Collaborative Technology Project (CTP)

**IDE 611 Informational Technologies in Educational
Organizations Fall 2020
Instructors: Moon-Heum Cho & Zhijuan Niu**

Project Note-The comments in red within this report identify attachments or components that support this report. <u>Links within this report are underlined in blue</u>.

Project Title: Edutainment Game-Based Learning Opportunities in the United States
Army Sergeants Major Academy (USASMA).

Purpose of Project:
   The purpose of this project is to investigate how to leverage and standardize gamification and game-based learning for delivery of educational content, in the United States Army Sergeants Major Academy (USASMA) Military Equal Opportunity (MEO) program. Recognizing a performance gap in the delivery method associated with the MEO program within the USASMA, the team will attempt to help USASMA find new ways to include game-based learning for its delivery of content. Providing the USASMA with new technology ideas for deliverables of its instructional content, can help the students and instructors with improved learning capability.

Needs Assessment of Project:
   The need for this project derives from the necessity to provide a qualitative education experience of the equal opportunity program to the future senior leaders of the United States Army. The United States Army is always looking for ways to include principles of cultural awareness to build effective leadership within its ranks. The ability to add and edutainment game-based learning option into the equal opportunity lesson plan, will help in finding a unique way to deliver content to the senior leaders at the United States Army Sergeants Major Academy. The addition of game based learning into the lesson plan will not only increase awareness and provide the tools necessary to increase education, but it will help to meet the performance requirements in accordance with Army Regulation 600-20 and Army Regulation 350-1.

Brief Summary of the overall project:
- Research edutainment game-based learning options for the USASMA MEO program.
- Gather edutainment game-based information and options for the USASMA MEO program.
- Provide the students within the Department of Studies in the USASMA, with deliverable content, that helps provide more interaction within the current lesson format.
- Provide the instructors of the Department of Studies in the USASMA, with a edutainment game-based learning option, to assist them in providing a more interesting and interactive approach to delivery of the MEO program lesson.
- Help Army senior leaders to close the current soldier performance gap in the Army MEO program by enhancing lesson delivery by means of edutainment game-based technology.

IDD&E 611 Collaborative GBL Project

Project Team Members:
- Kevin Schuller-- co-leader, researcher, evaluator, designer
- Anthony Rausch – co-leader, researcher, evaluator, designer
- Tammy Poole- co-leader, researcher, evaluator, designer
- Mark Froom- Assistant Head of Department of Professional Studies, USASMA
- Randy McCoin Instructor-Department of Professional Studies, USASMA

Goals of Project:

Benefits to the students:
- This project will enhance the lesson interaction with the MEO program.
- This project will make the MEO program lesson fun for students.
- This project will enable students to take more interest in the MEO program lesson delivery.
- The project will help enable students of a better understanding of the MEO program lesson deliver and allow them to apply skills necessary to close the current soldier performance gap.

Benefits to the teachers:
- Students will be able to answer questions on lesson.
- This project will improve interaction between instructors and students.
- This project will improve student assessment scores.
- This project will enable preparatory game-based learning or gamification options to the instructors to aide in course material dissemination.

How to measure the success of student learning:
- Instructors will be able to see improved assessment scores at the completion of the MEO program.
- Instructors will use assessments to measure cognitive comprehension of the MEO program lesson content.
- Instructors will be able to better discuss racial and sexual discrimination issues with Soldiers in the Army.
- Instructors will be able to better explain prejudice and bias issues facing Soldiers in the Army.

Objectives for student learning:
- The students will be able to better define key components of the MEO program.
- The students will be able to identify the MEO program building blocks.
- Help the students to determine the Commander's responsibilities within the MEO program.
- Help the students in describing the proper MEO formal and informal complaint procedures.

Target Audience:

The target audience for this project are the students in the Department of Professional Studies in the United States Army Sergeants Major Academy. These students are future senior leaders for the United States Army and will serve as advisors to a broad range of commanders in both the United States Army Forces Command and the Unites States Army Training and Doctrine Command. These students have reached the highest enlisted rank in the United States Army and this school is the final stop in their military professional development. These students and future leaders will lead thousands of Soldiers in various units in both garrison and combat environments.

