Facilitating Financial Wellness

Higher Ed Roadmap to Financial Wellness

Design Document
University of Colorado Denver
Information Learning Technologies
INTE 5100

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Contents

The Office of Financial Aid at the University of Colorado Boulder is currently pursuing a plan to launch a financial wellness program. The information contained herein outlines a project to design the first learning module in their financial wellness program. University programs with a focus on financial wellness range from nonexistent to learning modules and requirements that span the tenure of a four-year term for an undergraduate pursuing bachelor's degree.

CU BOULDER's MISSION: To shape tomorrow's leaders, be the top University for innovation, and to positively impact humanity.

In support of the university's mission statement discussions around preparing graduates to contribute to society are taking place on campus. In the Office of Financial Aid the discussion has centered around financial wellness and the desire to create a program that will evolve into a multi-year program.

The university perspective includes concerns that graduates with student loans will struggle to find time and extra resources to pursue, and assist with, outside interests and projects that benefit society. Payments can cause financial stress and the need for extended work hours or a second job, and tap into available time particularly if the loans are for a significant amount. Lower, intentionally managed student acceptance of debt assists the university to reach their mission while providing students with the knowledge and tools to effectively manage their finances. The reduction in financial commitment, and potential increase in available time, opens to door for graduates to channel extra energy or funds into projects and programs they are passionate about.

The purpose of the project is to design an initial learning module as the first step to implementing a financial wellness program. The program will be open to all students on campus, however Federal regulations restrict an institution from requiring student action to obtain financial aid outside of their entrance counseling. The challenge remains in finding the best to incite students who take out loans to participate in the financial wellness program. The long-term goal is to implement a four-year program with a focus on instilling a habit of financial review and conscious decisions with regard to finances as students pursue their degree. The university would like to rollout step one in December 2018 in conjunction with communication of estimated aid packages for the Spring 2019 semester.

Step one is creating a learning module to ensure students understand the long-term impact of the loans they take out and to encourage them to make conscious decisions with regard to spending and how much to accept in loan aid. Students taking out loans for the first time would be encouraged to complete the learning module prior to confirming the amount they would like to borrow from loans offered. Completion of the learning module prior to accepting loans exposes students to the basic concepts of interest and its long term-effects prior to confirming the amount they wish to borrow.

Student Motivation, Knowledge, and Skill Gaps

Financial wellness begins with an understanding of the long-term effect that loans have on future finances. Generally students who pursue a degree are primarily focused on funding their Higher Ed career and often do not recognize the long-term financial impact of the loans they accept from one year to the next. Although they have likely learned about interest in a high school math class most do not have personal experience with a monthly payment, nor do they follow the changes in their student loan payment figure year over year. More often than not they see the loans as a means to support both the essential and non-essential expenses they incur while pursuing their education. *That ski pass they purchase each year with loan funds, well, their student loan payments after graduation will take care of that, it'll be worth it.*

Discussions with high school students and students already pursuing their degrees revealed not only a broad understanding of finances but also of motivation to understand finances. Students at this age are at varying stages of maturity. Some are focused on their anticipated new found freedom and four years from now is the distant future, others are already looking into the future and are concerned about how choices today will impact the future they are working to create.

Who are the learners?

A majority of students accepting their first student loan are Freshmen. Generally they are excited about leaving home as they take the next step toward adulthood while pursuing an education in the area of their choosing. The financial wellness program will be introduced at a time when many of the students are looking forward to taking flight and being free to make choices with regard to the direction their lives are taking. The learning timeline falls during a period when students have limited time and are already maximizing mental capacity as they are asked to focus on and digest a financial wellness course they will likely see as extra information and an unnecessary inconvenience. Their mindset is on getting acclimated to university and getting started in their classes. In light of this we must recognize that we are dealing with a potentially resistant audience. A more detailed overview of a potential learner is outlined in Appendix A where we get to know Chip, a high school graduate who will soon be facing the need to make financial aid decisions as finalizes his plans to begin university.

The expectation is that motivation to engage in the course will be low regardless of demographics, or previous knowledge of the subject matter. Recognition of these factors highlights the need for a course has the power to capture student attention, encourage retention, and be available at any time and in any place during this time when students are simultaneously focused on many other life changes as well.

