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THE APP FARM: ENGAGING DESIGN PROCESS AS A MEANS FOR FRENCH LEARNING

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In this design case, we present an instructional design project that resulted in a French language learning game development system. What we describe here is not the game itself, but rather the pedagogical intervention that created what the design team termed a mobile "application farm," which in turn produced the game. The term *farm* was used due to the perspective of the designers to create a sustainable system rather than a single design. This design case also has another purpose beyond presenting precedent in instructional design; we interrogate the interview process and the protocol we used while documenting this project. We present the outcome of our interrogation in reflection notes posted throughout this design case. We do this because we believe that there is a value and need for design cases created by someone outside of the design arena but with access to members of the design team, in order to elicit where precedents might be found within complex designs.

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INTRODUCTION

The design and development of this application farm (App Farm) took place at the University of Tennessee, Knoxville, where all four authors are faculty members. The first author, Craig, joined the design team as a new faculty of Instructional Technology. The second and third authors—Sébastien, a professor of French language and culture, and Cary, a professor of Art—were the two original members of the design team. Sébastien and Cary worked closely with undergraduate students with a background in art, design, and computer science, and graduate students studying French language pedagogy to design and develop the game-based French learning application. They had been collaborating on the application development since the beginning of 2015 and continued to work together. Lisa, the fourth author and a faculty member in Instructional Technology, had known Sébastien and Cary through mutual colleagues and had discussed potential collaborations. Sébastien and Cary invited Lisa to the App Farm team to engage in joint research, at which point Lisa invited Craig to join the team. This design case is about the intense design experiences leading to the first iterations of the students' work. All authors were involved in the development of this article, but Craig took the lead in conceptualizing and writing the design case.

The initial concept of this article began when Craig was invited to take part in several meetings related to doing research on Sébastien and Cary's App Farm's design experiences with students. These meetings were exploratory in nature. During the second meeting, Craig suggested that we document the project via an instructional design case, to create a straightforward conceptualization of the scope and detail of such a complex project. As a newcomer to the design project, Craig

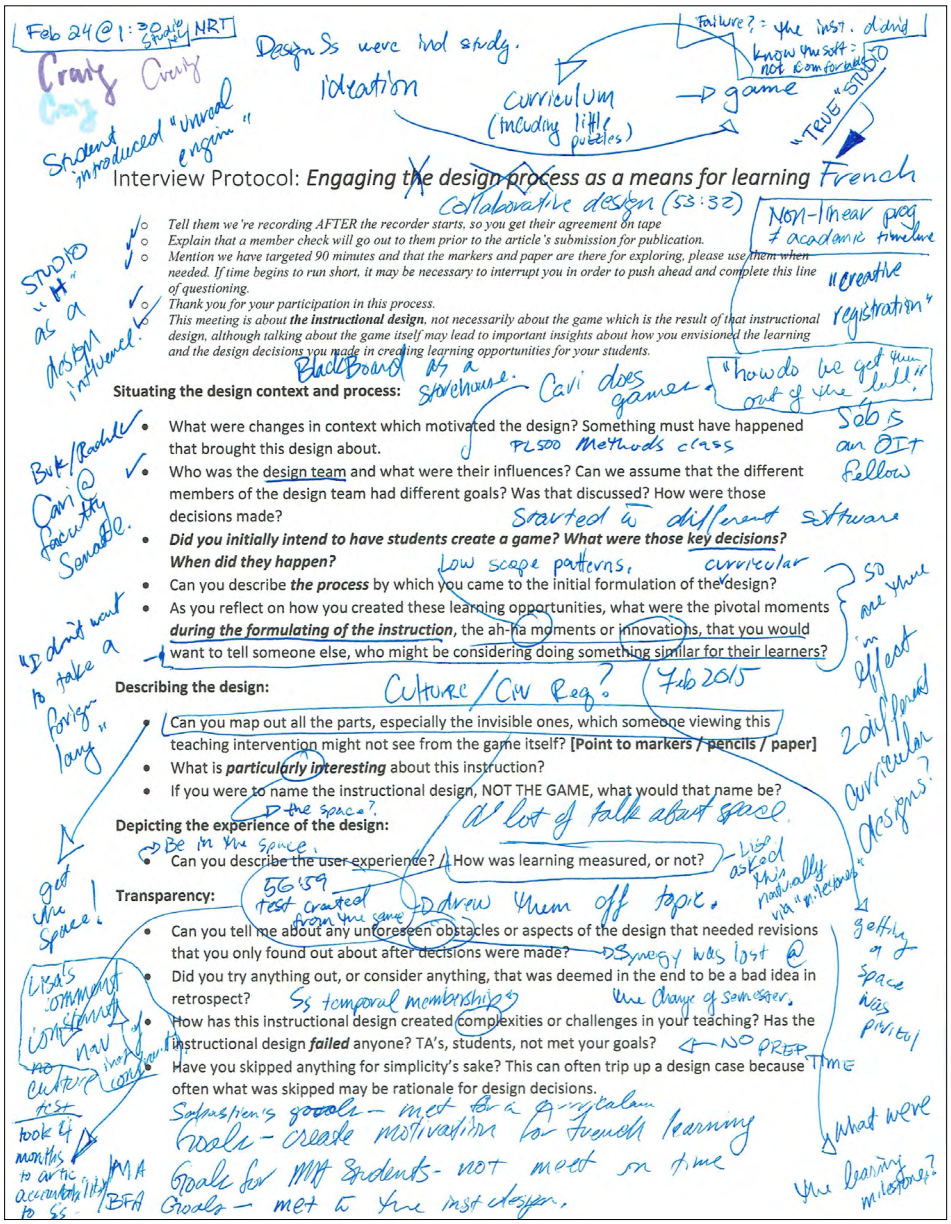
searched for a strategy to elicit the precedent in instructional design that was embedded in the designed product and the process involved so far in creating it (Boling 2010).

This multi-step strategy involved conducting a semi-structured interview with the design team. To prepare for the interview, Craig reviewed an article he wrote five years ago about the concerns reviewers had regarding design cases in IJDL (Howard, 2011), and two other significant articles related to the presentation of instructional design cases (Boling 2010; Smith 2010). He reasoned that these articles would provide the foundational questions he could use for the semi-structured interview that he was intending to lead, and had advantages over other protocols that were more general in nature or geared towards preparing to create a design rather than documenting it (Tawfik, Trueman, & Lorz, 2013). Craig crafted 10 questions from these texts, and limited the protocol to one page, anticipating that more questions might prevent the designers from expressing key areas of precedent they discovered through their designing. The 90-minute time frame functioned as a useful constraint to lead the discussion into key areas of precedent and avoid overwhelming amounts of details which might detract from an expression of the innovation present in the intervention. The original interview questions are presented in Appendix A, and the annotations Craig wrote on the question sheet as the interview progressed are shown in Figure 1.

The interview took place in February 2016, and each of the authors on this article was present, each with different roles. Sébastien and Cary were members of the design team, Craig was the lead researcher, and Lisa took a support role as an interviewer and a member of the research team. We audio recorded the interview to allow for a review of the discussion that took place. In the following sections, we introduce what we learned about the design during the interview.

