LAPU Learning Model: Know|Feel|Do Framework

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Abstract

Los Angeles Pacific University is a 100% online university with a mission to create a fully mobile classroom experience. Over the past ten years, we have continually researched, tested, and developed what it means to offer fully online courses. Creating a mobile-first experience required much more research and divergent thinking. Through interdepartmental collaboration, learner experience mapping, and application of the know/feel/do framework within the LAPU learning model, the eLearning led cross-functional team designed a mobile classroom that sets up our students for success, evokes emotions, and boosts retention. The eLearning team decided early in the process that we must design emotion into the course. This decision was largely based on Cavanagh's argument [3] that designing courses for emotional impact better captures students' attention, improves both short and long-term memory of the subject, and improves students' motivation and efficacy. This paper is a case study of how we approached the creation of mobile learning and specifically applied strategies to design in an emotional context to the courses.

1. Introduction

This case study began because of a question and challenge. The question asked by the President of Los Angeles Pacific University was about a single student and their ability to complete their degree. "If a student was stranded on a deserted island with only their phone and a good internet connection could they graduate from our university?" This question forced us to rethink our design approach and adopt a beginner's mindset. This case study focuses only on the learning design portion of the above-stated challenge question.

Ambrose et al. [1], in their book How Learning Works, defines learning as a process that leads to change, which occurs as a result of experience and increases the potential for performance and future learning. They also state that learning is the direct result of how students interpret and respond to their experiences. Brown, Roediger, and McDaniel [2] define learning as acquiring knowledge and skills and having them readily available from memory so you can make sense of future problems and opportunities. Cavanagh [3] argues that designing courses for emotional impact better captures students' attention, improves both short and long-term memory of the subject, and improves students' motivation and efficacy. Using the above definitions and the thoughts posited by Cavanagh [3], it is clear that as we look at mobile learning, we need to look at the student from a holistic perspective which includes but is not limited to viewing the student from the perspective of being both an analytical and emotional being. This is specifically relevant when designing learning for the mobile environment.

Mobile learning is different. Creating mobile learning that is inclusive and accessible requires a different design perspective. According to Talan [4], mobile learning is not bound by a location, and it is contextual by nature. We learn within the context of the environment from which we are learning. Crompton [5] formally defines mobile learning as "learning across multiple contexts, through social and content interactions, using personal electronic devices" (p. 4). When we couple this definition with the reality that over 95% of the world has cellular data coverage and cell phones are prevalent in most areas of the world, we can begin to see the need for creating mobile learning from a perspective of accessibility, inclusion, interactivity, and connection to the student.

This case study highlights the successes, failures, and processes used by the eLearning department at LAPU to respond to the question posed by the university president and create a meaningful and effective mobile learning experience. The goal of the eLearning department was to develop mobile learning that inspires, empowers, and equips students to succeed. To do this, the eLearning team had to first take a step back and determine the best approach to help foster students' success within an online environment.

2. Problem/Question

The critical question to be answered by the eLearning team was how do we create mobile learning that inspires, empowers, and equips students to succeed. This problem and question gain context when we look at our hypothetical student stranded on a deserted island. To facilitate this student's success, the eLearning team decided that design efforts needed to focus heavily on the learning experience and emotional connection outlined by Cavanagh [3].

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3. Moving to mobile learning

As previously stated, mobile learning is different, and we must think from a different perspective to leverage the untapped potential of mobile learning (mLearning). Herrington, Herrington and Mantei [6] stated, “Despite the significant potential of mobile technologies to be employed as powerful learning tools in higher education, their current use appears to be predominantly within a didactic, teacher-centered paradigm. We have found this to be true still today. The majority of online courses we reviewed were teacher-centered. We set out to change our paradigm and create a mobile learning environment that puts the student at the center to leverage the potential of mLearning. To change our learning paradigm, we chose to engage a cross-functional team to leverage the diverse thoughts on education and the student experience present within the university. The following sections of the paper describe our experience and show the process we went through to create student-centered mobile learning.

The overall process we took began with engaging the larger cross-functional team and working through the questions of student-centered mLearning and how we create a repeatable and rigorous model that leverages our students' experiences to help them thrive within the university. Working through this gave us opportunities to develop more inclusive courses because of the nature of mLearning. We also quickly realized that as we place the student in the center of the learning experience it is critical to design for feeling and emotion in the course purposefully. How does the learner feel when engaged in the learning process? Cavanaugh [3] states in her book The Spark of Learning: Energizing the College Classroom with the Science of Emotion, "if you as an educator want to capture your students' attention, harness their working memory, bolster their long-term retention, and enhance their motivation, you should consider the emotional impact of your teaching style and course design." To wrestle with these concepts and come up with the process we began by engaging the larger team from different departments throughout LAPU.