Designing an effective solution for CU Boulder requires continued focus on the learner and recognition that we are designing a learning module for potentially resistant learners. This points to the need for use of a human-centered methodology to tap into the learners world, grasp their attention, and create an environment they can settle into and engage with to absorb the learning material. A blend of Human-Centered Design Thinking, the Successive Approximation Model (SAM), and using the CCAF Model as a framework for designing the e-learning module were used during the design process.

Professor David Kelly, with the Hasso-Plattner Institute of Design at Stanford (Kelly, D. 2007) introduced a Design Thinking Process Guide that begins with a focus on empathy. The use of this model serves our learners well both for this initial module, targeted at students adjusting to university, as well as for modules later in the project when students are graduating and facing student loan repayment. With an initial focus on empathy we began an in-depth look at the learner's world, seeing things from their perspective, asking questions, and looking for anomalies to gain a deeper understanding of their world.
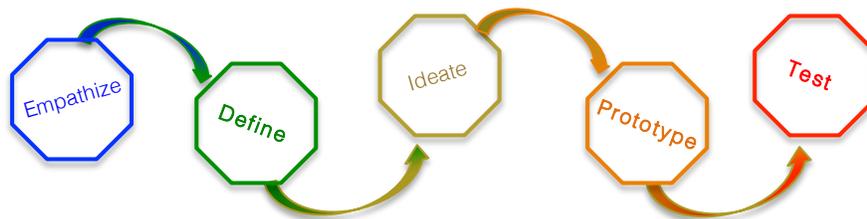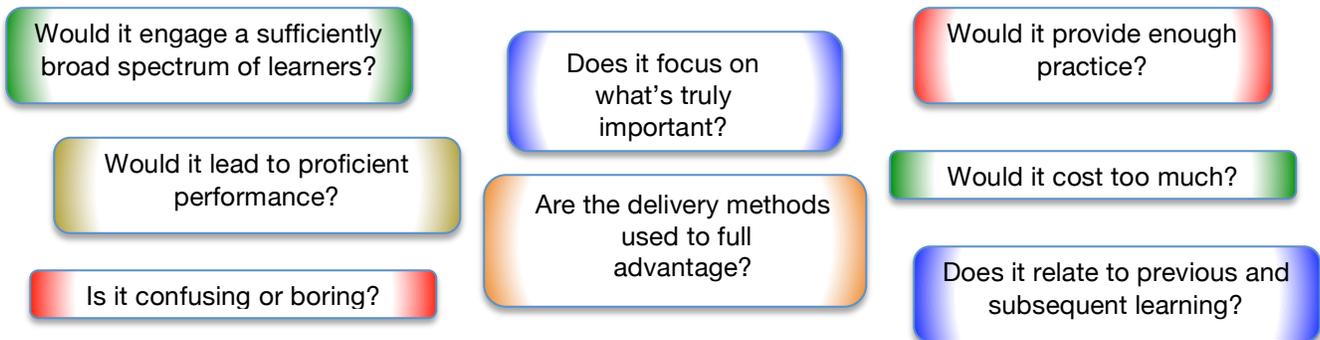

Recognition of the short timeline and the need to focus on learner experience, motivation, and engagement, led to selecting the Successive Approximation Model as a framework to chart our course through the instructional design development process. SAM is a natural fit for this project as it is a fluid model that facilitates shorter timelines yet retains a focus on learner experience, as well as encourages fluid movement between the elements through out the project. Having an understanding of the university's goals and the student perspective we were ready to begin laying out a plan for design.
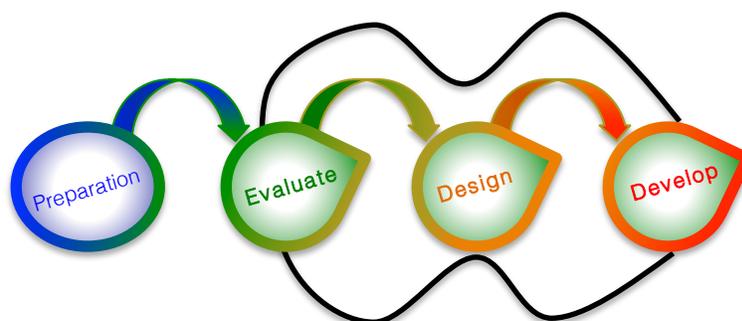
SAM begins with an information gathering/preparation phase, which is where we look to Design-Thinking-Empathy, SAM focuses on evaluation, or analysis of the information gleaned in the preparation phase. After the evaluation phase it moves quickly to the design phase wherein the instructional designer presents a solution to the client for review and discussion. The resulting conversation assists the designer to quickly tap into details that will affect the project thereby helping to clip timelines and facilitate progress.