CONTEXT

Prior to the interview, the designers had focused much of their descriptions about the project through reference to the students' completed work. Storyboards depicting the game itself, and flowcharts of the computational logic used to create the game's functionality adorned the walls of the conference room that the project team occupied. This raised an issue for Craig because he had previously found that results of a pedagogical intervention can often confound the main purpose of a design case, which is to express the process and product of the instruction, not the results of the learning (Howard, 2011, 2013; Howard, Boling, Rowland, & Smith, 2012). While the products of learning may present evidence that learning has occurred, they are not a description of the


Interview Protocol: *Engaging the design process as a means for learning*

Tell them we're recording AFTER the recorder starts, so you get their agreement on tape
Explain that a member check will go out to them prior to the article's submission for publication.
Mention we have targeted 90 minutes and that the markers and paper are there for exploring, please use them when needed. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.
Thank you for your participation in this process.
*This meeting is about **the instructional design**, not necessarily about the game which is the result of that instructional design, although talking about the game itself may lead to important insights about how you envisioned the learning and the design decisions you made in creating learning opportunities for your students.*

Situating the design context and process:

- What were changes in context which motivated the design? Something must have happened that brought this design about.
- Who was the design team and what were their influences? Can we assume that the different members of the design team had different goals? Was that discussed? How were those decisions made?
- ***Did you initially intend to have students create a game? What were those key decisions? When did they happen?***
- Can you describe ***the process*** by which you came to the initial formulation of the design?
- As you reflect on how you created these learning opportunities, what were the pivotal moments ***during the formulating of the instruction***, the ah-ha moments or innovations, that you would want to tell someone else, who might be considering doing something similar for their learners?

Describing the design:

- Can you map out all the parts, especially the invisible ones, which someone viewing this teaching intervention might not see from the game itself? **[Point to markers / pencils / paper]**
- What is ***particularly interesting*** about this instruction?
- If you were to name the instructional design, NOT THE GAME, what would that name be?

Depicting the experience of the design:

- Can you describe the user experience? / How was learning measured, or not?

Transparency:

- Can you tell me about any unforeseen obstacles or aspects of the design that needed revisions that you only found out about after decisions were made?
- Did you try anything out, or consider anything, that was deemed in the end to be a bad idea in retrospect?
- How has this instructional design created complexities or challenges in your teaching? Has the instructional design ***failed*** anyone? TA's, students, not met your goals?
- Have you skipped anything for simplicity's sake? This can often trip up a design case because often what was skipped may be rationale for design decisions.

FIGURE 1. The hand annotated protocol from the original interview, February 2016.

instructional design that was employed to produce that learning. This led Craig to quickly make a distinction between the instructional design, and the game that resulted through the process of learning French, and how to code a mobile app. The interview started with four questions related to the context of the design geared to make that distinction early on in the interview.

Memories shared between Sébastien and Cary of the early phases of the design were vivid, even though many of the events were over a year past the time of the interview and much had happened in the process of design. Sébastien answered in detail. Like many instructional design projects, this design was opportunistic in its formulation. Sébastien remembered the spark of an idea that originated in a graduate foreign language instructional methods course. During the in-class deliberations, the idea of using the designing of a game as a learning tool for foreign language appeared largely untapped relative to the potential that that strategy held. Two graduate students enrolled in Sébastien's course were intrigued by the strategy and engaged in meaningful conversations with Sébastien about the feasibility of exploring it. These two graduate students were influential in getting the project started and were a driving force within the design project as a whole. The conversations with these two graduate students evolved from simple brainstorming about how French might be taught, into graduate theses around this process of instruction through designing a game. Both graduate students were Sébastien's advisees and first year Masters students in their first semester. These inspirational discussions took place in the fall semester of 2014.

Cary and Sébastien met at a faculty senate meeting, and their discussions about working together in the future led to this project. During the first few weeks of January 2015, Sébastien was weighing multiple options for development, including a key software selection, *ARIS* (Augmented Reality Interactive Storytelling – see http://arisgames.org), as well as who might help with the technical side of things. Software choice played a role in the original formation of the ideas in Sébastien's mind as he contacted the graduate students in January 2015. By the time he had contacted them, Sébastien's two graduate advisees were already putting ideas to paper and forming initial conceptual designs of the game. The two graduate students had already envisioned a game as the focal point of the content-based instruction as they explained to Sébastien during their first meeting in January 2015. Their discussions targeted the summer session to comprise most of the actual game development tasks and possibly playtest the game with students during the fall semester of 2015.

During the early months of 2015, the design team was formed. Sébastien approached Cary and the two weighed tactics that might make the project feasible—both about administrative technicalities and about which students might be interested in participating in the design of a French-learning game. Sébastien remembered specific conversations with Cary about the alternative of handing over the design authorship of the game to students, rather than having them simply playtest it. He phrased this as a, *"radical change in the experience in learning French"* because this is not normally how second language learning games are developed. Oftentimes, a content expert and a design team create the game and only solicit learners for feedback in the development. Designers reserve key design decisions for themselves. Sébastien had doubted the feasibility of the project; nonetheless, Cary put together a list of undergraduate art and design students within a few days of this meeting.

REFLECTION NOTE #1: Questions related to the context of the design occupied over a third of the interview. Of the five questions planned to elicit memories of the initial phases of the design, only four were needed to elicit specific recollections of the important contextual aspects that influenced how the design was formulated. It is curious that the most influential aspect of the context—the undergraduate design students' reluctance to register for foreign language learning classes—went unstated in descriptions of the context of design, and only emerged in the discussion of design failures. It may be the case that certain aspects of a design context can be so foregrounded that they fail to emerge in a designer's description of context. This suggests the importance of asking about areas where a design did not serve a purpose it came to have.

INFLUENCE AND CONSTRAINTS

Cary and Sébastien referred to an influential project, "Studio H" that was the subject of a documentary about urban renewal via design (see Figure 2). The Studio H project focused on providing a dedicated design space and the potential for dramatic creativity when learners are empowered with directing their own learning through a project intended to improve their community. *If You Build It* is a documentary film that functioned as a common ground from which the two designers could reference values that they were bringing to the project.

Both designers drew on different important influences for their design decisions. Sébastien drew on games and how they can be used in foreign language instruction and other computer-assisted language learning designs. Cary drew on a series of print projects that had failed to create an interactive experience for the user, and had failed to allow for learners' creativity. Cary had previously taught print-based graphic design, and she saw potential in this game design

project to provide teaching motivational opportunities print projects could not. For Cary, design is way too much work if it is not fun. The flexibility and large amount of design decisions the learners would be faced with in creating a game afforded new teaching opportunities and potential motivation. This dynamic figured prominently in her reasoning as she accepted and agreed to take part in the project. At the same time, she recognized administrative requirements would become hurdles in the process of creating a learning experience based on the constitution of a cross-functional team—another desirable that cannot be traced back solely to the documentary. Broadly defined, a *cross-functional team* is a group of people in which each member brings a high level of expertise in one area while learning about the other team member's own area of expertise. This arrangement leads to a collaboration between team members that is both enhanced and more effective in achieving the result for which the team was assembled (i.e., in our case, creating a language learning game).

FIGURE 2. Design precedent was drawn from a project called Studio H, which was the subject of a documentary both designers (Cary and Sébastien) had seen. The image above is the release cover from the film which the two designers referenced in their collaborations. IF YOU BUILD IT is Long Shot Factory Release, 2013, directed by Patrick Creadon. Image used with permission, courtesy of O'Malley Creadon Productions

While putting the cross-functional teams into place, navigating the rules of the university played heavily into the design decisions, including how the project could be justified as "for-credit" learning for both the graduate students and for the learners who would eventually design the more intricate parts of the online game. For Cary, the hesitance of design learners to take foreign languages sparked her interest as this lack of desire had posed issues for her program coordination in the past. The general education requirement played on her strategizing the projects' completion. For both Sébastien and Cary, addressing program requirements in the design of the project were significant design constraints. This resulted in focusing the project on summer curricula because the summer offered certain administrative advantages.

In the spring semester of 2015, design students were exploring a proof of concept, while the Masters students studying French language pedagogy were exploring the various strategies in using games for language learning. Cary and her design students were interpreting the ideas of the French graduate learners into

storyboards. Cary aligned these tasks into an independent study for certain design students who had previously had essential learning during the past spring semester. Two undergraduates played significant roles prior to the time when the project moved to a different physical location, the library.