The Non-Commissioned Officer's Center Leadership Center of Excellence United States Army Sergeants Major Academy
14511 Churchill
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79908 (915) 744-
8081

- ➢ Grade level: Sergeants Major Academy
- ➢ Number of Classes:1
- ➢ Number of Teachers: 2
- ➢ Student Total: 16
- ➢ Type of School: United States Army Military Professional Development

Technologies Used:
- Edutainment based game technology
- Jeopardy Style game-based learning
- Software application
- Individual Mobile Devices

Completed Timetable:
Please (See document: IDDE 611 Schuller-Rausch-Poole_Calendar) or you can view (IDDE 611 Schuller-Rausch-Poole_APPENDIX B) at the end of this report.

Challenges to be Faced:
- Enabling the use of edutainment jeopardy game-based technology to the existing USASMA blackboard.
- The upgrading of software to add change to the current MEO program curriculum and lesson plan for the United States Army.
- Providing and enabling linking capabilities of the edutainment game-based technology to mobile devices.
- Ensuring the selection of edutainment game-based learning options are user friendly to the students of USASMA.

Expectations & Results:

- Enabling the use of edutainment game-based learning into the MEO program of instruction will improve overall assessment scores. (See document IDDE611-Schuller-Rausch-Poole_LessonPlanSurvey).
- The integration of edutainment game-based learning will enable the students in being responsive to the MEO program content.
- Edutainment game-based learning will help the instructors see value in the technology, and potentially provide the same option in other lessons.
- Help the USASMA to incorporate permanent change by inserting edutainment game-based learning in the MEO program lesson plan.

Demonstration of Project Progress:

- The final product will be delivered within a power point presentation and included within the P576 Department of Professional Studies lesson plan (Attached IDDE Schuller-Rausch-Poole-PowerPoint).
- The team used a calendar (Attached IDDE 611 Schuller-Rausch-Poole_ Calendar) to maintain and document progress throughout the project and until completion.
- The project proposal is the final report as required by established timelines in IDDE 611 necessary to meet all requirements (IDDE 611 Schuller-Rausch-Poole_Collaborative Group Final Report).
- The team is currently working with the United States Army and Training and Doctrine command to apply the developed Jeopardy Labs game-based training in the

Edutainment Game-Based Technology Website:

- The team created a game-based learning Jeopardy style program for use during MEO instruction taught at the Sergeant Majors Academy. The team determined this approach was best because as it provided the ability of recall and quick response to any MEO issues that students may encounter in the future. One of our classmates, within the group, created an eMicrolearning presentation on game-based learning which we used to determine the best option to meet the target audience's needs.
- The following is the development website evaluation information. You can click on the below link to access the technology edutainment game-based learning for the P576 MEO United States Army Sergeants Major Course lesson plan. (See P576 USASMA MEO link) to access developed game-based technology training.

View the website at https://jeopardylabs.com/
Login Link: P576 USASMA MEO Jeopardy

Reflection:

IDDE Competencies Utilized During Report:

1.0 Ongoing Professional Development
- (1.1-1.7) Enhance communication skills in visual, oral, written, and visual/graphic design
  - Messages must target learner requirements and needs and meet the required content and learning objectives.
  - Write and edit text to produce messages that are clear, concise, and grammatically correct.
  - Revise messaging to target audience
  - Create visuals that entice learner and further the learning objectives.
  - Presentations keep learners engaged and reflect the learning material.
  - Open dialogue between stakeholders and designers.
  - Presentation is in line with stakeholder and learners' ideals.
  - Seek out individuals with diverse backgrounds to enhance input.
- Conduct research into similar types of situations to gain knowledge.
- 2.0 Planning and Analysis

