

Molly Schultz

672 section 7

Week 02 Case Study 1: Paul Lindley

Key stakeholders in the case:

- Kevin Elkin- Instructional design team-Grad student, understands game play hardcore gamer, researching types of gameplay
 - Primary interests/concern- Game tells a story
- Linda Grimes- Instructional design team- Grad student in library science, familiar with gameplay, interviewing students and teachers, researching types of gameplay, working on how to implement games within libraries
 - Primary interests/concern - Teacher's lack of time, relevance of context for students, concerned about violence in the game.
- Jamie Tolliver- Instructional design team - Grad student, not familiar with game play, only experience online card games, interviewing social studies teachers and students
 - Primary interests/concerns- game violence, appropriate for the age group and demographic
- Bo Chen – Instructional design team- Grad student, former public-school teacher, strong interest in motivating students, researching state standards
 - Primary interests/concerns- student motivation, standards
- Paul Lindley - Lead instructional designer- Professor, manager, lead instructional designer, specializes in educational technology
 - Primary interests/concerns- “considering goals within constraints” (Watson, 2017, p.49), satisfying the client, getting funding, researching learning from educational video games

- Bob Reckowsky – Client/Subject Matter Expert- Principal of alternative school
 - Primary interests/concerns - Educational video game produced using no extra resources, former professional baseball player, interested in how students learn through games.
- Social Studies Teachers at alternative school- Audience/Facilitators
 - Primary interests/concerns- No time to teach anything new, do not make their work harder, limited access to computers
- Students at alternative school- Audience
 - Primary interests/concerns - They like recreational video games, they like baseball/sports, they do not see how historical events affect their life now.

Instructional design challenges and case-specific constraints:

Key instructional design challenges:

The main ID challenges are lack of learning objectives and lack of experience designing a video game.

The designers have been tasked to make a video game to teach about Japanese internment camps that can be done in a short amount of time with no extra budget. The main ID challenge falls in the design phase because they have no experience designing a game and they don't have learning objectives by which to design it.

The team can think of their process and challenges in terms of a blended approach of the **ADDIE** (Molenda, 2003) and **Dick and Carey ID model** (Dick et al., 2015).

Analyze- So far, the team has interviewed teachers, the principal, and students. They have reviewed other recreational video games and educational video games. The team has been researching the topic of Japanese internment camps. Paul talked to Bob, the principal, about his needs and wants. Paul and the students watched documentaries and read books about Japanese internment camps. Paul collected

the standards that Bob used for the original lesson that inspired this project. The team found historical documents and watched films about baseball in the camps.

Identify instructional goals - The team has collected the basic facts about Japanese internment camps which could be turned into instructional goals.

Conduct instructional analysis - The team is working with several types of skills. The content about Japanese internment camps needs to be taught as an Intellectual skill, the video game itself would be a psychomotor skill, and lessons about the current social values connected to the lesson would be taught as attitudinal skills (Dick et al., 2015).

Analyze learners and contexts - The learners are students at an alternative school. They likely have behavioral issues, learning disabilities, or socioeconomic problems. The learning context and the performance context are probably going to be the same. They will likely be in a computer lab at the school.

Write Performance Objectives - Currently the team does not have performance objectives.

Revise Instruction - The team cannot revise instruction until goals and objectives are developed.

Design - Currently the grad students are responsible for designing the game. "It's important that the gameplay reflect the learning goals. We want an interesting story, and we want interesting choices, but we want them connected to the learning as well" (Watson, 2017, p.45). The team would like to design a thorough teacher's guide so as not to make additional work for the teachers. Some design challenges that they have encountered have been that many video games have violence, many video games have gambling, and the topic involves racial slurs.

Develop- The team is going to have a problem designing and developing because two people on the team are unfamiliar with video games. They have developed a paper-based design of the game to test logic and mechanics (Watson, 2017).

Develop Assessment Instruments / Develop instructional Strategy - The team needs to identify the learning objectives before they can develop assessment instruments or an instructional strategy.

Develop and select Instructional Materials - The team already knows that they want the instructional material to be a video game and potentially relate it to in-class lessons.

Implement - There are a few implementation constraints including access to computers, and available time.