3.1. Defining the Process

We found that rethinking course design and the student experience permitted us to think with a beginner's mind and question how we do things from a fresh perspective and focus. The switch to mobile allowed us to freely question our current paradigms with relative safety. We defined effective mobile teaching and learning while not trying to either support or destroy the current state or set of beliefs held on learning and the student experience. The Author's note from the book Make It Stick: The Science of Successful Learning, Brown, Roediger, and McDaniel state, "we as teachers tend to make a lot of assumptions about how students learn - and, therefore, about what counts as effective teaching - on the basis of our own experiences, wisdom passed down by our mentors, and our sense for what's intuitive. Intuition, of course, can be a powerful byproduct of long-term engagement with a set of concepts or skills. But it also has its risks: not only is it hard to interrogate practices that "just feel right," it can be especially hard to let go of and revise those sorts of practices, even in the face of counterevidence."

Making a drastic change required a systematic and flexible approach. To define our strategy for mobile learning, the first thing we did was define a larger team composed of members from multiple departments within the university. The eLearning department led the team events. The first event started with the goal of defining the student experience. The team created a student journey map with touchpoints and emotions felt by the students at the touchpoint. The mapping process was limited to the student experience beginning with the student entering their course, moving through the course, and successfully completing it.

3.2. Engaging the team and defining the student experience

A cross-functional team of multiple departments within the university and current students who are university employees came together to define the mLearning experience. Because LAPU uses the coaching model, we utilized several coaches on the team. Coaches talk with and support students throughout the students' time at the university. Coaches speak directly to the students and listen to students both compliment and complain about their student experience. We also gathered input from students, and several of the team members were previous or are current LAPU students.

The more focused goal of the team was to define what the student experience should look and feel like. The team determined that a student experience map was needed to define the student's touchpoints and emotional connections at each touchpoint. We utilized mind mapping software and held multiple brainstorm-type sessions to define the student experience and precisely what emotions we could design into the different touchpoints to motivate and support our students in their learning. While conducting the student experience map exercise, the most helpful emotional connections for the students were a sense of self-efficacy, competence, support, and excitement.

How do we design a mLearning course that helps promote strong self-efficacy, competence, support, and excitement? The first step was to define the evidence-based theories that connect with those

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constructs. We quickly realized that many theories and approaches to designing in emotions and performance would help students feel capable and be successful in the university. We went back to our mind mapping software and described the different theories, models, and strategies that we could use. There is substantial recent research on student performance and how students learn.

We separated theories into primary categories within the mindmap we created. We determined that we needed to build courses that allowed the students a greater opportunity to feel a sense of belonging and perform at a high level. The primary theories we moved forward with were Andragogy by Malcolm Knowles, Mindset by Carol Dweck, Grit by Angela Duckworth, and multiple learning and neuroscience theories and strategies such as Anders Ericsson's deliberate practice.

4. Primary findings

4.1. Inclusion and accessibility

Inclusion and accessibility are two critical components to designing and delivering student-centered courses that effectively facilitate a thriving student in our university. If a student does not feel included or if they are not able to access the material their student experience is automatically negative. Clark [7], in his book The 4 Stages of Psychological Safety, defines the first step of psychological safety as inclusion safety. He also further defines inclusion safety as a basic human right. Using the perspective of psychological safety within the classroom we had to find evidence-based research to foster a sense of psychological safety for our students.

We utilized research presented by the Derek Bok Center at Harvard University. One major takeaway from the Bok Center was to create multiple ways students can demonstrate their mastery of the content. This is particularly important when developing mLearning. Giving students different options embraces their strengths and gives them unique opportunities to show their mastery of content in unique ways that utilize the newest tools to communicate their expertise.

4.2. LAPU learning model

What came from the first couple of meetings on mLearning is that we needed a concise way to hold and display the content for the students. Logical order and easy navigation are important in any online course. In the mLearning environment, it is even more critical because of the reduced screen size and expectations of the learners from previous mobile use. We needed to give the students a place to practice and even fail in a psychologically safe environment as well. We came up with the LAPU learning model. LAPU stands for learn, apply, practice, and utilize. This model requires interactive learning strategies to facilitate deeper learning. The goal is for the student to apply what they learn in the classroom to real-world situations in new and creative ways. Fostering creative problem solving along with critical thinking is the overall goal.