- (2.1-2.8) Validate performance gaps using multiple techniques
  - Determine how to acknowledge gaps and how to conduct analysis.
  - Determine the target audience.
  - Id the performance gap and how to address changes in content.
  - What technology will address the learning gaps in content.
  - Create a needs assessment report to target overall gap in learning content.
- (10a) Analyze the characteristics of the environment.
- 3.0 Design and Development
- (3.2-3.7)
  - Determine what content will meet the instructional goals.
  - What technology resources will engage learners.
  - Embed new instructional plan into lesson plan.
  - Modify existing technology with inclusion of new learning material.
- 4.0 Implementation and Evaluation
- (4.1) Implement and disseminate instructional interventions
  - Materials that implement changes in lesson plan.
  - Observe new learning material embedded in lesson.
  - Format new learning so that learners have multiple ways to engage in the material.
- 5.0 Management and Leadership
- (5.2) Manage collaborative relationships

Overall, our team worked effectively in developing a collaborative project that was geared towards increasing student engagement and improving assessment scores. The team held multiple meetings throughout the project. As a team, we were able to leverage the technology skills learned in this course as well as our digital media course to develop a solution that would meet the needs of the United States Army. After developing the idea and discussing it with the department head, he agreed that adding a game to increase student engagement would add value to the Military Equal Opportunity (MEO) curriculum. Throughout the project, we were able to gain practical experience in instructional design competencies. After identifying the performance gap, we efficiently worked through designing and developing a solution aimed at closing the gap. Accomplishing this task required that we develop a plan and stick to a timeline. Our team did a great job of staying on task despite challenging setbacks as it pertains to the pandemic.

One of the primary challenges we faced as a team was during the implementation and evaluation phase. Although we developed a sound implementation and evaluation plan, we were not able to implement it because COVID restrictions caused the student schedule to be shifted. Thus, the game-based learning could not be implemented or assessed prior to the project due date. That said, our team fully anticipates this project will be piloted implemented at the academy and we look forward to it enhancing the quality of training students receive about MEO within the United States Army Sergeants Major curriculum.

While we faced many challenges because of the pandemic, we feel we did a good job adapting regardless of the circumstances we faced. One of our strengths as a team was our ability to adapt when circumstances arose beyond our control. That said, upon further reflection, one area we could have improved is by incorporating more contingency planning into our overall plan so that we could be better prepared for any future events that could thwart our progress.

All considered, despite the challenges, we feel we have designed and developed a game that will meet the needs of the client in enhance training for all future students in the academy. Overall, the project was a great experience. It allowed us to work with our future colleagues and determine where knowledge and performance gaps in training exist in the institution we will be working in upon graduation. Further, it gave us the confidence to know that we will have the competence and expertise to assist our future colleagues in developing solutions and closing the gap.

Outline of Equal Opportunity Lesson Plan:
The following is an outline plan of the current equal opportunity lesson plan in the Department of Professional Studies. The current overall lesson time is 200 minutes in length. The edutainment jeopardy game-based learning will take the students approximately 30 minutes each.

The intent of the game-based learning will have the instructor/facilitator will have 16 students that he/she will break out in four separate groups of four. The facilitator/instructor will serve as the game host and let students pick categories and amounts to achieve a score. The team with the highest score at the end of the game will win. The edutainment game will be conducted following the fourth hour GNI block of instruction.

This will take the lesson plan from the current 200 minutes of instruction to 230 minutes of instruction. Coordination will need to be conducted with the United States Army Training and Doctrine Command for approval in adjustment to the current lesson plan P576 (See Appendix A below Lesson Plan P576).

APPENDIX A

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Lesson Plan

SERGEANTS MAJOR ACADEMY
Department of Professional Studies

Lesson Plan for Lesson P576
Equal Opportunity – MEO Training for Senior Leaders

Department Reviewer: Mr. Mark Froom
Lesson Author: Mr. Robert Balatico
Date Prepared: 7 February 2020

1. SCOPE

During this four-hour lesson, students will develop an understanding of the Army's Military Equal Opportunity (MEO) program, complaint process and climate assessment requirements. This stresses the Army's zero tolerance policy toward discrimination and ensure that the Army's environment is safe and keeps the highest standards. As a result, of this lesson, students will understand the Army's MEO program, complaint process and climate assessment requirements to develop a healthy environment in their future organizations.

