game play, the hope is that children will start thinking more about their food choices with newly obtained information of the food items and be able to make informed decisions such as building healthier eating and exercise habits.

## #SCIENCEFTW

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The American Museum of Natural History has spent the previous year exploring how game play and game design - both analog and digital - can inspire youth to identify as science learners. After school programs with high school youth were developed, using digital games like Minecraft and analog games like Phylo (a CCG about biodiversity), Bone Wars, and Parasites Unleashed. A gaming manifesto was also produced, to position our interests in regards to combining the Museum assets with game and the tools of science to support 21st Century Learning.

## RULES AND RHETORIC: UNFAIR GAMES IN THE COMPOSITION CLASSROOM

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Much of the scholarly work on games in the classroom has focused on applying game-like structures to the classroom in an effort to facilitate learning, a process that has become known as "gamification." While gamification advocates a system in which students are rewarded for completing goals much like they were playing a game, very little attention has been paid to students themselves setting the parameters of the games. Furthermore, it is generally accepted that the games being played offer rules that are fair and present all participants equal opportunities for success. Using Ian Bogost's concept of procedural rhetoric, whereby arguments are made through the process of playing the game, as a starting point, this presentation focuses on students learning rhetoric through the creation of "unfair" games. I assert that students can develop rhetorical arguments through the creation of games that largely favor one side. By dictating the "rules" of the games, the students attempt to both interpret in class texts and take positions by attempting to persuade their audience to a certain side. The majority of the discussion will focus on my own experience teaching First Year Composition at the University of Wisconsin-Milwaukee. Examples will include games created by my students and testimonials by these student creators. Ultimately, I argue that putting students in charge of classroom games can be just as useful of a teaching tool as a gamified classroom in which students are subjected to formal rules.

## JOURNALING THE ZOMBIE APOCALYPSE: MINECRAFT IN COLLEGE COMPOSITION

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Over the course of a semester, an international freshman-composition class played Minecraft while reading selections from Max Brooks' World War Z and The Zombie Survival Guide. Students combined these readings with a modified version of Minecraft that simulates the zombie apocalypse. The students' experiences inside the game paralleled topics described in the books. Students wrote journals on these experiences and three academic essays on issues of the zombie phenomenon, morality versus survival and for the final project developed a zombie preparedness plan for the city of Athens, Ohio. This approach allowed these second-language students to operate within a single context over the entire semester, so that students could devote more time to understanding the process of writing than negotiating the meaning of textbook contexts and activities that are unfamiliar in both language and cultural context. This presentation will discuss the research findings of this one-context approach to teaching composition.

## CHOOSE YOUR OWN FAIRY TALES? ELECTRONIC LITERATURE AND GAME-BASED LEARNING

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The number of digital "texts" referencing fairy tales in the Electronic Literature Organization's canon only continues to grow, and such works provide unique opportunities to instructors seeking to bring game-based learning into classrooms. Works such as Donna Leishman's RedRidingHood and Deena Larson's The Princess Murderer and Modern Moral Fairy Tales are all examples of electronic

literature that require readers to interact with fairy tales in ways that are pedagogically beneficial and in ways that promote playful game-based learning. Although these texts can be used in curriculum simply because they may be a more relevant way of engaging students who are reluctant to read, such texts provide additional benefits for instructors attempting to teach fairy tales in the classroom since they mirror the folkloric and playful aspects of the "original" tales. Just as the oral tellers of the tales could alter or modify the stories at will, so too does the student interacting with these texts in the classroom have the ability to follow various hyperlinks or storylines built into the texts. In this way, students can "construct" the stories as they please (with some constraints since the structures of the text itself limit absolute freedom). Thus an instructor (whether in a classroom in the field of literature, creative writing, children's literature, or folklore) can discuss traditional oral, literary, and electronic fairy tales in a comparative way, but also in a way that fosters a deeper understanding of the adaptive and playful nature of fairy tales through ludic learning processes.

## THE FLUID ETHER: LEARNING PHYSICS THROUGH PLAYFUL SIMULATIONS AND LEVEL EDITORS

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Iridescent is proposing a demo of The Fluid Ether, the first of a planned six-game series of physics simulation games designed to help students develop an intuitive understanding of complex physics concepts through experiential play. The Fluid Ether explores concepts of drag, inertia, size and force by letting students manipulate water jets and floating objects of varying density to achieve goals. By allowing students to use these water jets to propel balls, break blocks, light up squares, collect coins and more, The Fluid Ether integrates the learning directly with the gameplay with levels and goals that are designed to highlight core fluid dynamics concepts. With an appealing sandbox and a safe environment for failure, The Fluid Ether provides students with an opportunity to observe and interact with complex forces that are difficult to demonstrate or experience in the traditional classroom. We intend The Fluid Ether to be offered as an interactive lab or extended class project. The Fluid Ether is free to download, and includes an opportunity for students to create and share their own level using the in-game level editor. Besides promoting engagement, the level editor teaches students in a different way than direct gameplay. By forcing students to balance competing design elements and work within the constraints of the simulation, they will be asked to engage in systems thinking as well as demonstrate a deep understanding of the fluid dynamics concepts involved. The level editor feature also increases the games' potential for use in the classroom, as teachers can assign open-ended challenges to be investigated and completed using the level editor (for example: What would ocean circulation patterns be like if a giant island dissected the Pacific Ocean?" We are particularly interesting in exploring the level editor as tool for student reflection and synthesis on STEM concepts, functioning similar to an essay in humanity courses. You can also view a sped up video of student level creation (in an earlier graphics format) here: http://www.youtube.com/watch?v=DcJJ2t9S1Z0&feature=youtu.be. In addition to the level editor, the other core feature of The Fluid Ether is that it captures clickstream data for assessment purposes. When students play the game, it collects data about play performance (e.g., what level parts they create, what parts of the level they test, how they go back and redesign levels, etc.). This allows for innovative assessment models that can measure metrics like conceptual understanding or how students use the iterative design process. The Fluid Ether is designed to reflect Iridescent's overall learning philosophies, including learning by doing, learning in a goal- and task-oriented environment, using open-ended challenges, creating a safe environment for failure and encouraging performance before competence. Iridescent has learned in face-to-face programs that open-ended design challenges are a terrific tool to engage children as tinkerers and inventors, and the virtual environment provides a no-mess, quick-reward approach to tinkering and problem solving that is

also a safe environment for experimentation and learning through failures. We see games as an ideal tool to bring innovative pedagogies into the classroom.

## SALTY DOGS

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Salty Dogs is a two-player turn-based strategy board game that exemplifies the struggle between whalers, whales and those trying to keep them apart. Play takes place on a 12 by 12 grid playing field. One player plays as the Whalers, placing his 6 triangle-shaped Whaling Ships on any of the 12 North or 12 South port squares. Player 2 places her 2 circle-shaped Whale Protection Agency Rafts in the marked spots in the middle of the Whale Zone (the inner 4x12 section) and the 6 Whales at any locations within that same zone. As play commences, each player takes turns moving the ships based on the roll of a single six-sided die. Whaling Ships can only move the direction that their prow is facing (with turning the ship counting as a move). Whale Protection Agency Rafts can move in any direction, but only within the Whale Zone. The Whaler must try to use his ships to capture the whales (by landing on them), while the Whale Protection Agent 1) finds and reports the Whaling Ships (by landing on them) and 2) renders the whales uncapturable by placing her rafts within 1 space of the whales. This protection, however, only lasts for two turns, after which, if the Whale Protection Agent has failed to move, the whale dives and resurfaces based on the roll of a 4-sided Longitude Die and a 2-sided Latitude Die. The game ends when either 1) the Whaler has captured all of the Whales or 2) the Whale Protection Agent has reported all of the Whaling Ships.

