



GOAL21: Gaming Opportunities in Academic Libraries

White Paper SP-02-14-0038-14

The Center for Games & Learning at MidAmerica Nazarene University's Mabee Library was started through funds from a 2014 IMLS Sparks! Ignition Grant. The Center sponsors game design and game research for use in educational settings.

The main activities of this project included the following:

- Creating the library-based Center for Games & Learning
- Directing 9 case studies during the spring semester of 2015 to study how students use 21st Century Skills—as identified in the IMLS 21st Century Skills Toolkit—during gameplay in college courses
- Hosting a conference on games and learning for librarians and educators
- Consulting with librarians and educators about game-based educational programs and services

The Mabee Library at MidAmerica Nazarene University created a Center for Games and Learning to promote 21st Century Skills identified by the Institute of Museum and Library Services. The library assessed its ability to promote 21st Century Skills with the assistance of a consultant, purchasing resources purchased for the Center as a result of the assessment. Faculty and students used the Center to incorporate games in higher education curriculum and academic life. These games helped students to practice life skills in the areas of critical thinking, creativity, communication, and collaboration. These are skills that students need to flourish in a modern global world.

Creating the Center for Games & Learning

Scott Nicholson, PhD served as consultant. He contributed knowledge, experience, and advice on games to purchase for the Center, research methods for the case studies, and ways to use games across the curriculum.

Prior to grant funding, the Mabee Library at MidAmerica Nazarene University did not have any games in its collection. Over the course of the grant, the library purchased 291 tabletop games to create a collection for the Center. Games were selected for curricular support and for recreational purposes.

The library staff needed to work through the logistics of cataloging and circulation when adding games to the collection. The staff decided to catalog games using the following MARC fields:

- MARC 245 Title Statement
- MARC 260 Publication, Distribution, Etc.
- MARC 300 Physical Description
- MARC 500 General Note
- MARC 508 Creation/Production Credits
- MARC 520 Summary, Etc.
- MARC 521 Target Audience

- MARC 650 Topical Term
- MARC 655 Index Term—Genre/Form

Faculty, students, and community patrons can check out games for two weeks at a time. Games can be placed on hold, but they are not loanable outside the system. All game pieces are counted when the games are returned. When games are returned with missing pieces, we follow the same policy that we do for other items that are returned in damaged condition. Each game includes a contents list on the back of the box cover. In this way, we try to reduce the number of games that are returned with missing pieces. We point out the contents list to patrons in an effort to ensure they are aware of our policies and expectations.

During the grant period, the Mabee Library was able to acquire a total of 291 games for the collection. We reached a total of 675 circulations of board games from October 1, 2014 to September 20, 2015. This accounts for 12.44% of the library's total circulation. The second library outcome from this grant set a target of increased circulations—from zero to 25 per month—by September, 2015. We met this goal. The first time we exceeded 25 check-outs of games in a month was in January, 2015. The games with the highest circulation counts were Bandu with 46 checkouts, Ticket to Ride with 29 checkouts, Roll Through the Ages with 27 checkouts and Pandemic with 26 checkouts. During July, games were checked out for a local conference and therefore, the number of checkouts greatly exceeded the average.

Circulation of Board Games by Month

Month	Number of Circulations	Percent of Total Library Circulation
October, 2014	2	0.32%
November, 2014	6	1.09%
December, 2014	5	1.36%
January, 2015	30	5.88%
February, 2015	46	8.01%
March, 2015	38	7.13%
April, 2015	42	8.50%
May, 2015	6	3.51%
June, 2015	76	30.16%
July, 2015	171	47.63%
August, 2015	91	26.38%
September, 2015	162	25.04%

Scott Nicholson Ph.D., provided a list of recommended games. He divided his recommendations into the following categories:

Games that can be completed in one class:

- 10 Days in Asia/Africa/Americas/Europe/USA
- Campaign Manager 2008
- Chrononauts
- Dixit
- Evolution
- Flash Point: Fire Rescue
- Once Upon a Time

- Pandemic
- Ricochet Robots
- Rory's Story Cubes
- Snake Oil
- Timeline (various)
- Wits and Wagers (with custom questions for the class)
- You've been Sentenced
- Zendo

Games that have a reasonable stopping point:

- Bolide
- Founding Fathers
- Shadows over Camelot

Games that can be easily played over multiple class sessions

- 1775: Rebellion
- 1812: The Invasion of Canada
- 1960: The Making of the President
- Diplomacy

Recreational Games for Social Use:

- Animal Upon Animal
- Bananagrams
- Fluxx
- Forbidden Island
- Incan Gold
- The Resistance
- Telestrations
- Tumblin Dice
- We Didn't Playtest This At All
- Word on the Street

In order to make the Center more accessible to internal and external constituents, the university created a website: www.mnu.edu/games. This site advertises events, includes lists of resources we recommend, and includes a list of games in our holdings. In the future, the website will also include research findings, handouts, presentations, web links, and an annotated bibliography of sources pertaining to games and learning.