The next step is development of a prototype to facilitate further discussion and refinement. The initial prototype is developed quickly with the intention that it will draw out issues, concerns, and suggestions during the evaluation stage. Michael Allen describes this as the *Iterative Design Phase* (Allen, M.W. 2016, p314).

The initial navigation through the model is repeated during the *Iterative Development Phase.* During this phase revisions are made based on presentation of the product, client review, and discussion. Discussions should include a review of initial assumptions and questions previously raised to ensure the product being developed will serve client and learner needs. This phase is where we expect to find a majority of concerns to rise to the surface. Movement through this phase, or into and through other phases, is anticipated during shortened timelines as progress is made to reach the final product. The *Iterative Development Phase* is repeated until deadlines are reached or the project is complete.

Would it engage a sufficiently broad spectrum of learners?	Does it focus on what's truly important?	Would it provide enough practice?
Would it lead to proficient performance?	Are the delivery methods used to full advantage?	Would it cost too much?
Is it confusing or boring?		Does it relate to previous and subsequent learning?

SAM provides the framework for understanding the learner and charting a course to a solid development plan, however one of the most important considerations is determining how to most effectively build the learning module to facilitate motivation and engagement.

Michael Allen's CCAF components point to elements within the learning module that drive "impactful, interactive, instructional experiences" (Allen, M.W. 2016, p101). Including use of the CCAF components assists with development of a product that facilitates a learning environment that will capture learner attention while increasing the opportunity for transfer of knowledge to long-term memory. The model focuses on ensuring Context, Challenge, Activity, and Feedback are incorporated into the design of the learning model. Allen notes that although all components should be considered the order is not static.

Our learning plan resulted with the following elements to incorporate into the e-learning module.

Component	Consider	Learning Impact
Context	Where will the activity normally occur?	Aid is reviewed and accepted online. Learning will take place online.
Challenge	What should they be able to do?	Students are able to evaluate loans, interest, and consider alternatives for funds to finance their education.
Activity	What is the final goal?	Students consider alternate funding choices and accept loans for only the amount they need to finance their education thereby lowering student debt.
Feedback	Initially provide results and explanation moving to results only as learning advances	Scenario based exploratory screens provide explanations based on learner choices. The learning game at the end of the module will provide results feedback only.

We have noted that engaging potentially resistant students highlights the need for a course with the power to capture student attention, ensure retention, and be available at their convenience. The selection of an online learning module nested in a Learning Management System (LMS) fulfills these requirements and introduces the use of an LMS to students who may not previously have worked within one. The use of an LMS also provides an opportunity to utilize audio, visual, and kinesthetic elements which enables us to tap into all learning styles. In addition it ensures accessibility through the creation of a learning module that can be accessed anytime from either a computer or a mobile phone. It also opens the door or students to return to the module at a later date if desired.

Components of the learning module must be attention grabbing, motivating, and facilitate retention. Based on these considerations we settled on the following structure for the learning module.

- Incorporating an introductory video
- Contextual narrated slides to introduce conceptual information
- Scenario based slides with options for learners to select a path, followed by a response with an explanation of the result of their choice
- A learning game to review and evaluate learning and retention

Once complete the learning module will be forwarded to the client as an FRP file which can be uploaded into the university's Learning Management System to facilitate distribution and tracking of the completion of the module.

As an avenue to facilitate learner retention and transfer to long-term memory we also propose the following:

- Follow-up by the Office of Financial Aid in the form an electronic post card or letter mailed to students including current loan balance, interest rate, & anticipated payment.
- A monthly email that includes a financial puzzle for students to solve to be eligible for an additional grant the following year. University support of financial wellness would serve to highlight the importance of the concepts learned and the university's focus on student financial wellness.

A more in-depth look at justification for the selection of each element of the learning module can be found in Appendix B.

A suggestion will also be made to include the learning module in the new student welcome and onboarding process that occurs each summer. Restrictions on required modules within the realm of academic learning are not governed by the Federal Government, therefore there may be potential for them to require the initial learning module prior to school start. If the financial wellness program grows, and they have dedicated support at some point in the future, student recognition of, and familiarity with the program could be supported by campus through the requirement of the module as a portion of the onboarding process. The financial wellness program could further encourage student engagement by presenting a coupon for redemption of swag when presented at the financial wellness program offices.