## PROJECT CONSTΔNT: A GESTURE-BASED GAME THAT TEACHES CALCULUS

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Project CONSTΔNT serves as an active educational tool for learning calculus concepts, targeting undergraduate students in a university setting using an original narrative, art, and audio assets. A gesture-based role playing game utilizing the Microsoft Kinect, this game engages students to learn calculus through challenges and rewards, providing an engaging alternative learning experience. [Development Team: Frank DiCola, Julian Chaves, Jack Farzan, Natalie Barillaro, Zach Klapwald, Andy Wiggins, Alex Thieke, Michelle Zanone, Michelle Little, Beth Hromada, Jiaren Li]

## USING MEANINGFUL GAMIFICATION AND PLAYFUL DESIGN INSTEAD OF REWARDS FOR THE CLASSROOM

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Interest in using reward-based gamification has been growing as a way to engage students in classroom activities. There are some dangers in relying upon rewards, such as demotivation, a loss of support structures for struggling students, and long-term damage to intrinsic motivation. Rather than focus on the scoring systems from games, another approach is to focus on concepts from meaningful gamification, such as introducing the play aspect of games, embracing choice and player-generated content, and incorporating reflection more deeply into the classroom experience. During this presentation, Dr. Scott Nicholson, director of the Because Play Matters game lab and faculty member in the School of Information Studies at Syracuse University, will first talk about his

experiences in the classroom implementing concepts of reward-based gamification and where it failed. He then will present how he turned to concepts of play and meaningful gamification in order to approach his classes with concepts from play, such as creating a failure-safe space, and from self-determination theory, such as enabling the students to craft their own syllabus. Participants will come away questioning some of the reward-based approaches to classroom management currently gaining popularity and think about how to create a more playful space that will enable a more positive mental state for students.

## PLAYING TO LEARN: GAMES, ENGAGMENT, AND DEEP LEARNING IN HIGHER EDUCATION

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This presentation describes a grant-funded study to examine the impact of game-based learning (GBL) on student performance in remedial and introductory courses, which was conducted at the CUNY Borough of Manhattan Community College in 2011-2012. The results indicate that students in the game-based classes reported higher levels of enjoyment than those in the non-game-based classes, and this increase correlated positively with increased performance on deep learning questions embedded in post-lesson quizzes.

## GOVERNMENT IN ACTION

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Developed by Muzzy Lane for McGraw-Hill Higher Education, Government in Action (GinA) is an online multiplayer game where you role play a member of Congress as a way of exploring American Government. Your goal is to maximize your Political Capital while balancing the need to achieve re-election every 2 years with having success in Washington DC. You have limited resources to spend and cooperation with other players is crucial to finding success in the game. Schools use the game as part of a curriculum for AP high school and college students studying US Government. Games can be licensed similar to textbooks by schools or the students themselves. Instructors create courses and assignments and assign students. All data is saved in the cloud, and accessible for review and reporting. Multiplayer sessions can be played together in a single classroom, or from remote locations taking turns asymmetrically. The game has already won a number of awards, including the Massachusetts Technology Leadership Council's award for INNOVATIVE TECHNOLOGY OF THE YEAR in Ed Tech.

## ANALYZING PROCEDURAL LEARNING AND EMOTION RECOGNITION IN CHILDREN USING SERIOUS GAMES

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Difficulties with procedural learning are associated with language and grammatical problems in individuals with specific language impairment (SLI). Our game implements a serial reaction time (SRT) task that assesses this mode of learning. Participants are asked to touch the location of a visual stimulus trial by trial. Decreased response times during the pattern are taken as evidence of learning as the participants learn to anticipate where the next stimulus will appear. The results can be used to

study whether SRT task performance can account for some of the individual differences in language and grammar learning as well as problems of individuals with SLI. A second serious game assesses emotional perception deficits that are often noted in children with Autism Spectrum Disorder (ASD). We developed this game for a mobile platform to implement facial emotion analysis and training for children with (ASD). The game displays varying facial expressions and records individual recognition skills, reaction time and decision-making patterns. The log includes the amount of time taken by the player to make initial and subsequent choices as well as the success rate. The goal of the game is to both monitor a child's individual perception patterns and implement customized remediation procedures. The game runs on a touch-capable mobile platform with an easy-to-navigate user interface, extensive administrative controls, data transfer capabilities between devices and verbose experiment results.

## WOMAN UP!

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This talk offers an inside look to the activities behind the organization Code Liberation Foundation. Founded on March 8, 2014(International Women's Day) as a result of a game developer Phoenix Perry's reaction to attending math and programming events at the GDC, this organization enables, empowers and drives forward the discussion of women in gaming. By the end of 2014, Code Liberation has offered over 100 hours of free computer science programming classes in C++, Open Frameworks, Unity, Javascript, Java, Processing and Game Maker. They have also have run 2 successful game jams. One at NYU Poly and another at NYU Game Center. From these jams, a series of new games were born. By endorsing the creation of games with creative coding platforms like Open Frameworks and Processing, they are helping to facilitate the creation of titles by women who have never made games before while still exposing them to core tenants of computer science. The research around women in gaming and computer science is surprising to those outside of the field of CS. Computing was assumed to be "women's work" and was reserved largely for women during WW2, the Korean War, Vietnam and beyond. Also, since it was associate with secretarial work, most early computer jobs were held by women. In 1987, 42% of programmers were female. Women innovated the field by and large. From the idea of programming to data structures and down to even the term bug, legendary women built the infrastructure of modern computer science. In 1991, for the first time in the history of computer science, the numbers of women in the field began declining. They have fallen over the last 13 years down to 24% of programmers being women. In gaming, the problem is more systemic. According to data, women make up about 4-6% of game developers. Phoenix Perry has a long history in both research and Advertising. An odd hybrid of a woman who possesses a unique skill set, Phoenix began to attempt to deconstruct the problem from the perspective she possessed. What she found was that the personal computer and all of the ads created around it were targeted at men. Largely viewed as in control of the largest purchasing power, companies forced ads towards them and sculpted an image of personal computing that excluded women. Simultaneously, the United States Government ran programs to encourage men to enter into the expanding field of computer science. This two factors mixed together and entered into cultural consciousness. In gaming, the sexist tone of the early personal computer ads extended to a new and disturbing level. Gaming became depicted as something only men or boys did. The early Game Boy ads are an alarmingly clear example. Sega followed suit as did Sony and Nintendo. What the culture was left with was naked women, rape jokes and the dehumanizing of women. (See attached image deck for some examples. Sources available upon request.) Code Liberation builds of the basic assumption that we do not have a STEM problem in education. We have an image problem in our culture. As it turns out, according to many studies, when men are segregated out of classes women learn better in fields such as physics and math. Men learn better in fields thought of as female dominated such as literature. Gender stereotypes hold us

all down. As a result, the Code Liberation classes are single sex only. Only women or people identifying as women are allowed to attend. In 2014 the reach of the program expanded to nearly 200 women. Men are allowed to attend lectures, public events and take part in our community, however by keeping the out of the classroom, Code Liberation creates a safe space for women to re-explore terrain assumed to be male dominated. By tapping into the 47% of the gaming population that is female through their love of games, Code Liberation attempts to undo the cultural damage created through media, gender stereotypes, online bullying, and cultural exclusion. Students of Code Liberation have responded extremely positively. Women have gone from 0 to game in as little as 4 days. Not only can women program games, they are shockingly good at it when they work together, leverage community and work in teams. Their anonymous end of course surveys have had the following feedback. "CLF is a precious gem that is embedded with a promise to change the ratio in the tech industry." "I do not have a tech background and usually feel intimidated by coding. This environment was comfortable for me to learn in." "I'm working on stepping out the shadows of my male peers, and deeply appreciated having a supportive circle of women around me." Also, by introducing Computer Science through the use of jokes, silly charts, wacky graphics and metaphors, their teaching style is decidedly friendly. By leveraging simple creative coding tools like Processing and Open Frameworks, women begin immediately putting images on screen and creating game mechanics. Each success builds confidence. Sharing and mentoring each other within the room, they support community. Also, by having only female instructors, CLF provides role models and proves that it is possible for women to employ these tools. Code Liberation is recreating the image of women, casting them into a smart and intelligent light. In 2014, they will bring their vision to full manifestation by creating a publishing platform for women within their program. Identifying emerging talent, the organization will foster the development of titles by women and release them on Steam, iOS, Android and Windows Phone. These new games will help change the perception that women do not make games and that women cannot live within the industry as developers. This talk with show sample educational materials, short interviews of our students, games in progress and serve to inspire educators to empower women. Phoenix Perry is an adjunct professor at NYU Game Center, NYU Poly and NYU ITP. By working around the institutional paywall and offering free classes, she created a very successful program. The level of popularity within the NYC games community managed to build support within NYU for the organization. Stepping outside of the traditional structure of the academic world, educators can spark interest and drive forward the paradigm of higher education to be more inclusive towards women in the sciences. NYU now fully funds the high school version of Code Liberation and offers space, equipment and technical support for the adult classes. Male allies such as Frank Lanz have kicked down doors within NYU and also within the gaming community for Code Liberation Foundation. By identifying and celebrating these allies, Code Liberation also supports professional growth. Men in education in gaming by and large do not approve of the current state of the industry and are powerful voices that must be encouraged and recognized. By including men in our talks, events and game nights, Code Liberation builds community relationships and fosters collaboration. In summation, this talk covers the work done by Code Liberation Foundation in the NYC Games Community. It will break down how they change the perception of women by presenting research, serving as mentors and empowering women to release titles. It will discuss their experimental educational model and the creative coding tools they leverage. It will also explain ways educators can work within institutions to their advantage. By encouraging men to join forces with their organization, they promote allies and foster opportunity. This talk will excite educators and encourage new approaches for women new to computer science.