2. LEARNING OBJECTIVE

This lesson supports the **SMC TLO 400-SMC-1014**, Examine topics to derive knowledge in the leadership and workforce management and development area of study, which includes the analysis of leaders and managers throughout history, integration of leadership competencies, and the profession of arms.

ELO: 400 – SMC – 0930.15
Action: Analyze the key components of the Equal Opportunity Program.
Condition: As a student in the SMC, given the requirement to conduct research, write research papers, make oral presentations, selected readings, and questions posed by the Instructor.
Standard: Analysis includes –
Define the key components of the Military Equal Opportunity (MEO) Program
Identify the Military Equal Opportunity Program Building Blocks
Determine the Commander's responsibilities
Describe the Military Equal Opportunity (MEO) Complaint Process

Learning Domain: Cognitive
Learning Level: Analyzing

3. ISSUE MATERIAL

   a. **Advance Issue**: P576 Advance Sheet
   b. **Issue During Class**: NA
   c. **Read**: [57.5 minutes] (Access Required Readings in Blackboard)

4. ASSIGNED STUDENT READINGS
a. First Requirement: P576RA: *Army Command Policy,* AR 600-20, 24 July 2020, pp. 72 – 87 (para 6-1, 6-6, 6-10), pp. 132, 136, 140-143, (para C-1, D-3, E-2, E-3), pp. 205, 206, 209, (Glossary)(23 pages) [57.5 minutes].

b. Second Requirement: Be prepared to discuss the following questions:

(1) What is racial discrimination?

(2) What is sex discrimination?

(3) What is prejudice?

(4) What is discrimination?

5. INSTRUCTOR ADDITIONAL READING(S)/MATERIAL:

TC 26-6 Chapters 1 – 11 (61 pages)

6. TRAINING AIDS, REFERNCES, AND RESOURCES

a. Appendix A, Slides
b. Appendix B, Assessment(s) and Assessment Solutions – Omitted.
c. Appendix C, Practical Exercises and Solutions – Omitted.
d. Appendix D, Student Handouts – Omitted.
e. Video(s), Men of Honor (CE)

7. CONDUCT THE LESSON

a. Lesson Timeline: (200 minutes)

First Hour
05 minutes: Concrete Experience (CE)
05 minutes: Publish and Process (P & P)
40 minutes: Generalize New Information (GNI)

Second Hour
50 minutes: GNI
10 minutes: Break

Third Hour
50 minutes: GNI
10 minutes: Break

Fourth Hour
40 minutes: GNI
05 minutes: Develop
05 minutes: Apply
10 minutes: Break

APPENDIX B

IDDE 611 Calendar October 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Gather data for target audience	2 Develop Initial Report	3
4	5 Initial Report due on collaborative project to drop box	6	7	8 Research gamification option for MEO	9 Research Game Based options for MEO	10
11	12	13	14 Interview DPS instructor #1	15 Group collaboration on interview output	16	17
18	19	20	21 Interview DPS instructor #2	22 Group Collaboration on interview output	23	24 Make final decision on technology option for lesson plan
25	26	27	28	29	30	31

IDDE 611 Calendar November 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4 Provide DPS students with deliverable technology in lesson plan (implementation)	5 Review measures of performance (MOP) and measures of effectiveness (MOE) of collaborative technology	6 Draft progress report on collaborative project	7 Draft progress report on collaborative project
8	9 Progress Report due on collaborative project to drop box	10	11 Build draft PowerPoint presentation	12	13	14
15	16 Build final PowerPoint presentation with lesson plan	17	18	19	20 Review PowerPoint presentation	21
22	23	24	25	26	27	28
29	30					

IDDE 611 Calendar December 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Make final changes and adjustments to final report due on 4 December	2	3	4 Final Report due on collaborative project to drop box	5

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