- Students are able to recognize the impact of loan interest and future payments on finances.
    - o Identification; Bloom's Knowledge
    - o Presented in via conceptual slides in learning module
    - o Practiced via recognition in scenario exercises

- Students will be able to calculate interest and anticipated payments due on a loan.
    - o Calculate; Bloom's Apply
    - o Presented via a contextual and example in slides in learning module
    - o Practiced via questions in learning game

- Students identify optional expenses and evaluate the financial impact to facilitate conscious spending decisions.
    - o Calculate; Bloom's Apply and Compare; Bloom's Analyze
    - o Presented via contextual and example slides in learning module
    - o Practiced via questions in learning game

- Students can determine the number of work hours needed to finance optional expenses.
    - o Determine; Bloom's Apply
    - o Presented via contextual and example slides in learning module
    - o Practiced via questions in learning game

The following evaluation plan focuses on ensuring the e-learning module is effective and serves both the student and client populations. We will be looking for students to have a solid understanding of the objectives, this will open the door for them to make choices to lower their loan aid thereby promoting financial wellness and freeing up time upon graduation which ties into the strategic goals of the university. The plan takes both a formative and a summative approach and is based on the New World Kirkpatrick Model wherein the three main points that define the need for an evaluation plan include: (Kirkpatrick, 2015)

- Improving the program
- Maximizing transfer of learning to behavior and subsequent organizational results
- Demonstrating the value of training to the organization

During both the formative and the summative evaluation periods we will maintain a focus on Results, Level 4 of the Kirkpatrick model. Data will be pulled from the LMS by the Financial Wellness team and placed within the Active Collab project management tool for review by both teams. Results will be discussed in detail during a weekly video conference call. During the formative period the focus will be on the reaction and learning levels of the model. During the summative period the focus will be on behavior and results. Additional calls or onsite visits will be scheduled as needed.

The Formative Evaluation Period

The formative evaluation period focuses on revisions and changes as the learning module is being built, during the review phases prior to rollout, and for the first few semesters the module is in place. Updates during this period of time will focus on obtaining data from financial aid staff, beta testers, and evaluating learner survey feedback and quiz results.

Kirkpatrick Level 1

A short survey will be placed at the end of the learning module to elicit learner reaction. We will be looking for information with regard to how they liked the course, whether they felt it was valuable, and whether they felt they walked away with the knowledge outlined in the objectives? When the learner sees time spent in the course as valuable and engaging it is an indication that the module will be more favorably accepted by future learners as well. Early detection of potential issues and updates to the module will help to ensure we are presenting the material in an engaging and effective manner, thereby increasing the opportunity for promoting the program.

By incorporating the survey in the module we ensure learners will complete the survey and data can be easily pulled from the LMS for analysis. This will also allow CU Boulder to be able to continue to monitor for potential updates in the future. The survey will give an impression of how the learning module is being received however to determine whether the module is effectively teaching the learning content we will look at the scenarios and quiz results.

Kirkpatrick Level 2

To evaluate for whether the module is effectively teaching the learning content, and the degree to which participants absorb and retain the knowledge presented, we will rely on data from the scenarios within each conceptual learning section, and the quiz at the end of the module.

The scenario screens present a situation with a number of choices. The learner clicks on the options to see the results of their choices.

For the quiz we have selected to incorporate multiple-choice questions in a game that moves players down the road of life as they work through problems that require them to put their new knowledge to use. Although a multiple-choice quiz is not as effective as a simulated problem requiring decision making, the constraints of an online module with no instructor involvement and a potentially large cohort of learners limits options for gaining an insight with regard to the effectiveness of the course. When working with evaluative questions Dirksen points out that considering recognition vs. recall is an important part of the process. (Dirksen, 2016). Therefore the earlier questions in the quiz will focus on knowledge gaps and recall of information relevant to the learning material. Questions later in the quiz will be written to ensure the learner is able to perform calculations and has the knowledge required to make a sound financial decision. Feedback will be provided with an explanation outlining what would happen if the learner opted to pursue the selected path. If they chose to play the game again this method will have presented them with knowledge that may lead them to select another option when they try the quiz again.

The Summative Evaluation Period

The most valuable data with regard to long-term retention and utilization of the learning concepts will come from watching student behavior over a period of time as they are faced with making real life choices using the material learned in the program. This will mean following a cohort of students for four to six years as they attend university and compete their degrees. Therefore we find that as we move into the summative evaluation period our timelines stretch. For timeline details please refer to the schedule that follows within this solution design document.