# ITERATIVE DESIGN AND IMPLICIT BIAS: WHAT WE LEARNED FROM MAKING FAIRPLAY

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Games designed for learning and social impact are not merely about content delivery. Rather, they create worlds in which players engage with and make sense of the subject matter. With this in mind, we will facilitate a discussion around design approaches and strategies on folding content into gameplay in FairPlay. As part of this post-mortem, we will present the iterative prototyping process for Fair Play and discuss how our integration of content and gameplay has evolved. Fair Play is a web-based game designed at the University of Wisconsin-Madison to reduce implicit biases (i.e., unconscious assumptions that arise from group stereotypes) against underrepresented individuals in academic science, technology, engineering, mathematics, and medicine (STEMM). The target audience for Fair Play is graduate students and faculty members in these fields. The core of Fair Play centers on implicit biases and their effects on individuals in an academic setting. Unfortunately, we all are biased to some degree, and these biases stem from stereotypes we inherit from our culture (Devine, 1989). For instance, studies show that the majority of Americans tend to have more negative implicit associations with African Americans than with Caucasians (Nosek, et al., 2007). These biases, whether consciously endorsed or not, have a cumulative effect and contribute to the lack of diversity in academia (Minikel-Lacocque, 2012). The goal of Fair Play is to present biases in a realistic way through a rich narrative to raise awareness about their effects. By experiencing racial biases in the game, players will come to identify and learn the role that biases have in the lives of minorities in academia. In Fair Play, players take on the perspective of Jamal Davis, a young African American graduate student, on his way to become a renowned professor. In his journey, he meets peers and mentors who can propel him to achieve his dream, but people may not always be helpful. As Jamal, players must conquer objectives, explore the surroundings, and build Jamal's network to prove his full research potential. The game provides ample opportunity for players to experience implicit biases, particularly in encounters with other characters, as they navigate the world of academia as Jamal. It is through these social interactions with other characters, as a form of role-play, that Fair Play simulates real-life bias encounters. By actively assuming the role of Jamal and experiencing bias through his interactions, we hope that our players will gain increased levels of perspective-taking, empathy, and awareness of biases against underrepresented individuals. In this session, we will share the approaches we took to design the Fair Play narrative and gameplay (what worked, as well as what did not) while highlighting the design decisions that resulted in positive feedback and effect, as well those that did not. We have come across several obstacles that other games for social impact may face, and hope our experience will be valuable to others who are making games that deal with sensitive topics. Fair Play draws from research literature on game studies and implicit biases to create a world that models the intersection of commercial game design and top tier research. The core of Fair Play centers on implicit biases and their effects on individuals in an academic setting. Unfortunately, we all are biased to some degree, and these biases stem from stereotypes we inherit from our culture (Devine, 1989). For instance, studies show that the majority of Americans tend to have more negative implicit associations with African Americans than with Caucasians (Nosek, et al., 2007). These biases, whether consciously endorsed or not, have a cumulative effect and contribute to the lack of diversity in academia (Minikel-Lacocque, 2012). The goal of Fair Play is to present biases in a realistic way through a rich narrative to raise awareness about their effects. By experiencing racial biases in the game, players will come to identify and learn the role that biases have in the lives of minorities in academia. In Fair Play, players take on the perspective of Jamal Davis, a young African American graduate student, on his way to become a renowned professor. In his journey, he meets peers and mentors who can propel him to achieve his dream, but people may not always be helpful. As Jamal, players must conquer objectives, explore

the surroundings, and build Jamal's network to prove his full research potential. The game provides ample opportunity for players to experience implicit biases, particularly in encounters with other characters, as they navigate the world of academia as Jamal. It is through these social interactions with other characters, as a form of role-play, that Fair Play simulates real-life bias encounters. By actively assuming the role of Jamal and experiencing bias through his interactions, we hope that our players will gain increased levels of perspective-taking, empathy, and awareness of biases against underrepresented individuals. In this session, we will share the approaches we took to design the Fair Play narrative and gameplay (what worked, as well as what did not) while highlighting the design decisions that resulted in positive feedback and effect, as well those that did not. We have come across several obstacles that other games for social impact may face, and hope our experience will be valuable to others who are making games that deal with sensitive topics.

## WHAT CAN CHESS TEACH US ABOUT SOCIOLOGY?

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The metaphorical applications of chess to life date back prior to the thirteenth century and are still operating in modern narratives across many disciplines. The definition of "chess" varies across these narratives – some of which are problematic for moving beyond the mere "chess" metaphor. Based on the authorities found in the John G. White Collection at the Cleveland Public Library, this presentation explores the problem of defining "chess" such that the phenomenological form of "chess" is developed and intelligible enough to show that it cannot be translated by a theory of games. Rather, it should be understood as a preface to the development of a social logic that can enlighten students and scholars about social interaction and social life in general.

## WORLD OF WARCRAFT: EXPERIENCING REALITY IN A VIRTUAL WORLD

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The presentation will focus on my experience teaching a first-year seminar on the MMORPG World of Warcraft at Webster University. In the course, students are tasked to play the game itself and using it as both text and medium for exploring diverse questions about the "real" world. The gameplay--which involves exploration, solo questing, group dungeon runs, and player-vs-player wargames--is paired with scholarly work on the game itself as well as theorists who say nothing about games but whose work can be clearly seen in the design and mechanics of the game as well as how players interact with each other. The course covers a range of disciplines including political science, art, sociology, psychology, economics, and history and also focuses on skill-building (particularly in communication, teamwork, critical thinking and problem solving). My analysis (from pre- and post- test data) indicates that the game goes far beyond simply engaging students in the topic, but serves as a very effective device in helping student learn essential lessons of both content and skill.

## IT'S HOW YOU PLAY THE GAME: WHAT PLAYTESTING TAUGHT US ABOUT GAME DESIGN

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For the past two years, we have been developing Pox and the City, a Flash-based digital role playing game prototype for the history of medicine. Both the history of medicine and its sister discipline, the history of science, have become fruitful areas for the creation of digital games. The Wellcome Library in London has successfully incorporated games for adults as well as for children in its outreach programming (http://www.wellcomecollection.org/explore/play.aspx); the College of Physicians of Philadelphia has incorporated the game Illsville into its award-winning History of Vaccines (http://historyofvaccines.org). SpongeLab has developed History of Biology (http://www.spongelab.com/game_pages/hob.cfm), a scavenger hunt game that takes players through scientific discoveries from the 17th century to the present. Funded through an NEH Digital Humanities Start-Up grant, Pox and the City harnesses the technological power of adventure-quest games to present the early history of vaccines. The game is set in Edinburgh, Scotland in 1800, shortly after the introduction of Edward Jenner's vaccine for the prevention of smallpox. The player takes on the role of Dr. Adam Robertson, a young physician, eager to use the new medical technique to develop his practice. In order to successfully compete in Edinburgh's competitive medical marketplace, the player must attract patients, diagnose and treat their ailments, and prove his scientific credentials to his medical colleagues – all while dealing with a smallpox outbreak, investigating a murder and courting an eligible young lady. The proof of any game is in the playing. We playtested Pox and the City with the assistance of students at a range of educational levels. We will explore how they "played the game," focusing on their motivations, gaming styles, and choices. We will analyze the way in which design decisions affected both the presentation and reception of educational content. And we will explore age and gender differences in game play, and their implications for future game development in the history of medicine and science.

## USING INDIE GAMES TO TEACH ETHICS

**Karen Schrier**
MARIST COLLEGE
*karen.schrier@marist.edu*

How can games support ethical thinking and empathy development? Ethics and empathy are critical skill sets, yet there is limited opportunity to practice this in the classroom or informal learning environments. In this interactive talk, we will collectively create a set of criteria for designing and using games to teach ethics and empathy. To do this, I will provide a basic framework for evaluating games and provide an introduction to ethics games. Next, I will describe three different games: (1) Way - An online game where participants need to work together with someone virtually, where they can only communicate via gestures; (2) Awesome Upstanders - A iOS game to teach kids about bullying and acting like an "upstander;" (3) Sweatshop - An online game where participants run a sweatshop and need to make decisions about how to use workers to complete the sweatshop's tasks; and (4) Papers, please - An online game where participants act as a border crossing agent, deciding who is allowed to enter the country. These games were chosen because they can potentially counteract, readdress--and disrupt--our perspectives on teaching ethics and empathy using games, and what games can offer. We will discuss: (A) The goals and audience of the game; (B) Key features and mechanics, and design principles used; (C) The extent to which the game was successful; (D) What, if any, aspects of the game supported the practice of ethics and/or empathy? (E) How could this game be (or not be) integrated into formal and informal learning spaces?; and (F) How could we assess the learning in this game? All types of audience members are invited--no prior

knowledge is expected or necessary. This talk is suitable for educators, game designers, interactive media producers, academics and policy makers.