Center for Games and Learning

Home / Resources / Center for Games and Learning

Center for Games and Learning
Games List
Events
Resources & Courses
About Us



Contact the Center for Games & Learning

Address
 MidAmerica Nazarene University
 Mabee Library
 2030 E. College Way
 Olathe, KS 66062

Phone: 913.971.3561
Fax: 913.971.3285

Email: gamesandlearning@mnu.edu



The Center for Games and Learning at MidAmerica Nazarene University is made possible by a grant from the IMLS

The Center for Games & Learning at MNU's Mabee Library sponsors game design and game research for use in educational settings.

Effective learning for 21st century leadership demands expertise in skills such as communication, collaboration, problem solving, flexibility, creativity, and innovation. Tabletop games can function as powerful learning engines, requiring players to practice these 21st century skills.

As educators learn how to use—and even design—games as learning systems, they engage learners with cultural relevance. To this end, the Center for Games & Learning at MNU:

On the website, the games list can be filtered by the 21st Century Skill it most closely helps to teach. The games can also be filtered by type.

Filter by 21st Century Skill:

All Skills	Basic Literacy	Civic Literacy	Collaboration	Communication	Creativity
Critical Thinking	Economic Literacy	Global Awareness	Information Literacy	Leadership	Numerical Literacy
Problem Solving	Scientific Literacy	Visual Literacy			

Filter by Game Type:

All Game Types	Childrens'	Cooperative	Dexterity	Economics	Family
History	Language	Medieval	Party	Strategy	Story

The Center also hosted game five game nights in the library from January, 2015 to September, 2015.



The Center hosted game nights on Fridays from 7:00 p.m. to 10:00 p.m. We worked closely with student government and residential life to advertise and promote the events. We also offered “game approved” snacks: pretzels and M&Ms. These are food items that will not leave a residue on a person's fingers that might damage the games.

Game Attendee List

Date	Student	Faculty	Staff	Community	Total
2/20/2015	19	8	5	15	47
3/27/2015	20	6	3	--	29
4/17/2015	13	6	4	23	46
5/9/2015	--	4	5	20	29
9/10/2015	23	3	--	1	27
9/25/2015	26	1	3	2	32

Case Studies

Scott Nicholson Ph.D., project consultant, recommended a case study method to study how postsecondary classroom game supports the use of 21st Century Skills as identified in the IMLS Toolkit on 21st Century Skills. Nine professors formed a cohort that conducted nine case studies during the spring semester of 2015:

- Tyler Blake Ph.D., Professor of English
- Nancy Damron Ph.D., Dean of the School of Education
- Don Dunn Ph.D., Instructor of Business
- Elizabeth (Hornor) George, Ph.D., Assistant Professor of History
- Lauren Hays, MLS, Assistant Professor, Instructional and Research Librarian
- Kim Humerickhouse Ph.D., Professor of Education
- Jacob Lett, M.A., Graduate Assistant, Visiting Lecturer of Theology
- Mary Murphy Ph.D., Associate Professor of Management
- Andrew Overholt Ph.D., Associate Professor of Physics

Each cohort member volunteered to participate in the study, receiving a modest stipend for their participation. Each cohort member also determined which course was best suited for gameplay, selected one 21st Century Skill to target, selected a game that was best suited for the course and the 21st Century Skill, and prepared the game for classroom use:

Instructor	Course	Targeted Skill	Game	Student N
Blake	Composition II	Basic Literacy	Self-designed	20
Damron	Student Teaching Seminar	Creativity	Dixit & Once Upon a Time	7
Dunn	Christian Leadership	Collaboration	Forbidden Island	22
George	Interpreting History through Games	Collaboration	Roll Through the Ages	18
Hays	Making Information Work for You	Critical Thinking	Balderdash	5
Humerickhouse	Classroom Management	Communication	Digital simulation	4
Lett	Systematic Theology II	Critical Thinking	Clue, Tobago	19
Murphy	Principles of Microeconomics	Critical Thinking	For \$ale!	25