Kirkpatrick Level 3
The New Work Kirkpatrick Model suggests implementing required drivers to reward critical behaviors, to facilitate this we will monitor engagement with the monthly email puzzle sent out by the Department of Financial Aid. The email focuses on reinforcing knowledge and skills in an effort to drive learners to adopt new behaviors, it is also another step in encouraging immediate use of the knowledge to promote retention. Retention of the concepts presented will be important since it will be the end of the semester when they are reviewing their next semester's aid package before they are likely to think about the concepts again. In light of this it is only reasonable to recognize that the effect on long-term behavior can only be determined over time as the Office of Financial Aid pulls data to review loan amount offered vs. loan amount accepted each semester.

The data will be placed on Active Collab to facilitate review by both the Instructional Design Team and the Financial Wellness Team as well in preparation for the video conference where the teams will review the data and determine potential updates. The Office of Financial Aid will also be asked to keep a record of students who come in to ask questions related to the effects of interest or borrowing less than the loan amount offered. This can be accomplished by adding a code to the system that counselors can use to flag students who visit with this as their primary concern.

Kirkpatrick Level 4
Long-term behavior results will most effectively be measured once the first cohort has graduated and review of loan acceptance data for the history of their Higher Ed career is available. Our focus will be to determine if students have a more solid understanding of their financial wellness and if the amount borrowed has decreased. One major component of evaluating at this stage will be student feedback to determine the effectiveness of the program. Using a method suggested by Robert Brinkerhoff to gain additional insight we will highly suggest that some of the most successful and least successful students be invited to discuss their experiences in an interview just prior to graduation. (Brinkerhoff 2003)

Evaluation Schedule & Results Discussions
During the formative evaluation period review of the results of survey's and quiz scores is built into the weekly video conference referenced in the schedule timeline. The Instructional Design Team and the Financial Wellness Team will focus on updating the module before implementation. In the event an update with a larger scope is discovered a separate meeting and discussion should be scheduled either on campus or via a video conference. An update to the timeline will potentially be necessary and for major changes this may entail rollout of the revision during the following semester.

Evaluation and updates during the summative period will be scheduled to coincide with the university's census date each semester when students are no longer dropping and adding classes. This locks in schedules and aid packages, which ensures valid reliable data is used for evaluation. As outlined above data from the scenario's, quizzes, surveys, loan aid, and counselor feedback on traffic related to financial wellness, will be pulled and placed in Active Collab to allow all team members to prepare for the video conference. Review of the data and discussion of potential changes will be the primary focus during the video conference.. We anticipate an evaluation discussion each semester for three subsequent semesters in conjunction with the release of the first module. As additional learning modules are added to the program they will follow the same timeline.

Assumptions

- The Office of Financial Aid at CU Boulder has recognized the need to implement a financial wellness program for its students to encourage students to be aware of the implications of accepting student loans as part of their financial aid package.
- The long-term scope of this goal will be to create a multi-year program students are encouraged to complete.
- This project addresses the short-term scope of the creation of a learning module for students accepting loans for the first time.
- Students have access to a computer or mobile phone to receive emails from the Office of Financial Aid and complete learning modules.
- The university anticipates roll out of the module in conjunction with aid awarded in December for the Spring 2019 term. Time expectation for completion of the first module is mid-November.
- The Office of Financial Aid recognizes that timely submission of learning content for inclusion in the learning module is necessary to meet the goals on the proposed timeline.
- The Office of Financial Aid will determine the communication and rollout plans in conjunction with the launch of the financial wellness program.
- Instructional design, video production, and module development will be done pro bono for this first module to assist the university with implementation of the program.
- Review of the module as it is under production, testing, staff training, and incorporation of the module into the LMS will be the responsibility of the university.
- CU Boulder's Office of Financial Aid is responsible for creation of loan summary e-postcards or letters for students, the learning puzzles, and generating the monthly email to students to increase retention and promote transfer of concepts to long-term memory.

The following is an aggressive, however manageable and necessary, timeline based on the scope of the project. Meeting timeline goals should is achievable from an instructional design standpoint provided the client is able to forward information needed for the learning module and facilitate review and testing according to schedule outlined below.