## MARRIAGE EQUALITY IN GAMES: WHAT ARE GAMES TEACHING US?

**Karen Schrier**
MARIST COLLEGE
*karen.schrier@marist.edu*

How do games express values about who we should or should not marry, have relationships with, or have sex with? For example, role-playing game (RPG) series, such as Mass Effect, Fable and Dragon Age, allow participants to form romantic relationships with NPCs (non-playing characters, or characters that are not played by an actual person, but controlled by the computer). While these relationships may not be integral to the storyline or goals of the game, participants regularly pursue and engage in these relationships. In this short talk, I will explore how popular games in the last 10 years have approached same-sex and opposite-sex relationships. Have games enabled more options for same-sex interactions in more recent games? I will discuss how games, by providing certain romantic options rather than others, express particular values. We can use these popular games as a teaching tool to explore greater societal values about marriage, sex and relationships, queerness, and gender issues.

## USING A CARD GAME TO TEACH CIRCUITS

**Jeffrey L. Schwartz**
QUEENSBOROUGH COMMUNITY COLLEGE
*JLSchwartz@qcc.cuny.edu*

Students come to their first electronics classes with widely varying levels of experience and ability. It is very difficult to teach series, parallel, and series-parallel circuit solution methods to a class when some are rushing ahead and getting the answers while others are stuck on the very first step. I have designed a card game for my classes that provides a way to distribute the advanced students among those who are new to circuits and have them teach each other solving techniques while having fun in the process. This short presentation will demonstrate how this game is played and run.

## DESIGNING FUTURES WITH GAMES: GAME-FRAMED MATH & SCIENCE AT HOSTOS COMMUNITY COLLEGE

**Shad*, R., Cannon, C.**
CHAIR OF HUMANITIES & COORDINATOR MEDIA PROGRAMS @ HOSTOS COMMUNITY COLLEGE
*rshad@hostos.cuny.edu*

The Game-Framed Math & Science (G-FMS) initiative aims to increase students' understanding of STEM-based subjects at Eugenio María de Hostos The Game-Framed Math & Science (G-FMS) initiative aims to increase students' understanding of STEM-based subjects at Eugenio María de Hostos Community College CUNY by framing math and science within the context of game design and game play. Funded by the National Science Foundation's Advanced Technological Education Grant and Hostos Community College CUNY, the project has recently completed its first year of development including several original game designs and the building of a state-of-the-art game lab at Hostos. Implementation of the pedagogy will commence this Spring 2014 semester and will be followed by the Hostos Summer Games Institute.

## BEYOND THE MULTIPLAYER CLASSROOM: STORY

**Lee Sheldon**
GAMES AND SIMULATION ARTS & SCIENCES, RENSSELAER POLYTECHNIC INSTITUTE
*sheldc2@rpi.edu*

There are many examples in the literature on the benefits of storytelling to teach. More recently scholarly study has centered on using games to teach. I am a professional writer and game designer, as well an associate professor in one of the nation's top game programs at Rensselaer Polytechnic Institute. In addition to authoring the book, The Multiplayer Classroom: Designing Classrooms as a Game, I've written the standard text on writing for games: Character Development and Storytelling for Games, now in its second edition. I am uniquely qualified to speak on this topic. There are many examples in the literature on the benefits of using storytelling in education. More recently scholarly study has centered on using games to teach. There has been next to nothing about combining multiplayer gameplay with a gripping ongoing story. I've designed story-driven games to teach everything from pre-algebra to Mandarin Chinese. I'm now designing story-driven games to teach business ethics and engineering. An example of what we do: the engineering game, currently in production, follows the adventures of an extended Irish family emigrating to a new land: Mars. Students caught up in the story of mystery, adventure and compelling human conflict learn because they want to know what happens next, a process I call collateral learning. Using these games and other examples I will discuss how I use the most ancient of human experiences, gameplay and storytelling, to recapture, captivate and teach students of all ages.

## MODDING AN INTERDISCIPLINARY CARD GAME: THE EVOLUTION OF WHAT'S YOUR GAME PLAN?

**Smale*, M., Bisz, J., Edwards, C., & Rosen, J.**
NYC COLLEGE OF TECHNOLOGY CUNY
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Using games in teaching and learning is rapidly gaining in popularity across the higher education landscape, as educators use games in coursework, ask students to critically analyze games and gameplay, and involve students in the process of creating games. However, for instructors who are new to game-based learning it can be difficult to know where to begin. Faculty and staff may lack the knowledge of game content and mechanics, or the resources and support to acquire and use games and game-making materials may be in short supply, especially for digital games and tools. How do instructors who are not already familiar with game-based learning get started using games in their classes? In this presentation we describe the development and continuing modification (modding) of a low-tech, card-based brainstorming game for use in multiple pedagogical contexts. Development of these games was ultimately inspired by Tiltfactor's Grow a Game, in which multiple decks of cards with thematic prompts are used to catalyze a brainstorming session with the goal of creating "novel game ideas which prioritize human values" (http://www.tiltfactor.org/growagame). Initially Grow a Game was modded to create What's Your Game Plan?, a game for educators to use to brainstorm and iterate on ideas for pedagogical games for use in their courses. Our experience of the many successful uses of What's Your Game Plan? in faculty development workshops and conference sessions inspired two additional mods of the structural framework of the game. One mod is used in teaching graduate students in library science to brainstorm information literacy games for use in library instruction, while the other mod both promotes and instructs players on use of the OpenLab, a website for teaching and collaboration at New York City College of Technology (CUNY). In our work with these mods of Grow a Game we have discovered that the low-tech, analog structure of this brainstorming card game is highly adaptable to and successful in different pedagogical contexts. The modded games have been an effective way to encourage interest in game-based learning as well as in the relevant academic

disciplines or topics. Further, these games are engaging for workshop participants, and can be used to elicit an attitude of play in faculty development contexts that can support workshop goals. In describing the ways that the game has led each of us through an evolving process of modding and iterating on these brainstorming games, we will share strategies that attendees can adapt to their own needs, disciplines, and environments.

## FUN AND USABLE: MAKING BETTER, MORE INTUITIVE GAMES

**Catt Small**
CODE LIBERATION & BEDROCKET MEDIA VENTURES
*catt@cattsmall.com*

Video games are different from other types of software in that people are more accepting of frustrating user interfaces. However, those frustrations can distract players and detract from the fun of the game. How can we learn from user experience (UX) design in order to improve the usability of video games, and how can even the smallest games benefit from UX design practices? Quality UX design has become a major differentiator -- see Dots, SpellTower, and Polygon -- because it leads to better user retention and more sales. I will cover a few examples of poor user experiences in games and their effects on players. Attendees will also be learn ways to incorporate techniques such as discovery interviews, usability testing, rapid prototyping, and sketching into game-making. This will in turn help people to make games that are both less frustrating for players and more likely to be successful.

## THE EDUCATION ARCADE

**Michael Smith**
YORK COLLEGE/CUNY
*msmith@york.cuny.edu*

This proposed presentation will analyze a course in which students were asked to design and build a mechanical arcade game that could be used to support the teaching of a particular K-12 lesson. Pre-service teacher education students are required to take "Teaching with Multimedia Technology," a course which provides a foundation for integrating technologies in their pedagogy. For the winter 2013 session, the course was redesigned to include a game design component. The approach for teaching the game development process was inspired by the story of Caine's Arcade in which a nine year old boy fashioned a number of mechanical games from cardboard and everyday objects to be played by customers visiting his father's auto part supply store in East Los Angeles. Students were introduced to game design through the analysis of electro-mechanical games used in television game shows such as The Price is Right, a simple game construction exercise from the Institute of Play's GameKit web site, as well as a visit to Chuck-E-Cheese's which hosts a large variety of mechanical arcade games which students played and analyzed. The process was an opportunity for students to discover how 'play' might influence their pedagogy, as well as gain a sense of agency with technology through the building of a tool to support learning. The course culminated with an 'opening' of the arcade to which students invited family and friends to come and test their games, win tickets, and earn prizes. The proposed presentation will showcase examples of the students work on analyzing games and what they discovered about game design's influence on their teaching through the mechanical arcade game built. Students documented their reflections and process for building their educational arcade game on a public blog arcade.dewlines.org.