PROCESS

There were three areas of precedent that together combined to create the process by which the instructional design emerged: (a) the integration of cross-functional teams, (b) the pattern of work learners engaged in, and (c) the physical studio space itself were all the process components interacted with each other. All three areas are addressed here in an arbitrary order as they were concurrent and none was of any greater importance to the design as any other.

REFLECTION NOTE #2: Significant influences working on the minds of the designers appeared both in the narrative of the design process and in the narrative explaining the context of the design itself.

Cross-Functional Teams

The inclusion of learners from different disciplines and in different roles in cross-functional teams resulted in changes to the curriculum that could not have been foreseen, and, in turn, impacted the process of creating the instructional design. For example, an art student taking design coursework had specific insights. He drew on the "World of Warcraft" (an online role-playing game) functions and features to come up with the decision that certain problem-solving decisions could not be made with the originally chosen software, ARIS, because of functionality constraints—it is better suited to place-based mobile games than truly immersive environments. The student suggested another software, *Unreal Engine* (see https://www.unrealengine.com). The design decision to change the software resulted in an extended timeline for the learners to complete the design of the game. The two faculty members (Cary and Sébastien) developed a summer course focused on designing and building the game, and planned for that course to take place in a newly available space in the university library. From what the designers of the intervention learned via the two iterations of the App Farm project, they drew up a syllabus that explained their approach to students. The course syllabus is included in Appendix B. The syllabus reflected their strategic plan to express the goals of the course to learners who may be new to this type of project.

During the spring of 2015, an archive of precedent was being collected on the university's Learning Management System (LMS). Both Sébastien and Cary recognized that learners' design decisions surrounding the development of the game impacted the design of the curriculum through which learners learned both how to code and French language.

FIGURE 3. A just-in-time tutorial at the library studio space during the summer of 2015 (Dubreil & Staples, 2015).

These cross-functional teams were made possible through the other process decision of using a different physical space for the project during the summer semester. Having a studio space located in the library better enabled other students to access the project. The acquisition of a *resident genius* computer science student was also a significant memory of the project's time in the library studio. Another undergraduate student, studying linguistics, provided language support in terms of content that would be needed at various points in the development process during library work time (see Figure 3). In retrospect, cross-functional teams became important precedent in how the intervention became what it is now.

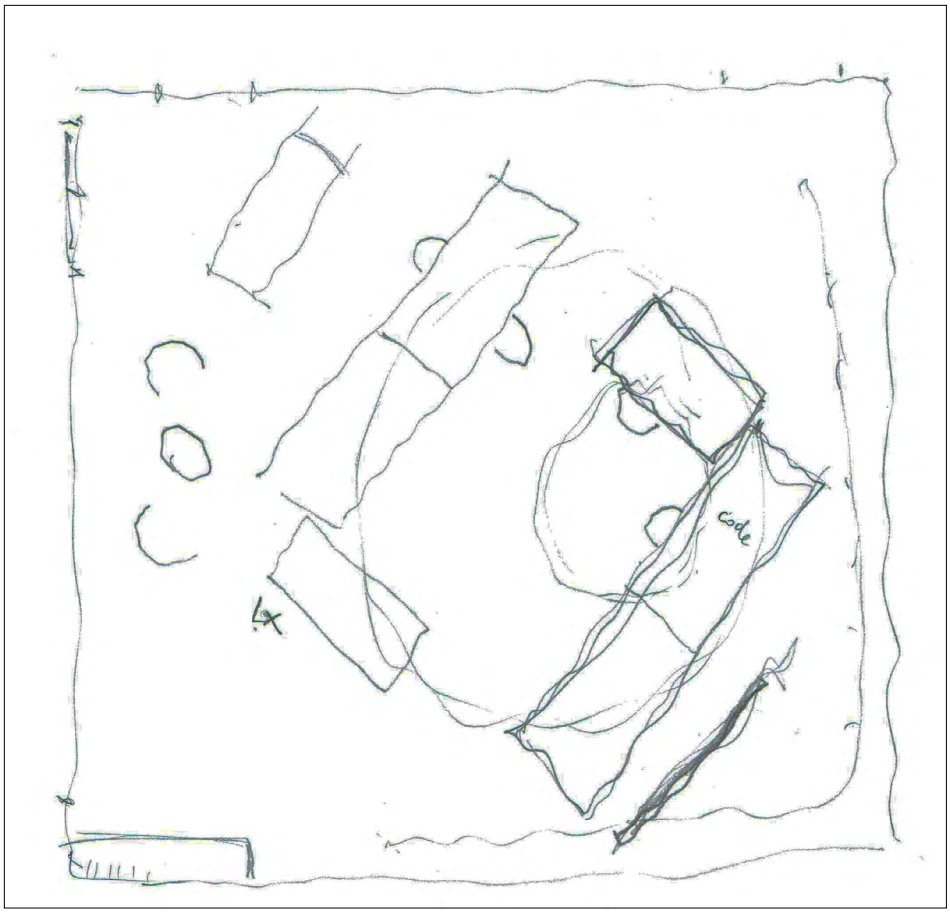


FIGURE 4. The library studio, and its optimal configuration, was a dominant memory in the recollection of the design team.

Low Scope Patterns

The move to a new location, due to the extended timeline mentioned earlier, also impacted the instructional design process because how the learners worked together changed. The curriculum changed from one of instruction to one of support for team learning and individual learning—the assembly of work created both in-class and out-of-class dynamics, allowing for learning to occur in groups and individually. The design team referred to these assemblies of chunked assets of work from various configurations as *low-scope patterns*, which is a second language acquisition term describing the process of learning language at certain stages where progressively larger collections of linguistic knowledge are assembled to accomplish larger and larger expressions of meaning (Ellis, 2003). The team recalled the new space in the library as a positively neutral space where the physical space reflected this learning process. Students often brought in work they had done on the game outside of class, often at home and at night, and sometimes after hours in the new studio itself. These were the low scope patterns that were assembled during class time. Both Sébastien and Cary saw finding the space to work as a pivotal moment in the development of the project to support these separate work experiences into an assembled whole. Sébastien expressed that *"once the space was there, and the optimal configuration was found… it really had a catalyst effect on moving the project forward because the students found themselves drawn to the project itself."* Workstations developed, and teams moved into different areas of the space to accomplish certain tasks, such as building code, learning grammatical concepts in French, or conduct independent development of visual assets to be used in the assembly of the game (see Figure 4 for the visual description of the space in its developed configuration). The change in working behavior impacted a change in the process of the instructional design because the designers were creating instruction to fit the new work patterns. During this time (summer of 2015) in the library studio, learners started discovering that they could make the code create the language learning interactions they wanted, and developed their game through the progressive assemblies of these *low scope patterns* (Ellis, 2003) where smaller interactions became larger game components. This is when the team saw code and language as meaning-making systems of signs, and the code, like language, was seen as reusable, re-mixable, and portable from context to context.

A Neutral Space Design Studio

The project was moved into a dedicated room in the university library for the summer session, and the team referred to this space as the *design studio*. The designers saw the library space as "neutral" because it was neither in the foreign language building nor in the art building. Perhaps because of the space being centrally located, the neutrality seemed to encourage a momentum in the work. The designers reflected on the space as somehow being off the home turf of any of the learners, and somehow lending to a lowering of identity barriers that otherwise might have created obstacles in making strides towards completion of the project.