Overholt	Foundations of Physics and Chemistry	Critical Thinking	Self-designed	8
-----------------	--------------------------------------	-------------------	---------------	---

Six cohort members selected commercial tabletop games, while two elected to use games which they had designed: 1) in Composition II, students played a worksheet-and-discussion-based grammar correction game in small groups, and 2) in Foundations of Physics and Chemistry, students played a card-based periodic table game in small groups. One professor opted to use a live, digital simulation--TeachLivE--that provided an immersive classroom management scenario with live, role-playing actors who supplied interactive dialogue for digital avatars. In short, six of nine cohort members used commercial tabletop games, while three of nine varied from that plan.

As the semester unfolded, the cohort met on a weekly or bi-weekly basis to discuss best practices for game use in the classroom. Their discussions ranged across three domains: 1) best practices for game instruction, 2) best practices for game facilitation, and 3) best practices for game debriefing. Three cohort members combined game instruction, game facilitation, and game debriefing into a single class session. The remaining cohort members spread game instruction, game facilitation, and game debriefing across two or three class sessions.

Data gathering included both quantitative and qualitative methods. All undergraduate learners ($N = 129$) completed surveys about their gameplay behaviors during a prior four-week period, encompassing varsity sports, sports for leisure, fantasy sports, computer games, video console games, mobile device games, phone games, role-playing games, gambling, and tabletop games. Only three percent of those surveyed reported that they played no games at all during the prior four-week period. Next, class sessions were video recorded and audio recorded in each cohort member's course during game instruction, game facilitation, and game debriefing. During game instruction and game facilitation, the data recording focused upon one gameplay group amidst many others in each classroom. During game debriefing, the data gathering included all students in each classroom. At the end of the data gathering period, all faculty cohort members completed a survey about their gameplay behaviors during the prior four-week period, as well as their pedagogical experiences with games and learning during the case studies.

Generally, the cohort members self-reported a degree of ambivalence about their experiences--yet, they assigned a positive assessment to the integration of tabletop games in the postsecondary classroom. When cohort members began their case studies, they harbored concerns such as, "Will my students enjoy playing games in the classroom? Will they understand the connection between gameplay and learning? Will I perform well in this unfamiliar task?" As the case studies were completed, the cohort members reported that most or all of their students 1) enjoyed playing games in the classroom, 2) drew a positive connection between gameplay and learning course content, and 3) appeared to be more "engaged" while playing games to learn.

At the end of the semester, all cohort members noted that students used multiple 21st Century Skills at once when playing games in the classroom. In particular, students used the 21st Century Skills of problem solving (eight of nine cohort members reporting), communication (six of nine cohort members reporting), collaboration (six of nine cohort members reporting), and critical thinking (five of nine cohort members reporting). Almost all cohort members also expressed the likelihood that they would continue to use tabletop games in the postsecondary classroom.

Cohort members also gave strong affirmation to the importance of classroom debriefing, especially when using tabletop games for teaching and learning:

- “The ‘make-it-or-break-it’ of using games really comes down to facilitation and debriefing.”
- “The debrief is probably the most essential component to effective teaching and learning through gameplay. Without this component, I don’t think any of the skills or ideas would have been fully integrated into the students’ habits and language.”
- “[I was] intellectually stimulated, excited with the take-aways my students experienced.”

When cohort members acknowledged that they felt slight tension about introducing tabletop gameplay to their classrooms, that tension typically arose from observing students who chose not to engage the experience with enthusiasm. This observation underscores the importance of careful debriefing: it is indispensable to the game-based learning process, yet it does not guarantee success for each student.

The audio file and video file transcription processes have proven to be more difficult than anticipated, due to a variety of factors. A USB microphone was used to capture audio from one gaming group amidst many nearby groups in almost all cases. In addition, a GoPro Hero camera was used to capture video from one gaming group in every case. Then, these files were mixed, amplified, and stitched together by a technician. Next, these files were turned over to a transcription service in the fall semester of 2015. The high energy and high ambient noise level present in most of the classrooms has presented a challenge to the transcription service. In addition, the transcription service is listening to the audio files but does not wish to view the video files. As a result, the grant assistant director is reviewing each stitched audio/video file, correcting errors in transcribed dialogue and adding notations about physical movement and other non-verbal communication.