DATE	DATE
July 16, 2018	On site introductory meeting with Instructional Design and the CU Boulder Financial Wellness team. Teams discuss the schedule and information needed to begin design work. The instructional design team rolls out the design plan and solicits initial feedback from the Financial Wellness Team.
July 18, 2018	CU Boulder emails Instructional Design Team to provide colors, fonts and other design parameters to ensure compatibility with CU standards. Instructional design team begins creation of the e-learning module.
July 27, 2018	Financial Wellness Team provides Instructional Design Team with loan amounts, interest rates, and scenarios to be used in the learning module. Instructional Design Team rolls out initial prototype of contextual learning content during Zoom meeting.
July 30 – August 03, 2018	Instructional design team works on finalizing contextual learning, slides, and begins work on scenarios in e-learning module.
August 3, 2018	Instructional Design Team presents first revision of contextual e-learning content and rolls out scenario based learning. Both portions of the module are reviewed for revision.
August 10, 2018	Second revision of e-learning contextual learning and first revision to scenarios are ready for review and discussion. Stories and content for introductory video are presented to the Instructional Design Team. Video actor(s) are selected.
August 17, 2018	Third revision of contextual learning and second revision to scenarios are reviewed and discussed. Future revisions follow this same weekly schedule as needed. Introductory video(s) is/are ready for review and discussion. Instructional Design Team presents options for games to be incorporated into the learning module.
August 24, 2018	CU Boulder Financial Wellness Team presents feedback on revised introductory video(s) and selects learning game(s).
August 27- September 13, 2018	CU Boulder fall semester start-up, no content review or meetings scheduled. Instructional design team completes work on video and learning game(s).
September 14, 2018	Revision to introductory video is presented, learning games are complete and ready for review.
September 21, 2018	The Financial Wellness Team provides feedback on completed e-learning module.
September 28, 2018	Revisions to completed e-learning module are complete and ready for review and discussion.

October 7, 2018	Finalized learning module is reviewed and forwarded to the Financial Wellness Team as an FTP file for upload into their Learning Management System. The Financial Wellness Team presents the learning module to the CU Boulder Office of Financial Aid Staff and proceeds with testing and preparation for rollout.
October 8 - October 12, 2018	Staff members are introduced to the module at a staff meeting. The module is loaded into the LMS for staff to walk-through and provide feedback. A group of five staff members are selected and scheduled to review the module while the Instructional Design Team screen shares to watch their progress.
October 12, 2018	Financial Wellness Team provides staff feedback to the Instructional Design Team. Survey and quiz results are reviewed as the first stage of formative evaluation including feedback from staff not associated with the project. The Financial Wellness Team is asked to finalize a team of 20 students to act as beta testers, best testers will schedule a 90 minute block of time with the Financial Wellness Team to facilitate the Instructional Design Team video sharing to monitor student progress as they navigate through the module.
October 15- October 19, 2018	Instructional Design Team updates learning module based on staff feedback and shadows select staff as they navigate through the learning module.
October 19, 2018	The updated module is reviewed in preparation for beta testing. The Financial Wellness Team communicates beta test information to the Instructional Design Team to allow them to shadow the beta testers using screen share technology as they navigate the learning module.
October 22 - October 26, 2018	Instructional Design Team shadows the beta testers based on schedule provided.
October 26, 2018	Results of shadowing and beta test survey and quiz results are reviewed. Final updates are determined.
November 5- November 9, 2018	Final e-learning module is ready for review and discussion prior forwarding FTP file to the CU Boulder Office of Financial Aid for upload into their LMS.
November 9, 2018	Financial Wellness Team and Instructional Design Team review the finalized learning module in preparation for rollout.
November 16, 2018	Completed e-learning module is presented to CU Boulder Financial Aid.
November 19 – December 14, 2018	CU Boulder Financial Aid finalizes preparations for rollout of the program in conjunction with release of estimated aid packages for the Spring 2019 semester.
February 8, 2018	Financial Wellness Team and Instructional Design Team meet to review loan acceptance data, as well as survey and quiz results from the first set of students completing the learning module.
February 11 - February 22, 2018	Learning module is updated and prepare for second release in conjunction with awarding of summer aid.
February 22, 2018	Financial Wellness Team and Instructional Design Team meet to review loan acceptance data, as well as survey and quiz results from the first set of students completing the learning module. Timelines for future review of the module and data are established with the anticipation this will take place just after census date each semester for the next five years. Discussions begin with regard to the second learning module.