REFLECTION NOTE #3: At the moment in the interview when designers were asked to map the components of the design, they mapped out the physical studio space in the library itself. Both Sébastien and Cary interpreted Craig's request for a map of the design, as a map of the studio, but each interacted with the drawing differently. Cary drew shapes representing furniture and other items in the space, while Sébastien drew the circles representing the movement patterns the learners enacted in the space. Neither representation was similar to what Craig envisioned as a map of the design, which is presented in figure 5. This dynamic suggested to us that there is a significant challenge associated with posing an abstract question such as mapping the components of an instructional design during a talk of real artifacts. Introducing the concept during a discussion of physical space may have prohibited the designers to envision the design as separate from the space itself. It was telling just how pivotal the library studio space was as they talked about it.

The designers also credited this space with important changes in the process. Memories of the studio space were vivid in the design team's minds based on their recollection of details pertaining to it, such as logistics like key control, the process of acquiring the space during the spring of 2015, and their memory of the layout of the space itself. Other logistical issues that made the project possible came about during the summer studio. Copyright issues needed to be addressed because of logistical problems with permission related to existing fonts or texts. The team also decided to create all the visual assets themselves on various workstations. The group, both teachers and learners, collaboratively decided to use lab fees to purchase fonts, and follow Unreal Engine's use permissions carefully. The design team credited these changes in process to be facilitated by being in the studio space; Sébastien noted, *"the space took shape because of what was happening in it."* (see Figure 4 to view how the studio space grew into workstations to support the cross-functional teams.

There was a point at which Cary and Sébastien hoped to retain the Library space for subsequent semesters, but that did not come to fruition because the space was repurposed, even though the project still continues to the time of writing this article. The team felt that the fact that the project was able to continue after the studio space was lost was directly due to what went on during the summer in the library space when the team gathered momentum and was able to achieve its first significant milestones (e.g., understanding the code, building the first mini-games, designing workflow as cross-functional teams). Cary recalled that explaining the project to others verbally was less effective in conveying how the project manifests learning than simply showing them the space in action. The combination of graduate and undergraduate students engaged in the game design made it clear and evident that learning was happening in the studio space. The summer studio provided a shared space, which allowed the project to create its own culture. Cary also noted that had they used a classroom in the design school, she felt that the dynamic would have been different. During the interview, the design team referred back to a similar process decision that was made in the documentary they watched about Studio H. Cary remarked about the value of the space in relation to the design experience: *"Everybody recognized from the get go that this was something that none of us could do by ourselves, that we were all in this together."* She looked at this design participant interdependence as an important dynamic within the design process and somehow linked to the use of the studio. It is noticeable that neither remarked whether or not this was a planned component of the design, or a rather serendipitous outcome. While the studio space was only one element of the project, it was pivotal.

THE INSTRUCTIONAL DESIGN

The components of the instructional design were not all present at any given time because some emerged organically and others were planned. These included both tangible and intangible components of the instructional design, which interacted with each other and are graphically represented in Figure 5. Particularly notable is that the game itself is only one component of the instructional design. Like any instructional design, some components express precedent in design, and others do not. We focus our following discussion on only those we deemed expressing precedent in design. Figure 5 represents the interviewer's perspective as a holistic image of the design that emerged through the process of the interview.

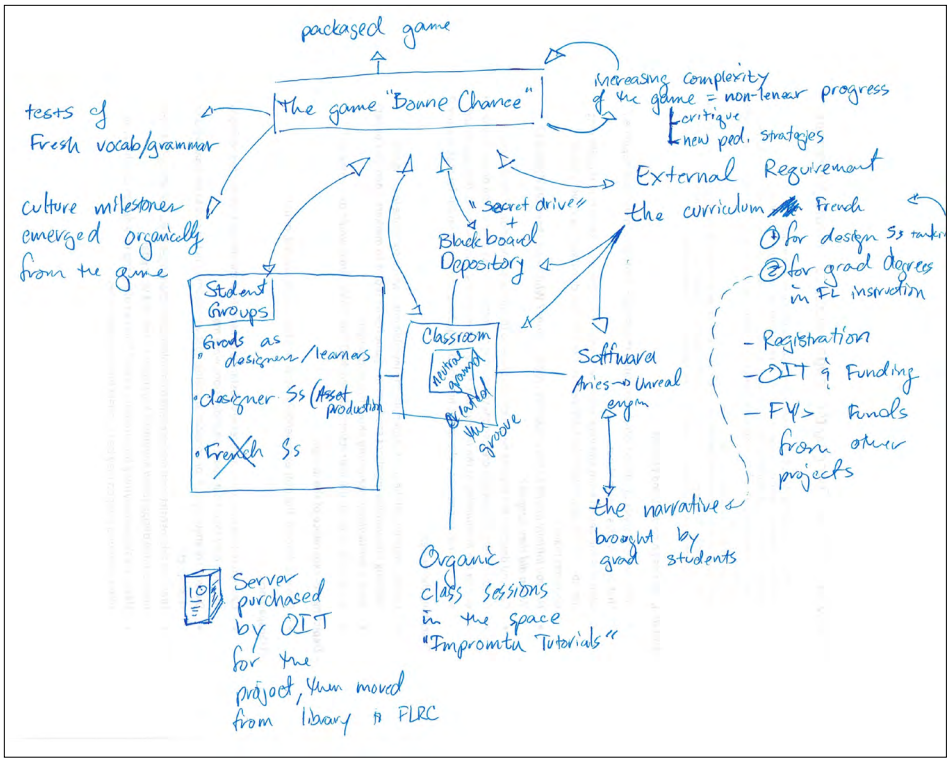


FIGURE 5. The instructional design as seen from the perspective of the interviewer.

REFLECTION NOTE #4: The diagram in figure 5 helped the interviewer in understanding the design. For example, "French Ss" is crossed out as Craig learned through the process of making the diagram that there were no French-major undergraduates involved in the project. However, the diagram does not express how designers themselves viewed the design. The designers viewed the design in terms of the narrative in which it came into being. For example, in analyzing the discussion and the diagram of the design after the fact, it is difficult to distinguish whether cross-functional teams were a component of the design itself, or an aspect of the process of design creation—it impacted both areas. In the diagram in figure 5, cross-functional teams is represented under "people." Direct questions asking for components of the design failed to elicit aspects of the design as separate entities. The team saw a narrative that did not distinguish between parts, or rather, where all the parts were mutually constitutive of the narrative. That is to say, each part of the narrative was instrumental in "co-writing" all the others. parts of the narrative.

Digital Assets as Evidence of French Language and Cultural Learning

Documents of French language learning emerged out of the design process. As part of the game design, undergraduate learners created tests of French language ability. French language content that they were developing in the game needed to be internalized to be used. In this way, vocabulary items and grammar structures (e.g., French nouns and verbs in various conjugations) became testable items in the game while learners tested themselves on game components, and checked and rechecked content with materials provided by the graduate students and French language learning resources. During the interview, Lisa brought up the issue of "evidencing required learning outcomes." These self-tests created in the process of design, performed this function of evidencing learning of French language. The element of precedent most prominent in this component of the design was that learners developed these tests themselves, and from the learner perspective, these tests were simply enactments of usability testing of game components as part of the design process. However, from the perspective of pedagogy, these self-created tests were necessary milestones learners normally create in typical French language study. These digital assets of the design were a record of learning created and shared among the students themselves. The undergraduate game design team members moved between being an *author* of the game and being a *user* learning from the game, and in doing so, evidenced their French learning.

The creation of digital assets combined with the research associated with that creation also comprised cultural learning. Sébastien recalled a learner question, *"What's the color palette of the Renaissance?"* – a valid but completely unforeseen example of cultural learning embedded in the context of game design. History, the fashion of the time, and an array of other cultural knowledge items became necessary knowledge items learners sought out in the process of creating visual components for the game interface that had – and represented – a legitimate, authentic connection to the French cultural context.