4.2.1. Learn. The student receives the general content in a way that utilizes active learning. How the student receives the content in the mLearning space is important. We decided as a team that the learning cannot simply be content spilled out from reading or watching a video. Often, we see online courses where a lecture video is used and is believed to be a great way to create online learning. A lecture, whether it is in person or a video, is still passive learning. Passive learning is less effective than active learning. Active learning strategies help facilitate learning and students' ability to apply what they learn in real situations creatively.

4.2.2. Apply. The student is shown and given guidance on how to apply the content. One example of this is an interactive quiz where the student gets feedback via video depending upon the answers they choose. The quizzes are not content recall types of questions. The questions have to reach the application level of learning.

4.2.3. Practice. This is where the student gets to practice applying what they are learning in a low or no-stakes environment. There are multiple strategies to allow students to practice in a low or no-stakes environment. Well worded discussion prompts possibly giving a scenario or walking through a scenario where the student is making decisions and seeing the results of the decisions are two simple ways to give the student opportunities to practice.

4.2.4. Utilize. The student is engaged to think of how they will apply the learning to situations they are currently facing. Because our students are typically non-traditional and are currently working or have work experience this allows students to internalize the importance of the content and practice applying it in ways to help with an immediate need.

4.3. Know|Feel|Do

Today our guiding light for course design is the Know/Feel/Do framework. This framework allows us to keep the student at the center of the design process and facilitate meaningful learning experiences. McDonagh, Denton and Chapman [10] state "Excellence in design is about more than the final product itself. It is about creating positive, rich and meaningful user experiences." We use the

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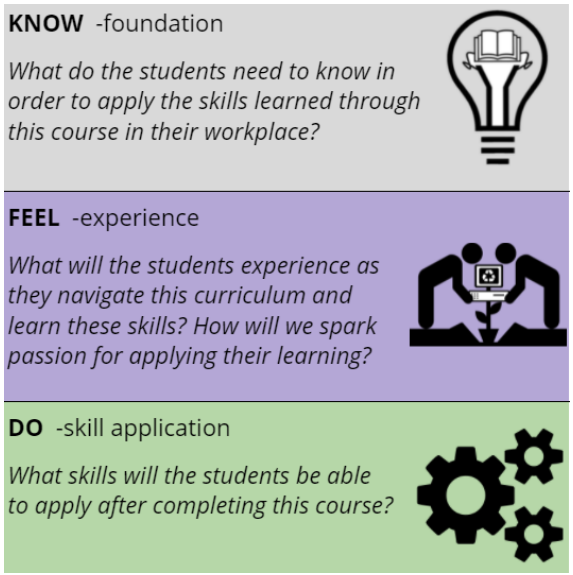
Know/Feel/Do framework to consistently design these types of experiences. Figure 1 shows how the framework is seen in our course design toolkit.



Figur 1. Know/Feel/Do

Instead of explaining the merits of using the Know, Feel, Do as a part of the course design process let us use an example to illustrate how the Know/Feel/Do framework is implemented. The examples given below are examples used in the meetings to create the mobile learning experience that we now call the "Next Gen" accessible and inclusive mobile learning experience.

4.3.1. Context. We apply Know, Feel, Do to our process within a specific context. What does the student need to know, how do we want them to feel and what feelings will facilitate their success, as well as what do they need to be able to do? This completely shifts the mindset from teaching about what we want to teach and focuses intently on the student and their needs. This is a powerful perspective because it gives us the clarity and permission to use strategies such as those outlined by the Derek Bok Center at Harvard University. One of the strategies we applied from the Derek Bok Center is to have more than one way to show mastery of a topic. When we ask the question what does the student need to do with the content and how can they show mastery of the content we are able to come up with multiple ways students can show mastery of the content. Defining how a student can show mastery as well as the development of the course is agreed upon by the course design team which includes the Assistant Dean, a subject matter expert, and faculty member overseeing the program development.

The Know and Do portion of the process are generally the most well-known to faculty and subject matter experts. We normally don not run into any issues here. We have found that the Feel part of the activity is where we come up with the ability to create highly engaging and effective content. By stopping and imagining how our students feel when they interact with our creations, we can make connections that we would have otherwise missed and better achieve our goal for our students to be able to take the content from the course and use it in meaningful and creative ways on the job and in life.