## DEVELOPING GAME-BASED LEARNING (GBL) APPS

**Sturm*, D., & Ploog, B.**
CSI/CUNY
*deborah.sturm@csi.cuny.edu*

We present our experience developing Game-based learning (GBL) apps with students outside the classroom. Through a collaborative project with Computer Science and Psychology faculty members and students at the College of Staten Island, we are designing and developing games with defined learning outcomes. We discuss our emotion recognition game that is designed to assess and possibly remediate social accessibility in individuals with Autism Spectrum Disorders (ASDs). The game tests the theory that atypical attention patterns are at the root of several of the features that characterize ASD. These features include impaired social and communicative skills, difficulty in adapting to changing environments, and academic underachievement. Our framework applies trials designed by domain experts that allow for standard repeatable measures across sessions and players. The game is designed to go beyond drilling skills; instead it aims to assess and customize learning. We report on design issues related to usability, data persistence, as well as software and platform concerns we encountered in developing the games.

## COMPUTATIONAL THINKING VIA VISUAL GAME CODING

**Sturm*, D., Imberman, S.**
CSI/CUNY
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Computational thinking as defined by Jeannette Wing is, “the thought processes involved in formulating problems and their solutions so that the solutions are represented in a form that can be effectively carried out by an information-processing agent" (2006, Computational thinking, Communications of the ACM, 49(3)). This involves decomposing a problem, recognizing patterns, generalizing using abstraction, and developing algorithms to solve the problem. Promoters advocate computational thinking as a necessary skill across disciplines. We report on our experience hosting a Google-sponsored workshop on teaching computational thinking. Two workshop sessions focused on the visual coding environment, MIT App Inventor. App Inventor has been used to develop games demonstrating problem solving techniques. It uses a cloud-based environment to build and store an app interface along with drag-and-drop blocks of code to add functionality to the interface. The game/apps can be tested on an emulator, deployed via QR-codes, or packaged and installed on Android platforms. The appeal of this environment is the potential for novices to rapidly develop fairly sophisticated applications for popular mobile devices while learning the problem solving skills inherent in computational thinking.

## GAMETRON7000

**Kristana Textor* & Josh Knowles**
VIDEO.ART.GAMES.
*kristana@videoartgames.com*

GT7K is an educational experiment by Josh Knowles at Frescher-Southern, Ltd. in New York City. The core of GT7K is built around feedback, communication, and sharing. The goal is to provide a simple, easy-to-use game design platform that anyone can use to create fun games. Concepts of game design, vocabulary and coding are introduced in the process of making a game in GT7K. Games that have been built in GT7K include "Bryan the Boy". "Bryan" was designed and built by at-risk HS students in an after-school game design club. Students at the college level would be prime candidates to use GT7K as an introduction to basic game design.

## GOLD STARS & BADGES

**Kristana Textor**
VIDEO.ART.GAMES.
*kristana@videoartgames.com*

This 10 min talk will outline experiments in gamification with at-risk youth in after-school game design clubs in the New York City area. Some of these students will go on to the CUNY system. But will they stay in college? Could a gamified badge system that bridges the transition from HS to college be a way to keep at risk youth in school? Gamification is a tool that builds on the classic classroom idea of gold stars. But it must be used wisely if the end goal is true engagement. A badge system that taps into intrinsic motivation can be applied to K12 as well as university level students. If this system were flexible enough for instructor modification it could be a point of continuity for students on the path to college. This short talk will propose that there is no blanket magic gamification fix for the classroom. Instead, instructors are encouraged to customize and adapt to student response. Moderate successes and epic failures of badges in the classroom will be shared candidly.

## ADVENTURES IN WRITING: COMPOSITION, PEDAGOGY, VIDEO GAMES, AND A LOT OF QUESTIONS

**Luke Thominet**
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*ez7398@wayne.edu*

Last year, I began exploring methods for integrating video games into freshman composition classes. In response to my research, I developed a website, Composition + Video Games, as a resource for instructors similar to me who wanted to explore the method, but who might not know where to begin or what sorts of opportunities game integration might offer. I first presented on this website this past summer at the GLS conference in Madison. This fall, in an effort to develop both the website and my own ideas more, I've implemented elements of the methodology into my sections of freshman composition. In this presentation, I'd like to propose areas for further study that have arisen from this implementation as well as the ways in which they will inform the development of the additional resources on the website. Currently, the primary concepts I am interested in are: 1) the ways in which institutional curriculum interact with these nonstandard pedagogies, 2) responses from and affordances for students in an actual game-focused composition class, and 3) ways in which digital environments can affect these digital pedagogies. As it can be seen here, while my interest lies primarily in video game integration, I believe that the lessons from this project can be expanded to a wider set of non-standard pedagogies. Overall, this presentation is not meant to be a closed argument. Instead, it acts as a self-critical invitation for discussion on how we can productively foster real change with these pedagogies.

## SLASHDASH

**Reynaldo Vargas*, Adnan Agha, VIvian Allum, Alexandre Gresh, & Armand Silvani**
NEVERNAUT GAMES
*rdv230@nyu.edu*

We'd like to demo our IndieCade Audience Choice Award winning game, SlashDash. The developers will demo the game and answer questions about when it will be available in the future.

## ENTERTAINMENT GAMES FOR EDUCATION: SELF-MOTIVATED EDUCATION AND EVE ONLINE

**Christopher Vicari**
TEACHERS COLLEGE, COLUMBIA UNIVERSITY
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During the last few decades, the demand to play and experience video games has increased exponentially. Researchers have contended that creating educational games and game-like classroom environments can provide a multitude of benefits (Baek, 2008). However, it is plausible to believe entertainment games can be viewed as potentially educational by enticing players to self-educate. This submission serves as a thought piece and a call for more research to discuss the possibility that entertainment games, and Massively Multiplayer Online Role-Playing Games (MMORPGs) specifically, can motivate players to self-educate, as well as potentially teach complex subjects and secondary skills. The game that will serve as the vehicle for this discussion is EVE Online. EVE Online, an MMORPG released in 2003, is very popular because of the player interaction that occurs in the game world. Described as a harsh universe by its player-base, the game's challenges force players to work together to survive. Individual player conflict and group-based competition is at the core of everything here. EVE Online's economy is an open economy that is entirely player-driven. Nearly every item is constructed and sold by players. Because of this, the game offers a data-driven market interface that includes graphs, charts, price histories, and Donchian channel. It is not uncommon for some players to play primarily as traders and manufacturers. The game's economy is at the mercy of supply and demand, and operates similarly to a real-world economy. In this case, even selling and trading opens opportunities for gamers to interact and combat one another. For a trader to excel, it is important to understand and utilize many economic principles. A player can begin with the basics such as buying low and selling high, price history, movement, and supply and demand, but may find themselves learning advanced techniques such as projecting opportunity cost, return on investment, and profit/loss calculation. What's interesting here is that the game does not outright teach these principles to the players. There is no tutorial. It is up to the players to learn on their own or work cooperatively. Not only are players learning economics, but comprehending these principles also helps them become more efficient traders within the game. More importantly, these same lessons could be applied to real-life contexts as well. For example, armed with the knowledge of how markets work in EVE Online, an individual could have an easier time understanding how the actual market economy functions. This could be accomplished without attending a single class. Research in EVE Online can be fruitful when applied to different fields such as professional development, leadership training, education of mathematics and economics, and socialization. More importantly, knowledge construction and communities of practice occur all the time here. Meaning, players co-construct and compile knowledge socially in what is called situated learning (Lave & Wenger, 1991). Situated learning and self-motivated education is a heavy proponent of how players learn to play, experience, and engage with EVE Online and their fellow players as well. A connection between entertainment games and self-motivated education is apparent.