Communication Plan

The instructional design team will house project information and progress in Active Collab, a project management tool. Members of the Instructional Design Team and the Financial Wellness Team will be provided with access to the project. Instructional design team members will notate progress and highlight design work in Active Collab to facilitate communication and forward progress based on the schedule referenced above. This will enable all instructional design team members and the members of the financial wellness team to follow progress and prepare for design review meetings.

The instructional design team will meet twice a week to review progress and discuss design issues.

We will establish the following communication methods and timelines with the CU Boulder Financial Wellness Team.

- Launch meeting is scheduled for July 16, 2018
- Beginning July 27, 2018 a weekly Zoom chat meeting will be scheduled on Friday's for the instructional design team to review progress and discuss the project. Other related parties will be invited to join the meeting as needed.
    - o A follow up email will be sent to all team members to review progress, decisions, assignments, and next steps.
    - o Due to the highly visual elements in the learning module a preview of completed programming will be presented via screen share for review and discussion of the e-learning module.
- An email will be sent to all parties on both teams when a milestone has been reached to facilitate testing.
- During the evaluation phase the CU Boulder team will communicate daily via email with regard to concerns found while evaluating staff and beta tester surveys and quizzes. The intention of the daily communication is to provide time for the Financial Wellness Team to discuss potential issues in preparation for the weekly meeting where change requests will need to be reviewed and finalized.
- Onsite meetings can be scheduled as needed.

This document outlines the proposed solution to the first step in a multi-year project to create learning modules for inclusion in a financial wellness program to be introduced at the University of Colorado Boulder. Instruction will be in the form of online learning module to facilitate accessibility, interactivity, engagement, and transfer of concepts to long-term memory. The module will consist of:

- An introductory video discussing the importance and relevance of understanding interest, loans and their future impact on finances, as well as alternate options for financing an education.
- Instructional content will be presented through learning slides with narration.
- The use of scenarios will reinforce concept recognition and facilitate transfer to long-term memory
- A learning game will increase engagement, motivation, and facilitate transfer to long-term memory

Upon completion of the learning module students will be able to review their financial aid package, and determine whether to accept loans and for how much. The Office of Financial Aid will follow up with the students by:

- Forwarding a personalized loan summary e-postcard or letter to students. The summary postcard will include total current loan value, projected interest and anticipated monthly payment.
- Adding the student to a Listserv to facilitate a monthly email highlighting an aspect of financial wellness and including a puzzle. Motivation to read the email and solve the puzzle are provided through knowledge that consistent submission of a solution to the monthly puzzle serves as eligibility for a grant to be included in part of the following year's aid package.
- Financial Aid Office will forward an infographic summarizing loans and interest to continuing students who have completed a FAFSA aid application. This serves as step one of reinforcing learning prior to students beginning their second round of considering aid for the forthcoming year.

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A - Learner Persona Profiles

B -An in-depth look at the Learning Solution

C - Storyboard

Learner Persona

The following learner persona highlights a student in a situation where they might be considering taking out more in loans than they need to. More often than not we see students take out the full value of loans offered to them to provide a cushion for spending without fully realizing the impact of their actions. This mindset carried through the course of four to six years compounds the effect of interest upon graduation. It is also evident that many students don't have a full understanding of the impact of compound interest over time and they face loan payments much larger than they realize upon graduation. Unfortunately for those accepting jobs with lower paying entry level salaries this has a much larger impact on their finances. Historically, as evidenced by student loan statistics, creating programs to facilitate an understanding financial concepts is not an area that universities have invested in. Sadly student loans affect a majority of Higher Ed graduates and the impact is substantial. In an effort to address this knowledge gap students of all backgrounds, and students with varied experience and understanding of basic loan concepts, represent the target audience for this training module.

The primary goal for this module is to introduce loan and interest concepts, the goal for the program overall is to provide insight into a variety of financial situations, provide the knowledge needed for long-term financial success, and to offer students a sound foundation in financial wellness by the time they graduate. This will help serve the university's mission of graduating seniors who are more readily able to contribute to society through volunteering or financially contributing to programs they are passionate about.

Discover Chip

Chip knows his name means warrior but recently he hasn't felt like much of a warrior. Chip has always been on top of almost everything in his life, he determines what he wants and he goes after it. He grew up in a stable home, competed in gymnastics in the Junior Olympics twice, learned to play his trumpet in grade school, and later the guitar. He is a leader at the youth group at church, and just graduated within the top twenty-five of his High School class. His parents set aside some money for him for college when he was young, and he was accepted to the university that was his first choice. People who see him think he's living the dream, however recently his parents separated and his mother is trying to raise three boys on her salary. His father, who was on board with the boys pursuing an education when they were younger is adjusting to a new life himself. He did not go to college and now is more of the mind that a degree from an institution of higher education is not worth the price tag, he believes Chip can do just as well without an education and has left school expenses up to Chip and his mother. Chip realizes this is going to make it difficult for him to make ends meet at school.