Evaluate/ Design and Conduct formative Evaluation of Instruction/ Design and Conduct Summative Evaluation – The team needs the standards and objectives to be able to create the evaluation.

Case-specific challenges:

School-specific challenges:

- School with no resources to create the game.
- Some teachers do not use video games in class.
- Students have trouble connecting history to their own lives.
- Teachers have little time to add anything to classes and lessons.
- No daily access to the computer lab.
- Some students do not have computer access at home.
- Some parents may be against using computer games in school.
- Limited time for the subject matter.

Project management challenges:

- No systematic design process
- No clear goal
- No learning objectives
- No timeline
- Communication within the team

Prioritization of Challenges:

Priority #1: Team Organization

- No timeline – The team needs to know how much time they have before they can make a realistic plan for analysis, design, and implementation.
- No learning objectives, no clear goal, no systematic design process – The team cannot move forward until they have a process and objectives.
- Communication within the team - The team needs common language to communicate needs and findings.

Priority #2: Design/Development

- Funding- The school has no resources to create the game. The team needs funding in order to create, implement, and distribute this game that the school has requested.
- Development- Developing video game: 2 people on the team are unfamiliar with video games. The team has no experience making video games. Developing assessments: The team doesn't have the objectives and standards that they need to start assessment.
- The topic involves racial slurs, video games have gambling, and violence.- The team needs to decide as to whether they will include these problematic issues in the lesson or video game.

Priority #3: School-specific issues

- Limited access to computer lab/computers- The students need access to computer labs in order to access the video game.
- Limited time for the subject matter - Teachers need the game to fit within the time constraints of the class schedule.
- Students have trouble connecting history to their own lives. - To retain what is taught, the students need to see how it applies to their current situation.
- Some teachers do not use video games in class. - The video game cannot be effective if it is not used.
- Alternative school – Students likely have behavioral issues, learning disabilities, or socioeconomic problems - The issues at an alternative school can affect learning and retention.
- Parents of students may be against using computer games in school. - The video game cannot be effective if it is not used.

I prioritized problems that are within the control of the team. If the team takes a systematic approach to design such as deciding to follow the ADDIE (Molenda, 2003) or Dick and Carey (Dick et al., 2015) theoretical models, then that would help relieve the communication issues and would create an order for tackling many of the other issues. Some of the issues can be addressed by the teachers after the game has been administered.

Readings:

Based on Ke (2015) I see why the team wants to create a role-play or character-based game. Role-play or adventure games seem to be the most comprehensive and immersive for students to learn the content if it is relevant to the learning objectives. However, I do not think the team has the information necessary to create a game of this depth. The team is looking more at creating what Ke (2015) refers to as an older model where the subject matter can be interchangeable within the frame of the game set

up. This may not be the most educationally ideal video game, but it fits within the constraints of time and resources.

When it comes to teaching controversial issues in the classroom the team needs to give the teachers clear instructions with a balanced perspective but based on Kello (2015), it is up to the teacher to decide how they will handle the instruction. The teacher may decide they are teaching just the state standards, avoiding any controversy, or giving the students the opportunity to share opinions on both sides. What direction the teacher decides is influenced by their racial or political perspective.

Previous Experiences:

My experience with video games, educational or recreational, is limited to Duck Hunt and Oregon Trail. This influences me to keep video games simple. A game does not need to be complicated or technical to foster motivation to learn. A game just needs to be fun. Though I do not have a lot of experience with video games, I do have a lot of experience with a creative outlet teaching me academic skills. I had difficulty in math, but I was an experienced and talented musician. When someone explained to me that fractions were like time-measures, suddenly it made sense. The same is true for when I learned to sew, suddenly many things about geometry, angles, and three-dimensional figures made sense that had never connected in my brain before. I could often memorize facts if I made them into a song or a monologue. I see how the play and story involved in a video game influences the motivation to learn and retention of facts.

When it comes to the controversial topics of the case, I do not have a lot of experience. My views are simplistic, racism is bad. I grew up in a mostly white middle-class small-town school with white middle-class small-town teachers, so controversial topics were mostly taught in a very factual way, not with many nuances. As I stated when reflecting on the reading of the week, the nuance is more up to the teacher than the curriculum. The curriculum can only present the facts.