## FROM GAME PLAYER TO JOB SEARCH PRO

**Michelle Wang* and Don Wei**
BOROUGH OF MANHATTAN COMMUNITY COLLEGE
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A successful job search requires a student's preparedness for an interview. In the past five years of teaching career planning, the presenter had found that students' major concerns for a job interview were lack of confidence, underpay due to limited qualification, and inability to obtain a job offer. Interview process can be stressful and weary. How to create a fun and exciting learning experience

in an interview class is vital to students' interview preparation and future employment search success. In this session, the presenters will share experience on game creation and integration in classroom teaching. The first game "Interview Me!" was created from a gaming project assigned to students in summer 2011. This game was developed with the intent to build interviewing skills in an enjoyable, interactive and collaborative learning environment. In fall 2011 and spring 2012, the game was demonstrated in career planning classes and accounting club to a total of approximately 100 students. The initial feedback was highly positive. Students' common feedback is as follows: (1) Fun to play. (2) Learn new way of preparing a job interview. (3) Game is realistic, interesting and entertaining. The second game "Job Search Jeopardy" was created to enhance students' career education. The game covers various topics of career planning concepts, job search skills, resume preparation, interview skills, and employment laws. This game was developed at BMCC by using Microsoft Visual Studio 2012 platform. Currently it is a Windows-based and single-user application. The instructor would have to manage the game play and total the scores manually for each of users groups. In the second phase, this game will be enhanced and upgraded to be a Web-based application. The application will be capable of managing the game autonomously and allowing multiple users groups to play the game concurrently. The digital jeopardy game will have test run in fall 2013 and the result will be reported.

## COOL SCHOOL: WHERE CONFLICT RESOLUTION IS FUN

**Mark Young**
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*markyoung@gmx.net*

The need to play is primeval in human beings, at last as strong as the urge to fight. While the larger gaming community has traditionally focused on the fairly lucrative potential of exploiting the urge to fight in the form of violent and destructive war games, the "Serious Games" segment has become aware of the power of applying this technology "beyond entertainment" to advance social good. So far most of this work has focused on the areas of civics, health, education and NGO policy advocacy. Relatively little has been explored in the crucial domain of conflict resolution, especially as it pertains to promoting positive social skills in childhood. We seek to address this important need by offering a first empirical analysis of the impact that can be had from a new digital game designed to teach conflict resolution to children: Cool School: Where Peace Rules. This enjoyable interactive PC based game has already furnished visible and inspiring evidence of just how games can help children learn not to fight, but rather to negotiate, compromise and consider other perspectives, even at an early age. We hope to inspire further research and reflection in this area, as well as provide a practical demonstration of this particular new game.

## FROM COOL SCHOOL TO CEDARIA: WHAT TEENS CAN LEARN FROM KIDS ABOUT GAMING

**Mark Young**
RATIONAL GAMES, INC.
*markyoung@gmx.net*

We propose to contrast two recently developed nonprofit serious games: (1) Cool School, a fun and interactive game for kids 5 to 8, PC based, already developed and operational at www.coolschoolgame.com. This was the first game of its kind designed specifically to teach conflict resolution to children in a playful way. (2) CEDARIA, A more sophisticated hand-held mobile game aimed at late teens and college students, originally developed by Search for Common Ground in Lebanon as a counter to games used it terrorist training. This game is nearing completion, but we will have a Beta version to show as well. In the brief presentation, we want to explore the connections between the two. What can teens learn from kids regarding game design, platforms,

interactivity, and fantasy creation? Both game developers will be onhand, as well as the full text of our recently published article Introducing Cool School in the Journal of Game Based Learning.

## WHAT'S IN A GAME?: TEACHING ONLINE AND FACE-TO-FACE COMPOSITION CLASSROOMS WITH GAME-BASED PEDAGOGIES

**Mikayla Zagoria-Moffet**
CUNY Graduate Center
*mikaylazm@gmail.com*

In an effort to better understand the impact of games and digital technology on the college composition classroom, I worked this semester to create a game-themed syllabus with game-based components to be implemented and evaluated in both online and face-to-face classroom environments. My goals focus not only on the question of the value of games in the higher education classroom, but also in the field of composition and in the specific and challenging realm of the online composition classroom. In an attempt to deepen my understanding and 'play' with game-based pedagogies in writing composition, I crafted my syllabus around the theme of the Game. Over the course of the class, students read selections of well-known critics and scholars in the field, such as McGonigal, Kapp, Gee, and others, in addition to literary texts that focused on elements of games, such as Collins's The Hunger Games and poetry from a wide range of authors. We have worked towards the practice of defining and redefining the idea of a game throughout the semester, throughout both formal (or 'high stakes') writing and informal (or 'low stakes') writing. In addition to having the reading and writing largely focus on games, game-based pedagogies, and gamification, I also created gamified versions of writing assignments. Students worked their way through an assignment called "My Gaming Manual" which asked them to pick and choose quests based on their interests and analyze, think critically, and write about their experiences and interactions with games. In addition, game-based language was used on formal assignment rubrics to help students conceptualize their major goals, victories, and shortcomings over the course of the semester. In teaching both a face-to-face course at Baruch College and an online course at John Jay College, I saw the opportunity to use the same readings and game-based pedagogical underpinnings to inform my approaches to the classes. Throughout the course of the semester, I have documented student reactions to the theme or topic of the class, including anonymous surveys in the beginning, middle, and end of the course. In this presentation, I propose to present my experiences, the experiences of my students, and the end results of both courses as points for comparison in teaching with game-based learning strategies in online and face-to-face composition classrooms. Elements of this experience in two diverse classroom settings included play-based learning, learning to write about or describe experiences with games, working towards definitions of nebulous and oft-confusing terms (like 'game' or 'play'), and working with digital technologies to enhance the educational experience of games in the classroom. I will present qualitative and quantitative data regarding the learning experiences of my students, in addition to examples that illustrate both the usefulness and the potential downfalls of game-based pedagogies in two very different composition classrooms.

## TEACHING THE ART & SOUND OF VIDEO GAMES ACROSS TWO DISCIPLINES

**Zlabinger*, T. & Gillespie, S.**
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In Fall 2012, Sarah Kate Gillespie (from Art History) and I (from Music) taught a pilot course called the Art & Sound of Video Games. Given that the experience of playing a game is both visual and aural, both sight and sound need to be explored in tandem in order to fully engage this medium that is now only forty years old. So not only did we team teach and have to negotiate our teaching styles

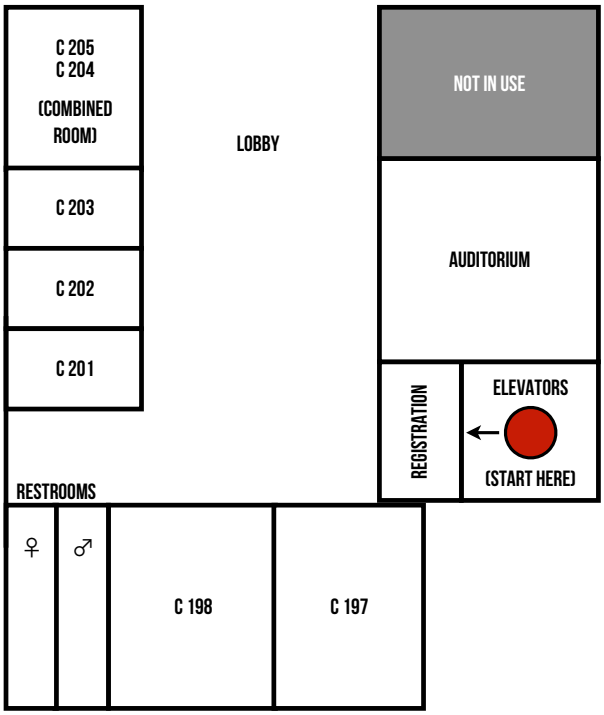
and attitudes, we also had to think about video games from the perspectives of our two different disciplines. But it is only in the intersection of the visual and aural that video games can be understood and can be accurately read as primary sources or experiences. Over the course of the semester, we negotiated the landscape of interdisciplinary team teaching and as a result were able to engage students in a way that would not have been possible with one instructor from a single discipline. The students were able to approach their analysis of video games and surrounding issues more deeply looking at both art and sound. The class and the way it was taught was so successful that we will offer it again this upcoming spring and also add it to the college's curriculum.