Nevertheless, the cases hold much promise for scholarship. The files are rich with data. The grant directors hope to write at least three journal articles as a result of the case studies: (1) an article on best practices for in-class game instruction and facilitation, (2) an article on 21st Century Skill practice when playing games in post-secondary classrooms, and (3) an article on debriefing strategies for classroom gameplay. At first glance, the first article may seem to be a trifle. To the contrary, the grant directors have observed that the instruction and facilitation of classroom gameplay may significantly affect the pedagogical efficacy of gameplay. In addition to these articles, the grant directors see an opportunity for further research, including: (1) an alignment of gameplay with Common Core for K-12 educators and administrators, (2) an alignment of game design principles with curriculum design principles, and (3) an experimental pilot in which social, digital play on tablets compares to social, analog play on tabletops. The grant directors intend to report on full case study results in 2016.

Games & Learning Conference

The first annual MNU Games & Learning Conference was hosted on Friday, July 31, 2015. Keynote speakers included Glenn Weibe, from ESSDACK, who explained how games can help students to learn. Matt Saunders, a local game designer, shared his experiences of the iterative process in game design. Breakout sessions included sessions on games and library programming, classroom use, curriculum development, history education, augmented reality across campus, and comparison with video games. The day was lively and filled with a lot of sharing of ideas. The project directors plan to host a second Games & Learning Conference in July of 2016. The first conference was focused of the *whys* of using games. The second conference will be focused on *how* to use games for optimal learning experiences: how to instruct on rules, facilitate gameplay, and debrief.



A total of 138 people registered for the conference. The conference was advertised on listservs and with flyers.

Group	# Attended
K-12 Educator	46
Public Librarian	23
Academic Librarian	18
College Professor	15
School Librarian	14
Parent educator	6
Community College Faculty	5
Other	3
Associate Dean	1
KSDE Program Consultant	1
Occupational Therapist	1
Program Development	1
Retired librarian	1
Student Success Coordinator	1
System Librarian	1
Tutor Coordinator	1

Conclusion

The GOAL21: Gaming Opportunities in Academic Libraries for 21st Century Skills grant has been successful. The Center for Games & Learning is now permanently incorporated into the structure of the library. Games can be checked out to faculty and students. Local area K-12 teachers are also able to check-out the games for use in their own classrooms. Pre-service teachers at MNU are helping to assist a school board game club that started after the summer conference sponsored by the GOAL21 grant. A total of 50 students signed up for the club.

Game nights continue to be held during the semester, and this year Mabee Library will serve as a site for ALA's International Games Day @ Your Library. A second summer conference on games and learning will be held on Friday, July 29 at MidAmerica Nazarene University.

The project directors plan to continue work in the area of games and learning. We will be guest speakers at the Kansas Gifted and Talented Conference in Salina, Kansas in June of 2016, and we have been invited to speak at the Mid-Continent Public Library and the Kansas City Missouri Public Library about facilitating and debriefing games. One area of surprising success was with the broader education and library communities. We were invited to Southwestern College in Winfield, Kansas to discuss our research and have other speaking engagements lined up.

The frequency and number of conferencing and consulting opportunities surprised the project directors:

- Boys and Girls Clubs of Olathe: program support
- Brick and Click Libraries Conference: conference presentation
- Fort Leavenworth School District: library program support
- Gardner Edgerton School District: afterschool program support
- Heartland Math Teachers' Circle: teacher in-service training
- Johnson County Corrections: juvenile detention alternatives
- Johnson County Libraries: Global Game Jam planning
- Kansas Association for the Gifted, Talented, and Creative: conference presentation, in-service training
- Kansas City District Nazarene Youth International: recreational event support
- Kansas City Maker Faire: booth exhibition
- Kansas Library Association / Missouri Library Association Conference: conference presentation
- MidAmerica Nazarene University: Teacher Education faculty support, Teacher Education student support, Teacher Education conference support, faculty development seminar
- Mid-Continent Public Libraries: program staff training, branch programming support
- Midwest Parent Educators: curriculum support, conference presentation
- Nazarene Youth International: college and university programming support
- Olathe School District: teacher in-service training
- Quadrennial Nazarene Youth Congress: program leadership
- Southwestern College: faculty development seminar

Clearly, the topic of games and learning piques the curiosity of many, arousing interest and enthusiasm. The Center has proven effective in the facilitation of outreach and network development across many educational and library contexts.

In conclusion, students use 21st Century Skills when playing games. By adding games to the collection, hosting game nights, providing games for curriculum support, and increasing the library's capacity to support 21st Century Skills, students receive increased opportunities for practicing and engaging in purposeful activities that foster 21st Century Skill development.