Impromptu Tutorials and Content Placement

French language instruction embedded within the design process is a design precedent worth sharing. Embedding language instruction took place in two forms: (a) by physically placing content in locations where it was likely to be

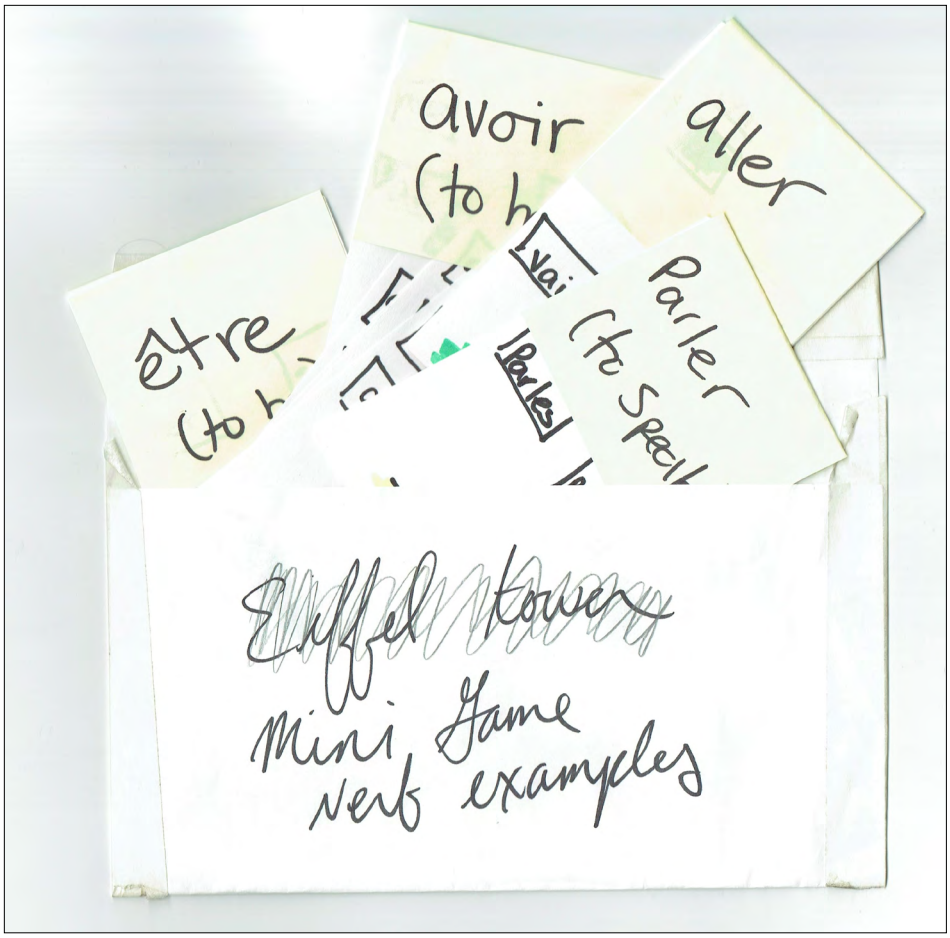


FIGURE 6. Verb conjugation cards developed for the student game designers to use in mini tutorials accessed at important points in the game development. Notice the envelope has been re-used from a previous learning purpose

needed, and (b) through impromptu language instruction. The need to complete digital assets necessitated informal tutorials at moments in the design process where its relevance was obvious and crucial. The graduate students had developed cards for learners to use as game content. Cards were placed in envelopes near workstations where digital assets of that type were to be generated (see Figure 6). These envelopes were re-used at different stages of the game development as they were both part of the paper-prototyping phase and the language tutorials; evidence of this can be seen in the crossed out envelope label. The undergraduate design students did not initially realize that the cards were important content until they needed to collect that knowledge for a game component. Sometimes the cards themselves were not enough, and tutorials happened organically. The just-in-time tutorials on the French language led by the graduate students are also intricately linked to the inclusion of cross-functional teams, making the different components of the design process and the design itself difficult to untangle.

University Credit

The assembly of cross-functional teams required dealing with a university course credit system that was not created to support this kind of pedagogical configuration. Flexible course numbers were utilized to allow learners from different disciplines to register for blocks of time where they would be in the same space at the same time as learners registered for other courses. Both Sébastien and Cary believed that the economies of being a student played a big role in motivating learners, so the prospect of getting a portfolio item out of the experience was a significant motivator for students' registrations and could not be sacrificed. Supporting the economies of being a student was made possible by offering credit for the task in different programs of study.

Students in different roles in the project needed different learning outcomes. These were negotiated early on. For example, Graduate students who led the French language instruction aspects of the project used the development of the game as data for subsequent papers and theses regarding language learning strategies using game design.

FAILURES: *AS IF WE HAD IT PERFECT THE FIRST TIME AROUND*

Recognizing failures is the most difficult part of writing design cases (Howard, 2011). In this design case, both designers were also practicing teachers. Practicing teachers are often so close to an instructional design that they may find it difficult to step out of the design to see other stakeholders' perspectives, and analyze failures that emerge from how a design may be used in ways other than how it was intended (Howard, 2013). It is important to note here that failures of a design are not failures on the part of the designers. Often, failures are only visible retrospectively and in this way, were likely unavoidable in the process of design.

This phenomenon of unforeseen obstacles creating design failures follows a theme seen before in IJDL. In creating a game-based learning intervention, Mulcahy (2011) discovered that the game could be learned in such a way as to

avoid learning the content that the game was intended to teach, and those who actually learned the concepts would perform well, but not as well as those who focused on studying the game itself. Mulcahy (2011) could see this outcome only retrospectively. To capture design failures within this case, the interview questions were phrased purposefully to avoid notions of blame, and to encourage reflection.

REFLECTION NOTE #5: Craig tried to avoid using the term failures in the interview questions because it is often misunderstood. Rather, unforeseen obstacles can be the crux of a subsequent failure and the more fruitful subject of discussion. Craig tried to leave plenty of time for a retrospective look at aspects of the design that did not go as planned or that could not have been foreseen. Questions geared towards transparency in the protocol emphasized these terms: unforeseen obstacles and retrospect in the process of design. This may have influenced the retrospective comments the designers made. That discussion started at about the 60-minute mark, or two-thirds of the time through the interview. Framed in this way, the designers did not find it difficult to discuss the tensions they encountered in the process of creating the intervention. Early in this section of the discussion, a member of the design team asked, "Are you asking if we had it perfect the first time around?" which lightened the atmosphere for all.

Recognizing the Importance of Prototyping

When asked to recall design failures, Cary recalled a pivotal piece of precedent she drew on: *"Eric Zimmerman puts forward the idea when you're designing a game, you have to have a working model in the first 20% of the time you have to develop the game. That's been the most difficult part of working with undergraduate students."* The requirement of being in a course where learning experiences were on a schedule was not the only obstacle designers struggled with. Meeting the requirement of having that working model quickly weighed on the design decisions, and had to be let go at a certain point. When the group chose to move to a different software application, it dramatically extended the timeline for project completion. Choosing to let go of ARIS, changed the goal of the project from simply completing the game to a larger learning goal of designing a sustainable system. The new software allowed for the design of a more complex game that ultimately will be better suited to meet the goals of the original or intended design. Creating an environment to support learners who were not initially enthused about learning French took precedence over the completion of the finished mobile game. This decision resulted in a broader set of goals—an application "farm" of possible games rather than just one game.