* Designates the corresponding author

# General Statistics

| | |
|---|---|
| Registered Attendees | 195 |
| Total posters and oral presentations | 74 |
| Posters and arcade demos | 24 |
| *Posters* | 12 |
| *Arcade Demos* | 12 |
| Oral Presentations | 50 |
| *10 minute shorts* | 14 |
| *20 minute talks* | 32 |
| *Workshops* | 4 |

## MAP FOR C LEVEL OF CUNY GRADUATE CENTER

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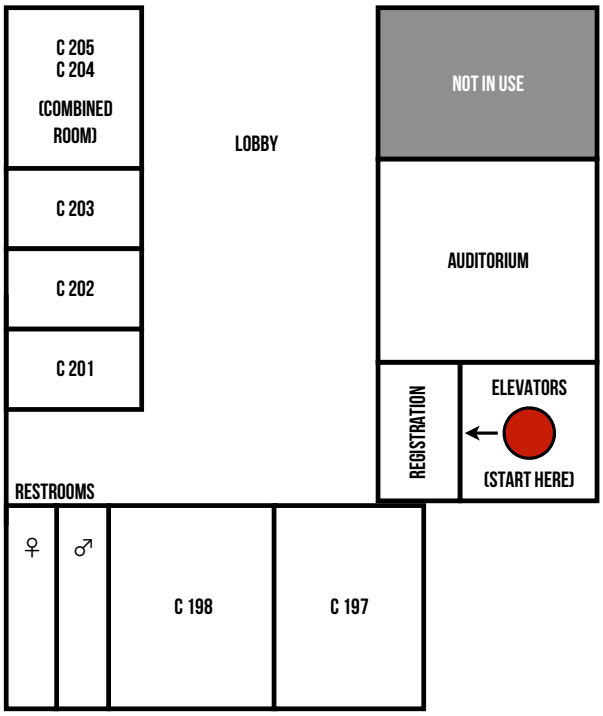


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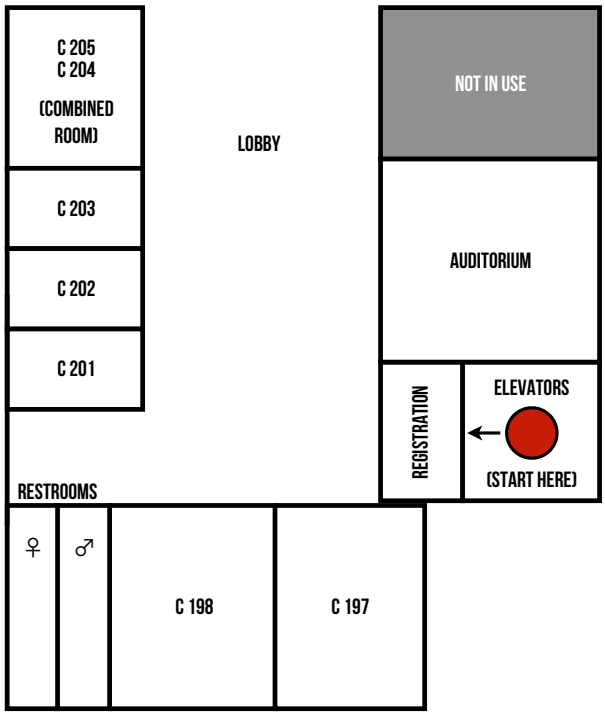


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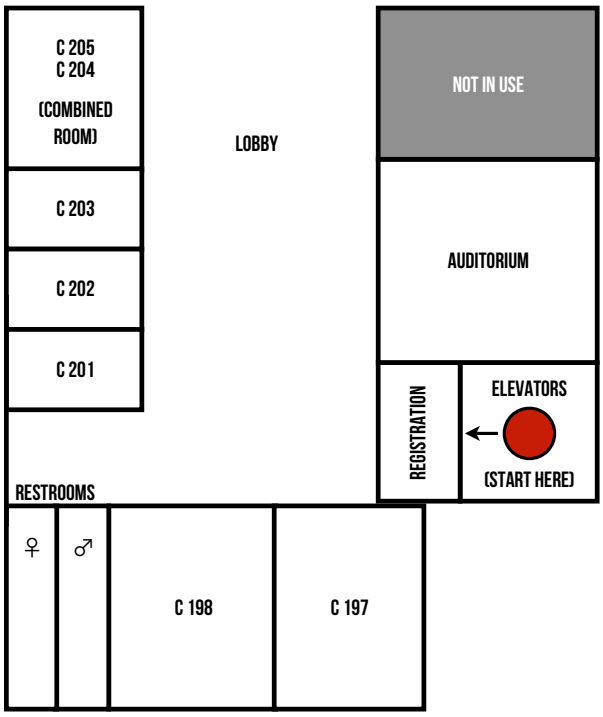

# SCHEDULE OF SESSIONS

## SESSION 1 — 9:15 AM – 10:35 AM

### C 201

**TOPICS IN GAME DESIGN 1**

**FUN AND USABLE: MAKING BETTER, MORE INTUITIVE GAMES** Catt Small, Code Liberation & Bedrocket Media Ventures

**TEACHING THE ART AND SOUND OF VIDEO GAMES ACROSS TWO DISCIPLINES** Tom Zlabinger and Sarah-Kate Gillespie, York College

**CHOICES IN GAMES** Ethan Ham, City College

### C 202

**VIRTUAL AND AUGMENTED REALITIES**

**VIRTUAL FIELD TRIPS IN HEALTH EDUCATION** Xin Bai, Joanne Lavin, and Renee Wright, York College

**GEOLOCATION AND FEAR: HORROR ON THE RIDGES** Rebecca L. Fischer and Seann Dikkers, Ohio University

**THE INSTRUMENTALITY OF VIRTUALITY: THE PERCEIVED REAL-WORLD VALUE OF VIDEO GAMING** Luther Elliott, G. Ream, E. McGinsky, and E. Dunlap, National Development and Research Institutes

### C 203

**WRITING WITH GAMES**

**JOURNALING THE ZOMBIE APOCALYPSE: MINECRAFT IN COLLEGE COMPOSITION** Jeff Kuhn, Ohio University

**ADVENTURES IN WRITING: COMPOSITION, PEDAGOGY, VIDEO GAMES, AND A LOT OF QUESTIONS** Luke Thominet, Wayne State

**WHAT'S IN A GAME?: TEACHING ONLINE AND FACE-TO-FACE COMPOSITION CLASSROOMS WITH GAME-BASED PEDAGOGIES** Mikayla Zagoria-Moffet, Graduate Center, CUNY

### C 198

**BREAKING THE MAGIC CIRCLE: GAMES AND REAL LIFE**

**PLAYING TOGETHER: TEAMWORK IN ONLINE GAMES** Christian de Luna, Teachers College, Columbia University

**MARRIAGE EQUALITY IN GAMES: WHAT ARE GAMES TEACHING US?** Karen Schrier, Marist College

**MONSTER APPETITE** Maria Hwang, P. Chantes, G. Tedaldi, and A. Lomboy, Teachers College, Columbia University

**COOL SCHOOL: WHERE CONFLICT RESOLUTION IS FUN** Mark Young, Rational Games

**DEVELOPING GAME-BASED LEARNING APPS** Deborah Sturm and B. Ploog, College of Staten Island

### C 204 & C 205

**GBL IN PRACTICE**

**WHAT'S YOUR GAME PLAN? AN 80- MINUTE INTERACTIVE GAME DESIGN SESSION** Joe Bisz, Borough of Manhattan Community College

### C 197

**POSTER SESSION 1**

**MURDER MYSTERY CHALLENGE! ENGAGING FIRST-YEAR STUDENTS IN A GAME-BASED LIBRARY INVESTIGATION** Robin Davis and Marta Bladek, John Jay College

**ANALYZING PROCEDURAL LEARNING AND EMOTION RECOGNITION IN CHILDREN USING SERIOUS GAMES** Jonathan Parziale, Ed Peppe, Deborah Sturm, B. Ploog, and P. Brooks, College of Staten Island

**LERPZ BEHAVES: A GAME TO TEACH APPLIED BEHAVIORAL ANALYSIS** A. Hamid and Robert O. Duncan, York College

**UNBIASED: A GAME TO REDUCED ERRORS IN COGNITIVE AND SOCIAL BIASES** H. Mehta and Robert O. Duncan, York College

**USING A BOARD GAME TO TEACH STUDENTS ABOUT DIVIDED ATTENTION** S. Dhar and Robert O. Duncan, York College

**IMPROVING DECISION MAKING FOR EXTREME PROSPECTS USING A BOARD GAME** X. Lin and Robert O. Duncan, York College

## SESSION 2 — 10:45 AM – 12:05 PM

### C 201

**DESIGNING ETHICAL GAMES**

**USING INDIE GAMES TO TEACH ETHICS** Karen Shrier, Marist College

**THE INTEGRATED PROBLEM: AN EXAMPLE OF SOCIAL SCIENCE GAMING** James R. Garfield, Queens College

**THE CHALLENGES OF DEVELOPING AN EDUCATIONAL BOARD GAME: BALANCING CONTENT AND GAMEPLAY** Christian de Luna, C. Vicari, T. Toynton, M. Luna-Lucero, and J. Lee, Teachers College, Columbia University