Two reasonable solutions/recommendations for the designer in the case:

Any solution needs to begin with a systematic design plan. Both solutions I am proposing would start with the team following a hybrid of the Addie (Molenda, 2003) and Dick and Carey model (Dick et al., 2015) as I laid out previously in this paper. They cannot move forward with either recommendation until they have established learning objectives. As the two main design challenges are lack of learning objectives and lack of experience with video games, my first recommendation is to remove the video game altogether. This would allow the team to focus on establishing learning objectives and creating a game that teaches and assesses the students based on those learning objectives without the team having to learn a new technology. My second recommendation is a simple video game. Again, this allows the team to create and focus on meeting the learning objectives. In this case the team would rely on Paul more, because he has video game experience, however they would be only designing one module, with one scene.

Needs that will be addressed by either solution:

Priority #1: Team Organization

- No timeline – The timeline for creation of the lesson/game should be one semester or one school year.
- No learning objectives, no clear goal, no systematic design process – Follow a hybrid of the Addie (Molenda, 2003) and Dick and Carey model (Dick et al., 2015) as I laid out previously in this paper.
- Communication within the team – Once the team has a systematic design process, they need a central location or software to store the information. Learning objectives will give them a starting point for clear communication.

Priority #2: Design/Development

- Funding- The team needs to secure grants. Solution #2 will require significantly more funding than solution #1. However, solution #1 could be filmed and submitted as a plan for creating solution #2.
- Development- Solution #1 will require no new development skills, the team just needs to understand baseball and of the subject matter. I suggest securing funds to hire a professional to create solution #2, otherwise the team will be relying heavily on Paul and will need a longer timeline to learn how to make a video game.
- The topic involves racial slurs, video games have gambling, and violence. - Both solution #1 and solution #2 are created without racial slurs, gambling, and violence.

Priority #3: School-specific issues

- Limited access to computer lab/computers- Solution #1 eliminates this issue completely. Solution #2 will be able to be completed in one class period.
- Limited time for the subject matter – Both solutions fit in one class period, with a lesson that is taught in one previous class period.
- Students have trouble connecting history to their own lives. - In either solution, the team will rely on the teachers to help interpret this and decide how deeply they want to address the controversies connected to the subject matter.
- The last three issues are mostly out of the control of the team and can best be addressed by creating a good product with effective learning objectives.
 - Some teachers do not use video games in class.
 - Alternative school
 - Parents of students may be against using computer games in school.

Solution/Recommendation # 1: Create a game that is a live baseball game teaching about Japanese internment camps. Students must answer questions regarding facts about Japanese internment camps in order to have a chance to hit the ball (one class period).

Addresses challenge	Pro	Con
Team organization	Takes the video game barrier out of the team communication.	They've already spent time researching video games and won't be using that knowledge.
Design/Development	They do not need to learn how to design a video game. Can focus on learning objectives. Less funding needed.	The professor specializes in Educational Technology not live gameplay.
School specific issues	Will not be a computer access problem. Will not be an issue with parents or teachers who do not want to use video games.	It is not what the client requested.

Solution/Recommendation # 2: Create a video game that is a baseball game. The students would have to answer questions regarding facts about Japanese internment camps. There will be several rounds of baseball where you are asked a question before hitting the ball and based on your answer get to first, second, third base or a home run (up to 30 minutes).

Addresses challenge	Pro	Con
Team organization	The team is already researching how to make video games.	Half the team is unfamiliar with video games.

Design/Development	This will be simple; they do not need to plan adventures or multiple storylines.	The team needs to learn how to make a video game.
School specific issues	The game will be 30 minutes to help with the computer lab time constraints.	The game may not be the ideal, most effective educational video game.

Final recommendation:

My final recommendation is that the team create a video game that is a game of baseball. There will be several rounds of baseball where you are asked a question before hitting the ball and based on your answer you get to first, second, third base or a home run (up to 30 minutes).

If the team had time and resources, they could further develop the game to include multiple optional modules which could include character creation, but the team needs to start by focusing on one simple game that can happen in one class period. The team will also create a lesson plan to be taught the previous period so that the game is a review of the lesson taught. The lesson would also clearly explain the connection between baseball and the internment camps. The team would need to secure funding to have someone make the game for them since none of them have experience making games.

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