A Tension of Purpose Among Stakeholders

Competing goals of purpose created a fair bit of complexity in creating the learning experience. The designers recognized a tension where the learners' goal of avoiding French and expediting degree completion worked against the opportunity to be involved in the creation of something of this magnitude and complexity. The magnitude of the project and all its logistical complexity required time learners did not necessarily want to spend. This desire to expedite degree completion also worked against the instructors' goals focused primarily on learning. Additionally, the designers also had a secondary goal of exploring the possibility of this project-based curriculum choice as advantageous over less motivating curricular choices in terms of learner engagement. In many ways, from the French learning perspective, these design choices built off language learning curricular failures that did not foreground the learner experience over other, usually instructor-centered, interests. However, the magnitude of the project worked both ways: it was an attractive feature while being an obstacle at the same time. In retrospect, the tension was inescapable, and in that sense, there was a design failure in that the design could not resolve the tension.

A Loss of Space Precipitated a Loss of Interaction

An unforeseen obstacle was the loss of synergy after the library-housed studio was lost. The sensation of "hitting the skids" came about when administrative requirements kicked back in after the summer of 2015. While some students were involved because of a requirement, others were investing time out of interest. Diffused boundaries may have played a role in this lack of learner motivation. Prior to the start of the semester, work emerged organically and was often learner lead, as described earlier in the "Low-scope patterns" section. At the onset of the semester, students desired a detailed schedule that could not be fabricated in the context of a yet-to-be-designed game. This failure stemmed from not knowing the loss of the library space would become a problem until the constraints in the design space forced the designers to realize that the loss had resulted in a lull in interaction.

The transition to a new space coincided with the start of the fall semester and new registrants, which in turn slowed the progress for learners. Students coming in at different phases in the creation of the game complicated the development process and the instruction. Different learners entered the project in the fall thus increased the instructional complexity, and hindered the project's progress toward completion. In addition to new undergraduate student members, learners who were important to the process could no longer be involved because of new timetables and schedules. While not totally unexpected, an unforeseen obstacle was that a small group of people putting a large amount of effort was needed to move a project of this size forward, and these

changes in student registrants required significant reworking of the curricula.

A Success in Development can Demotivate Learners

Once certain design milestones were attained, subsequent steps were not obvious. The designers also recognized that vague plans of action could be intimidating for learners. Since not all learning goals and outcomes could be planned and set forward for learners, the designers recognized that learners became hesitant to participate. Complexities in relating the design process to learning emerged at these later stages. For example, software learning was tied to game development, which necessitated realigning how learners were meeting program requirements. Furthermore, these French language learning and design learning goals had to be integrated into the various calendars of the academic learner's life.

The designers also noted that attaining milestones in game development might have caused learners to have difficulty reapplying themselves. When the first game was completed, the teacher-designers realized there were moments where they needed to step in with new tactics. For example, short presentations on design work and motivational talks were needed to re-start the design process.

CONCLUSION

This is a still-in-progress project, and with progress come new challenges. The design team is presently considering new avenues of development such as how the design might allow for crediting all learner contributions across multi-functional teams. The robustness of the project is another concern. There are talks of expanding participation to learners earlier in their programs and even to high schoolers as a means to foster community connections and support longer periods of development. Subsequent iterations will likely incorporate these complex issues of sustainability of the project in new design features. It remains to be seen to what extent new iterations mirror the last one, and if new iterations are developments of this design or entirely new designs.

Through this discussion of this case and future developments, it became clear to us that the beginnings and ends of a design project are an expression of perspective as much as they are objective statements about events. Sébastien looked to context early on as the beginnings of the design: *"There is nothing in the local ecology that would steer learners into learning a foreign language, despite its utility in the larger perspective of life and learning in general."* For him, the design began with context, and with conversations with his graduate learners. However, for Cary, the design began with the opportunity and key decisions in turning the idea into a reality. In this sense, it is possible that one of the important reasons for which the project was able to garner the success that it did, from a design and game development standpoints, as well as in enabling the design of a radically new learning experience owes to the makeup of this inaugural team. Indeed, the teams assembled in the first iteration of development were comprised of college seniors and mature juniors who already held a great deal of knowledge and experience in various disciplinary areas needed for the project development. These students were also responsible and reliable. Cary and Sébastien were thus able to capitalize on this expertise and desire to see the project through to catalyze and amplify the design process. From our dual perspectives from both inside and outside the design of the App Farm, we see the beginnings and ends of phases as less significant than the precedent embodied by a sustainable system for creating a motivating learning experiences for learners of French.

Lastly, we recognize that this design case hits on familiar themes albeit from a new angle. Giving learners agency through empowering them with the coding of a game dates back to seminal works by Papert (1980), and more recently with constructionist perspectives in mathematics education (Kafai, 1995, 2006). However, unlike those studies, this design case approached the intervention from a primarily utilitarian perspective, and was intended to speak to designers of instruction, rather than to a science of instructional design.

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APPENDIX A

Blank Interview Protocol

Interview Protocol: Engaging the design process as a means for learning

- *Tell them we're recording AFTER the recorder starts, so you get their agreement on tape*
- *Explain that a member check will go out to them prior to the article's submission for publication.*
- *Mention we have targeted 90 minutes and that the markers and paper are there for exploring, please use them when needed. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.*
- *Thank you for your participation in this process.*
- *This meeting is about the instructional design, not necessarily about the game which is the result of that instructional design, although talking about the game itself may lead to important insights about how you envisioned the learning and the design decisions you made in creating learning opportunities for your students.*

Situating the design context and process:

- What were changes in context which motivated the design? Something must have happened that brought this design about.
- Who was the design team and what were their influences? Can we assume that the different members of the design team had different goals? Was that discussed? How were those decisions made?
- *Did you initially intend to have students create a game? What were those key decisions? When did they happen?*
- Can you describe *the process* by which you came to the initial formulation of the design?
- As you reflect on how you created these learning opportunities, what were the pivotal moments *during the formulating of the instruction*, the ah-ha moments or innovations, that you would want to tell someone else, who might be considering doing something similar for their learners?

Describing the design:

- Can you map out all the parts, especially the invisible ones, which someone viewing this teaching intervention might not see from the game itself? [Point to markers / pencils / paper]
- What is *particularly interesting* about this instruction?
- If you were to name the instructional design, NOT THE GAME, what would that name be?

Depicting the experience of the design:

- Can you describe the user experience? / How was learning measured, or not?

Transparency:

- Can you tell me about any unforeseen obstacles or aspects of the design that needed revisions that you only found out about after decisions were made?
- Did you try anything out, or consider anything, that was deemed in the end to be a bad idea in retrospect?
- How has this instructional design created complexities or challenges in your teaching? Has the instructional design *failed* anyone? TA's, students, not met your goals?
- Have you skipped anything for simplicity's sake? This can often trip up a design case because often what was skipped may be rationale for design decisions.

APPENDIX B

Syllabus From Fall 2015

The University of Tennessee

212 / Beginning French	French Program
444 / Graphic Design Research	Graphic Design Program

Spring 2016 Syllabus

Fridays: 8:00AM – 1:00PM + Additional meetings TBD

Rooms: 322 a+a; 002A AMB

Instructors

- Cary Staples (Contact information removed)
- Sébastien Dubreil (Contact information removed)

Class Pre-Requisites:

Admission to this class is by invitation only. You have been selected to be a part of this team.

Class Co-Requisites:

Students enrolled in this section of French 212 will work on developing an app to assist classmates in practicing and reinforcing the French language lessons being presented in the traditional classroom. Students will also be participants in periodic language assessment and evaluation to document the quality and quantity of language acquisition and production as the result of building the app. This is a two semester sequence of classes, Fall and Spring.