### C 202

**GAMES & GENDER**

**VIDEO GAMES AS FEMINIST PEDAGOGY** Samantha Allen, Emory University

**WOMAN UP!** Phoenix Perry, Jane Friedhoff, Nina Freeman, and Catt Small, Code Liberation Foundation

**IT'S HOW YOU PLAY THE GAME: WHAT PLAYTESTING TAUGHT US ABOUT GAME DESIGN** Lisa Rosner and John Theibault, Stockton College

### C 203

**GAMING ENGLISH LANGUAGE AND LITERATURE**

**PLAY AS AN INVITATION TO LEARN: TEACHING GRAMMAR WITH GAMES** Amy Baskin and Rawlslyn Francis, Florida State College-Jacksonville

**JEKYLL & HYDE THE BOARD GAME: USING GAME DESIGN TO TEACH LITERATURE** Chamutal Noimann, Borough of Manhattan Community College

### C 198

**GAMES, NARRATIVE, LITERACY**

**RULES AND RHETORIC: UNFAIR GAMES IN THE COMPOSITION CLASSROOM** Brian Keilen, University of Wisconsin – Milwaukee

**GAME DESIGN AS LIFE DESIGN: A DECK OF CARDS** Brooke Allen and Marshall Poe, University of Massachusetts

**GAMES AND THE RE-PLAY OF GAME PLAY: RENDERING DELEUZIAN MEMORY** Kimberley Garcia, Graduate Center, CUNY

**CHOOSE YOUR OWN FAIRY TALES?: ELECTRONIC LITERATURE AND GAME-BASED LEARNING** Eva Lupold, Rutgers University

**THE ROLE OF VIDEO GAME GLITCH IN EMANCIPATED LEARNING AND NEW LITERACY ACQUISITION** Beatriz Albuquerque, Teachers College Columbia University

### C 204 & C 205

**OPEN CHAT**

**TEACHING WITH GAMES: AN 80- MINUTE INTERACTIVE CHAT** Francesco Crocco, Borough of Manhattan Community College

### C 197

**POSTER SESSION 2**

**COMPUTATIONAL THINKING VIA VISUAL GAME CODING** Deborah Sturm and S. Imberman, College of Staten Island

**ISKETCH: A DIGITAL ART THERAPY GAME TO IMPROVE SELF-ESTEEM** A. Aponte and Robert O. Duncan, York College

**SAVING MIKEY: A DIGITAL GAMES TO EDUCATE AT-RISK COLLEGE STUDENTS ABOUT DEPRESSION** H. Flores and Robert O. Duncan, York College

**CRITICAL THINKER: A DIGITAL GAME THAT TEACHES CRITICAL THINKING SKILLS TO COLLEGE FRESHMAN** E. Restitulio and Robert O. Duncan, York College

**RESTAURANT ROCKSTAR: A DIGITAL GAME THAT TEACHES STUDENT HOW TO READ NUTRITIONAL FACT LABELS** S. McIntosh and Robert O. Duncan, York College

**A LANGUAGE LEARNING APP FOR INTERNATIONAL STUDENTS PREPARING FOR HIGHER EDUCATION IN THE U.S.** Hsu Shuyi, Teachers College Columbia University

## SESSION 3 — 1:30 PM – 2:50 PM

### C 201

**GAMES, STORYTELLING & NARRATIVE**

**BEYOND THE MULTIPLAYER CLASSROOM: STORY** Lee Sheldon, Rensselaer Polytechnic Institute

**TEACHING FICTION WRITING USING ROLE-PLAYING GAMES** W. Trent Hergenrader, Rochester Institute of Technology

**TRUTH IS WHERE YOU MAKE IT: DESIGNING HISTORICAL GAMES** Leah Potter and Carlos Hernandez, Graduate Center, CUNY, and Borough of Manhattan Community College

### C 202

**GAMES & STEM**

**DESIGNING FUTURES WITH GAMES: GAME-FRAMED MATH & SCIENCE AT HOSTOS COMMUNITY COLLEGE** Rees Shad and C. Cannon, Hostos Community College

**#SCIENCEFTW** Barry Joseph, American Museum of Natural History

**ITERATIVE DESIGN AND IMPLICIT BIAS: WHAT WE LEARNED FROM MAKING FAIRPLAY** Dennis Ramirez, B. Gutierrez, S. Chu, C. Samson-Samuel, A. Salmon, K. Squire, and M. Carnes, University of Wisconsin- Madison

### C 198

**LEARNING BY DESIGN**

**PLAYING TO LEARN: GAMES, ENGAGEMENT, AND DEEP LEARNING IN HIGHER EDUCATION** Kathleen Offenholley and Francesco Crocco, Borough of Manhattan Community College

**USING A CARD GAME TO TEACH CIRCUITS** Jeffrey Schwartz, Queensborough Community College

**LEVELFLY: AN ACHIEVEMENT-BASED LMS AND SOCIAL NETWORK** Francesco Crocco and Joe Bisz, Borough of Manhattan Community College

**GOLD STARS AND BADGES** Kristana M. Textor, Video.Art.Games.

### C 204 & C 205

**GBL IN PRACTICE**

**WHAT'S YOUR GAME PLAN? AN 80- MINUTE INTERACTIVE GAME DESIGN SESSION** Maura Smale, NYC College of Technology

### C 197

**ARCADE DEMO 1**

**ARGUMENT** Andrew Y. Ames, Robert Morris University

**THE GAME OF COLLEGE** Melissa Barlett, Mohawk Valley Community College

**PROJECT CONST∆NT: A GESTURE-BASED GAME THAT TEACHES CALCULUS** Brian Moriarty, E. Lennon, M. Zivkovic, Stevens Institute of Technology

**SALTY DOGS** Jon Molina and Matthew Bethancourt, Hostos Community College

**SLASHDASH** Reynaldo Vargas, Adnan Agha, Vivian Allum, Alexandre Gresh, and Armand Silvani, Nevernaut Games

**THE FLUID ETHER** Kevin A. Miklasz and T. Chklovski, Iridescent

## SESSION 4 — 3:00 PM – 4:20 PM

### C 201

**TOPICS IN GAME DESIGN 2**

**USING MEANINGFUL GAMIFICATION AND PLAYFUL DESIGN INSTEAD OF REWARDS FOR THE CLASSROOM** Scott Nicholson, Syracuse University

**LIMINAL SPACE BETWEEN FUN AND EDUCATIONAL IMPACT: A POST MORTEM** Ira Fay, Hampshire College

**MODDING AN INTERDISCIPLINARY BRAINSTORMING CARD GAME: THE EVOLUTION OF WHAT'S YOUR GAME PLAN?** Maura Smale, Joe Bisz, Charlie Edwards, and Jody Rosen, NYC College of Technology and Borough of Manhattan Community College

### C 202

**STUDENTS AS GAME DESIGNERS**

**FROM GAME PLAYER TO JOB SEARCH PRO** Michelle Wang and Don Wei, Borough of Manhattan Community College

**THE EDUCATION ARCADE** Michael Smith, York College

**THE TRANSFORMATIVE GAMES INITIATIVE: LEARNING BY DESIGN** Robert O. Duncan, York College

### C 203

**EXPERIENCING REALITY IN POPULAR GAMES**

**WORLD OF WARCRAFT: EXPERIENCING REALITY IN A VIRTUAL WORLD** Amanda Rosen, Webster University

**ENTERTAINMENT GAMES FOR EDUCATION: SELF-MOTIVATED EDUCATION AND EVE ONLINE** Christopher Vicari, Teachers College, Columbia University

**WHAT CAN CHESS TEACH US ABOUT SOCIOLOGY** Michael W. Raphael, Graduate Center, CUNY

### C 204 & C 205

**OPEN CHAT**

**MAKING EDUCATIONAL GAMES: AN 80-MINUTE INTERACTIVE CHAT** Leah Potter, The Graduate Center, CUNY

### C 197

**ARCADE DEMO 2**

**MIND READER AND FORTY EIGHT** Ryan Courtney, Stony Brook

**GOVERNMENT IN ACTION** David McCool and Chris Parsons, Muzzy Lane Software

**OFF THE PAGE, ONTO THE CLASSROOM STAGE: DISCOVERIES THROUGH PLAY WITH TEXT AND LANGUAGE** Katherine M. DiMarca, Middlesex Community College

**STELLAR CHEMIST: A WORK IN PROGRESS** Eric Church, University of Baltimore

**COOL SCHOOL** Mark Young, Rational Games

**GAMETRON7000** Kristana M. Textor and Josh Knowles, Video.Art.Games.

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