4.3.2. What does it look like to address the feel. Addressing the feeling aspect is simpler than it sounds. Our approach is to ask a question before designing anything. The question is, "if I *could* control how my user feels, how would I want them to feel?" From our student experience map, we know that emotions to help a student thrive within our university are feelings of being supported, capable, confident, relevant, and several more. The next question to ask is how. How do we design the feelings into this course? Here is an example of a bad example that we all can probably relate to. We used this example to help us grasp the power of emotion within the design process.

4.3.3. The bad example. In an initial meeting, a bad example of a learning experience was discussed with the team that was tasked with creating a learning environment to help the student on a deserted island succeed and complete their degree. We used the idea of a poorly made mandatory training course. Imagine a mandatory training course that you were required to complete for HR purposes. These typically consist of sterile slides with lots of text, maybe a cliche stock image, and a narrator just reading the words already on the screen. The "interactive" elements are next buttons and multiple-choice quizzes at the end of each module. These types of activities are completely focused on the legal requirements of delivering information and assessing that you can choose the correct answers on a quiz. And that quiz is usually one that you can retake as many times as you need to in order to get a passing grade. This means you can guess until you get that checkmark and never actually learn anything!

Compliance training is important. The content we are supposed to be learning is important. Then why is the delivery of content devoid of the elements that students need in order to learn? Why is it simply focused on the content rather than how the learner will experience and connect to the content? Something this important deserves to be designed from a user-centered perspective that takes into account the emotional connection between the content and learning.

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Let us take one step further back. Imagine you just got an email saying you have to complete your annual mandatory compliance training. How did you feel reading that email? We posed this question to our team, and the responses were generally negative feelings. The negative feelings expressed were not because of the content; the negative feelings were expressed because of the course experience.

The next steps of the process were to walk the team through being in the course and then completing the course. We painted vivid pictures of a narrator reading the slides which happen quite often in these types of training. Throughout the entire exercise, the team continually stated they have had a negative experience and even detailed some of the actual experiences they had. The emotions stated by the team when they reached the end of these types of courses were generally the same. The emotions ranged from frustrated because they felt their time was wasted all the way to joy for surviving the experience or for the experience simply being over.

The exercise ended with a question and an ensuing discussion. The question was, "Now, what if the designer of that training had consciously decided to focus on how you would feel before, during, and after you engaged in the learning?" "How would they have approached the training?" The discussion gave the team a larger perspective on how to design in the emotions.

4.3.4. The how. A new mind map was created to capture the multiple perspectives on specific theories and strategies to help design emotions into courses. The strategies were numerous. The following list is a sample of only a few of the strategies included in the mind map [9]. The mind map is available at [8].

- Predicting. Utilizing the LAPU mobile app to post predictions of how the topic for the coming week will apply.
- Create curiosity by using a short no-stakes response using the LAPU app to question what the topic for the coming week means to the student.
- Self-Explaining.
- Clearly explain the why.
- Clearly define what is in it for the student.

5. Solution

To systematize the process, we had to rewrite our course design process. We named the document for our course design the "Course Design Toolkit" to recognize that we will use multiple tools and strategies to build our courses, and not every tool or strategy fits the need of every course or student. The Course Design Toolkit contains multiple documents. The course vision document is the first document used in the design process. The document is completed using a highly collaborative process with a team that includes the Assistant Dean (AD), Instructional Designer (ID), Instructional Media Designer (IMD), Subject Matter Expert (SME), and Program Development Coordinator (PDC).

Microlearning is built directly into the document to facilitate the design process. The microlearning topics are on ways to design in inclusion and other key features necessary to design courses that help a student to thrive in the university environment [10]. The microlearning videos on creative assessment IS available at [9].

6. Implementation and outcome

The goal we set out to accomplish is to define a process that empowers and equips the student to succeed and thrive in and out of the university.

Using the LAPU Design Model connected to the Know, Feel, Do framework is what we came up with through discovery with the larger team. The initial data we are receiving is promising. We are currently gathering data to determine the effect of the new process and designing feeling into learning. The initial feedback and data are encouraging. We will be publishing and disseminating the results once we have gathered and interpreted enough data.

Anecdotally, we can sum up the typical data trend we see as feeling and learning cannot be separated, and designing courses should incorporate emotion into the process. We were able to get feedback from a student who dropped a particular course that had not yet been revised and then returned to take the course a second time after the revisions had been implemented. The feedback from that student highlighted the ease of navigation and how they felt more equipped to succeed.

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