Course Objectives

- To break down the language learning process into: vocabulary + grammar, vocabulary + cultural context and, finally, language generation.
- To generate multiple concepts and successfully evaluate and edit those concepts
- To orally communicate ideas clearly
- To learn to work as part of an interdisciplinary team
- To broaden and document your process for exploration and self motivation
- To understand and apply the visual, linguistic and mechanical (code) principles to execute concept
- To learn French

This course supports the following BFA in Graphic Design Learner Outcomes in preparation for advanced study in Design:

- *Students will be able to analyze, criticize, execute, and communicate design concepts in verbal, visual, and written forms across various media.*
- *Students will explore, discover, and refine their personal creative process and be able to summarize the manner in which this process supports a thoughtful design practice.*

Introduction

211/212 French represents a unique effort on the part of your instructors to craft an interdisciplinary, undergraduate research experience. This class would not exist without the combined efforts of everyone involved. The primary researchers for this project are graduate students in the French Department. Several graphic design and studio art students spent the summer to create our proof of concept or MVP, minimum viable product. This year we will build upon these efforts.

This project also represents considerable support from the Office of Undergraduate Research, Hodges Library, the Studio in the Library and OIT, the Office of Information Technology as well as the School of Art, the College of Arts + Sciences and the UT Foundation. People will stop by, you will need to interact with them, you will be an ambassador for this project.

211/212 is a rigorous class in which all students are expected to adhere to the standards outlined in this syllabus. This semester will introduce new ideas, new concepts, and new ways of thinking. You are encouraged to embrace all that you encounter, pushing yourself farther than you think you can go. Your ideas and opinions will be the core of class critiques and discussions. Your instructors will provide resources, tools and guidance to advance your knowledge and critical thinking skills, but it is up to you to come to each class prepared, with an open mind, and with the willingness, motivation and desire to move this project forward. You will be asked to make numerous choices. You will need to generate the materials to support your point of view. These choices will represent the materials discussed at 8:00 on Friday.

It is important that we can interact during the semester. Working in a studio environment may be new to some of you, however access, in person, to the development process is vital. In addition to the scheduled meeting times, you must post and be available during additional hours in the studio. Times may vary based of project needs and information handoffs. If you cannot make this commitment to access, they you should not participate in this project.

To ensure the ongoing viability of this project, all participants agree to the following:

This class will operate as a "studio" with meetings at 8:00-1:00 on Friday. Promptly.

All students will schedule a weekly meeting with one of the instructors. Failure to attend a scheduled meeting will result in a lowering of the final grade in the course.

Work will be documented at the end of each week in three ways:

- on the Google drive (after being approved by the instructors),
- and on personal clipboard + on Game clipboard,
- and printed documentation, with breadcrumbs, must be posted on both clipboards, and
- failure to post work when promised or absence from the studio will result in each offense, lowering final grade by ½ a letter grade.

We are a team and we will need to rely upon each other.

Working fast + working slow

Schedules will be posted each week outlining what work will be available when. Every student will bring in work to discuss each week with instructors. All work must be printed out for weekly meetings.

Fridays at 8:00 will be an "All hands on deck" Agile Scrum : 9:00 – 1:00 will be studio time.

This is a 3 hour class. According to NASAD this means that this course will require 45 clock hours for each academic credit. So, for 3 credits you must demonstrate 135 hours-worth of work by the end of the semester. This work will be documented in the following ways:

1. Each student will be present, in the classroom or in the studio during the entire class time. (7 hours/week x 14 weeks = 98 hours) You are required to be here the entire time. 15 min coffee break OK // 30 minute lunch NO // Leaving the building.
2. Each student will post their studio hours in their work space. These are hours when you will be working on your own in the studio, but will be available to collaborate with classmates and clients. (135 required hours - 98 class hours = 37 hours) (37 hours / 14 weeks = 2.6 additional hours /week) Hours are important as the goal is to not figure out how quickly you can complete a task, but how many times you can complete a task. This project is iterative. Each time you "re-do" a piece, you will make it better.
3. Progress from each work session will be printed out and posted on our critique board.
4. At the end of each work session breadcrumbs to work entries will be posted on Clipboards. Print outs will be posted in the studio.

About the design studio culture

From Iowa State University: College of Design

The study of design is not easy. It is a long and slow process with its own frustrations, but the journey is exciting and the rewards are many. Like other design studio courses, French 211 is an intensive project-based course that requires a lot of time and intellectual

commitment. This project is complex and could easily be the basis of several courses. We emphasize design through critical thinking, creative conceptualization, iterative processes, and articulate communication in the development of design projects. We will work simultaneously in mechanical, conceptual and visual rhelms, exploring a complex set of relationships that we hope you will find exciting for the rest of your lives. We require that you experiment, take risks, and be bold in taking charge of your education.

The design studio is a workplace, not a classroom. The studio is the central place of design education and you will spend the majority of your time here. Your instructor will not lecture or deliver information to you. The studio's operating premise is that of ongoing, self-generated work, supported by a dialogue between student and instructor, as well as between students.

This studio is the place where you should do your work. During studio you may move about freely, visit classmates, and take breaks without asking permission. However, one of the intentions of the three-hour studio is to develop concentration and stamina when you are working. The role of your instructor is, among other things, to help you learn to think for yourself. If you expect to find out what your instructor wants, or what constitutes the correct response, design education will disappoint and frustrate you. Ambiguity is inherent in all creative processes, and a diversity of approaches is expected and valued. It is assumed that you are mature, have self-discipline, and accept responsibility for your education.

Design is a critical endeavor. The more of your work you submit for criticism, the better the critique you will receive and the better your design will become. Good criticism is a skill acquired with practice. The critique session, either at your desk or in a public forum, is one of the most important aspects of your education. Differing opinions and constructive criticism will be consistently offered. You are expected to exert yourself in as a critic and you may find that the more active you are in this role, the better your own work will become. All critical processes must be documented in the studio.

Never take the critique of your work personally. Design work demonstrates your creative process and what you are learning. What you are learning will be become evident in the nature of your questions and answers, your ability to take and generate criticism, and the quality of your design work. You must work independently and produce new work each week. The amount of time and attention you will receive from your instructor will be in direct proportion to the amount and effort you put into it. No work, no feedback. Iterate and reiterate. These are perhaps the most crucial aspects of design.

Made three models? Make twenty more. Is it bad? Do it again. Is it good? Do it again.

Respect and common sense

Respect the work, your colleagues, the space and the equipment. Use your head, your instructor and your mentors. If you do not know how to do something, ask for help.

Annotated bibliography

All students are required to keep an annotated bibliography of readings and sources. (see Bb resources for template.) This resource will be invaluable when preparing work for submission. Annotated Bibliographies are dynamic documents that will be updated weekly on Bb.

What do you want to learn that is new?

Students are responsible for mastering the hardware and software required to complete the assignments on time. In this course faculty and students alike will serve as facilitators. Your ideas and opinions will be the core of class critiques and discussions. The instructor will provide resources, tools and guidance to advance your skills and creative thinking, but it is up to you to come to class with an open mind and the willingness, motivation and desire to learn.

Methods of achieving objectives are working studio to develop a viable app, presentations, spirited critiques + discussions that will direct the project development, both group and individual assignments + possibly tests.

Course Evaluation

Each student will be responsible for "proofreading" a specific component of the game. These reviews must be performed weekly and results posted in the studio. Students will have weekly assignments that are due each Wednesday at 8:00. Students are responsible for posting any agreed upon work on the Google Drive with breadcrumbs on Group Me. Presenting + submitting work on-time, turning in all required components, and impeccable detail to the craft and finish of the end product is expected.

Grading Criteria

Projects will be evaluated and graded based on the following grading scale in accordance with the university grading scale and further defined by the graphic design faculty:

- 5 pts: Superior. Excellent work. Work demonstrates solid understanding of the project and ability to apply this understanding to outstanding visual, conceptual and mechanical execution.
- 3.7-3.5 (A- /B+) 4pts: Very Good. High achievement, good understanding of the assignment. Piece requires additional refinement to be acceptable for the finished product. One missed deadline will result in a lower grade, two will necessitate transfer to the regular section.
- 3.0. – 2.7 (B/B-) 3pts: Good. Solid understanding of the project, goals are met, in theory. Good attempts have been made to explore visual execution, yet final visualization does not enhance concept. Piece needs more attention.
- 2.5 (C+) 2pts: Fair. Met all of the basic criteria for the project; Project shows some attempt at visual experimentation. However, exploration is incomplete or limited. Solution/s do not demonstrate a solid understanding of all of the project goals or individual experimentation.
- 2.0 (C) 1pt: Satisfactory. Average work, met most if not all of the basic criteria for the project; project needs much improvement. Project does not demonstrate an understanding of previous concepts.
- ----------| Grades below a "C" do not count toward the degree |----------
- 1.7 - 1.0 0.7 (C-/D/D-) 0pt: Unsatisfactory. Poor, unacceptable, did not meet project parameters or goals. Failure.

Final Grade

212 requires work both in class as well as out of class. Fridays between 8:00 – 1:00 are designated as in-class workdays, you are expected to bring printouts of your work to date, as well as any materials to work in class. Failure to do so may result in your being asked to leave the class. This is the time that everyone has designated to collaborate, not bringing work to share and review is unprofessional and rude.

Fridays will begin with an 8:00 Agile Scrum. Everyone presents what they have worked on during the week and identifies who they need to collaborate with during the Friday meeting. Only classes where the students have received prior approval (one week in advance) will justify missing a Friday meeting or leaving between 8:00 – 1:00.

One additional meeting with Cary or Sébastien each week is required. These meetings may be individual or small group (if a team is working together). Every student will schedule this meeting time during the first week of classes. Failure to attend an individual meeting or to arrive late for the Friday meeting will result in the lowering of your final grade by half a letter for each instance.

If you have a medical emergency, contact faculty when the situation is stable.

Work that is late due to technical difficulties either at your end or at an outside shop will not be accepted. It is your responsibility to estimate the proper amount of time to produce your project. It is suggested you plan to print after each work session so you can always document where you are in the process.

Mandatory and on-time attendance for each entire class period. Each class is considered a business appointment. Lack of punctuality and preparedness is unprofessional and rude to everyone, and will result in a lowering of your grade.

All cases of cheating or plagiarism will be dealt with in accordance with the University of Tennessee's policy. The University's policy is to turn these cases over to the Student Judicial Affairs. No exceptions.

Grading Rubric

Creativity is the act of bringing something into existence that is genuinely new, original, and of value either personally (of significance only to the individual or organization) or culturally (adds significantly to a domain of culture as recognized by experts) based on the Creativity Rubric. See: http://akron4.metiri.wikispaces.net/Creativity+Rubrics.

	4 | ADVANCED	3 | PROFICIENT	2 | BASIC	1 | NOVICE
FLUENCY Generating ideas through brainstorming	Brainstorms + explores numerous ways/ideas to solve problem/s. Views task from various points of view. Goes beyond the required elements.	Brainstorms + explores ways/ideas to solve problem/s. Views task from various points of view.	Brainstorms and explores ways/ideas to solve problem/s with guidance. Views task from own point of view.	Has one idea and follows it to completion. Does not include all requirements.
UNIQUENESS/ ORIGINALITY Original/unique ideas, phrases, or products	Innovative design, use of materials and ideas in an unexpected way. Originality of thought + action. Bring something new into existence. Goes beyond the required elements.	Materials and ideas often developed in unique ways, with a minimum of support.	Materials and ideas occasionally developed in unique ways, but only with guidance and encouragement.	Materials and ideas developed in everyday way.
FLEXIBILITY/ ADAPTABILITY	Able to see multiple ways of reacting to change and independently responds accordingly.	Often able to independently envision new responses to varying situations. When supported, is able is able to easily adapt responses to fit the situation.	While still fairly inflexible, the student can be guided to reconsider some positions and points of view.	Lacks flexibility, stubbornly maintaining positions and points of view in spite of new and changing conditions.
SELF REFLECTION	Product exhibits improvement based upon student's self-scrutiny and feedback from others.	Self reflection apparent, impacts product completion.	Some self reflection apparent, but has no impact on product.	No self reflection apparent.
INTRINSIC MOTIVATION The self-satisfaction of participating	Work demonstrates evidence of enjoyment, satisfaction, and challenge of the work itself.	Self motivated, depending upon interest in topic and accepts guidance.	Extrinsically motivated by task, but can be guided to develop interest in some topics.	Task is completed because it is required.

Class Structure & Class room expectations // studio requirements

Students are expected to come to class ready to work and participate. Each student will be assigned primary responsibility for several "units" and will be asked to report on the state of each of these assignments on the Monday meeting.

Proofreading

Storyboard

- Story Arc
- mini games
- UX

Asset development

- Code
- Development
- Production

Additional categories will be added as need arises.

We are using the materials that are produced to submit for grants, so it is important that all work is refined and accurate. All questions must be asked during class. Answers and clarifications will be announced in class and posted to Bb. Please do not wait until the end of class to come and ask a question, chances are there are other students in the class who would also benefit from your inquiry.

Suggested texts

Reference Books are available in the studio. You are encouraged to borrow books, however please leave a note stating which book you have, in case someone else needs it. In addition, please let us know if there are books we need to add to the library.

Email Address + Blackboard

Every student will be asked to maintain a UTK email address, Group Me with the group and check resources on the Google Drive created for this project. Oftentimes class announcements will be sent via email either by the individual instructor or through BlackBoard. Please check this email address regularly and ensure that your account does not exceed its limitations.

Blackboard will be actively used in the dissemination of information and archiving for this course. It is the responsibility of the student to check their utk e.mail as well as the Bb course site regularly for course materials, updates and clarifications. Any shifts in the syllabus will be clearly outlined in class and posted for reference in the Announcement section on BlackBoard.

Disabilities

Any student who feels s/he may need an accommodation based on the impact of a disability should contact faculty privately to discuss your specific needs. If you are a student with a disability, you will need to contact the University's Office of Disabilities at 865-974-6087 in Hoskins Library to declare your disability and to have your rights and responsibilities explained and to coordinate reasonable accommodations. Faculty must receive a letter from the Office of Disabilities attesting to your condition within the first week of class. While the faculty will work to accommodate your condition, please note that excessive absences have the potential to affect your ability to work at the level expected of the class and thus may affect your overall grade. Any absence that must be incurred due to an ODS related event must be conveyed to the faculty via e.mail PRIOR to the class starting. This e.mail must also be copied to the Office of Disability Services.

University Civility Statement

Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: http://civility.utk.edu/.

Your role in teaching and learning through course assessment

At UT, it is our collective responsibility to improve the state of teaching and learning. During the semester, you may be requested to assess aspects of this course either during class or at the completion of the class. You are encouraged to respond to these various forms of assessment as a means of continuing to improve the quality of the UT learning experience.

Attendance & Integrity Statement

The faculty of the Graphic Design Program and the French Department at The University of Tennessee support a rigorous attendance policy in all classes. Consistent and prompt attendance develops responsible professional behavior and insures that students have access to the full range of experiences and information necessary to complete class assignments and acquire the skills and knowledge emphasized in a university education.

Attendance at all 211 / 444 meetings is mandatory. Failure to attend class or post work during discussion or when it was promised, will be asked to drop the class or transfer to the traditional classroom section.

Academic Integrity

An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.

Student commitment

Having read the syllabus and the above statement, you are now aware of the importance of responsible attendance and class preparation as well as the conditions which constitute acceptable behavior. Please complete the information below and sign, acknowledging that you fully understand the policy within the first week of class.

- Student's Signature: _____
- name: _____
- e-mail: _____
- signature: _____
- course + date: _____