Immerse yourself in Chip's world

Chip is not apprehensive about starting college, he took courses at the community college during his senior year of high school and he is excited about heading out and starting a new chapter in his life. He has always had a knack for knowing what he wants to pursue and can't wait to begin working towards finding his own way. He has big plans, and in order to get on

with his life he needs to get his degree and out into the real world where he can actually do something to try to help this crazy world he lives in. He is analytical in nature and has always been confident in his ability to see more deeply into situations and problems he has come up against in the past. He was hoping not to take out student loans but circumstances have changed and he is considering taking them out if they are offered to him. He decided that there has been enough stress in his life recently, if the loans mean he can focus on school and not expenses, it will be worth it in the long run. He figures he'll need the money to make ends meet anyway and any extra can be an emergency fund, or just give him some extra play money when school gets stressful and he needs a break to get away from it all on the weekend and recharge.

Connect with Chip

Chip knows that CU Boulder will encourage him to take a financial wellness course if he is offered, and accepts, a student loan. He thinks the course is rather silly. He realizes many of his high school classmates didn't care about math or interest rates, and they certainly didn't apply them to real life situations. They definitely need the knowledge and skill reinforcement, kudos to the university for trying to help them out. However his father was a financial planner so he learned about the effects of interest and started putting money into an IRA while he was in high school so he knows what he is getting into. He hasn't sat down and actually done the math to take a look at what his payments would be now or in the future, but he knows they have you do a quick FAFSA training just before you accept your loans so he can see what his payments will be, he is not worried. His plan is to blow through the course as quickly as he can and just get it out of the way. There are so many other things to focus on during those first few weeks of school.

Detach to find a learning solution

Chip, like most students, will be consumed with a new environment, an unfamiliar campus, and new expectations, amongst other things when he arrives on campus. An online learning module that is accessible to students who were awarded aid early will be invaluable to them. Students can complete the module before they arrive at campus which makes them more likely to engage with the course over the summer when they have more time and are preparing for college. For those who applied late, or needed to submit additional paperwork before their aid could be awarded, the online module will also be a benefit since they can access the course at their convenience. They will not have to navigate fitting an additional class in as they are adapting to campus life and their college course schedule. The university won't have to offer the class a number of times to accommodate student schedules, thereby tying up an instructor and a classroom. Students who were not paying attention and didn't complete the course could potentially be frustrated when their aid is not disbursed, however they would still have the opportunity to complete the online course to release their aid.

The cost for the initial design would be higher however the course could be used on an ongoing basis and easily updated as needed. The university's long-term goal is a program that not only offers a variety of financial learning opportunities, but also encourages completion of an annual learning module to review aid borrowed and payment figures for students with loan debt. The long-term plan is still under consideration pending the results from the first year of the program, therefore it is far from the design or implementation stage, however acknowledgement of the long-term goal will affect creation of this first module.

The decision for selecting an e-learning module is reinforced by Michael Allen's reference to e-learning as having the ability to provide extraordinary enhancements (Allen, M.W. 2016, p23). He also mentions that the return on investment is 50-60% higher than traditional learning despite the upfront investment. An added benefit to the university comes with the realization that not only can students return to review content if they desire, but also the fact that updating an e-learning module is fairly easy and the module can be uploaded to the university's LMS thereby allowing for ease of tracking of completion.

The decision to incorporate an introductory video was influenced by Michael Allen's indication that including multimedia stimulates emotion resulting in the potential to increase a positive learning attitude. (Allen, M.W. 2016). In this case we are working with students who are not self-motivated to complete the course, therefore tapping into tools to increase motivation is paramount to success.

In an effort to capture learner attention in the introductory video we look to Dirksen's reference to Jonathan Haidt's *The Happiness Hypothesis (2006)*. Haidt refers to the brain working as an elephant and a rider. Dirksen describes the rider as "the conscious, verbal, thinking" part of the brain, and the elephant as the "automatic, emotional, visceral", part of the brain (Dirksen, J. 2016). Dirksen points out that the elephant is much stronger therefore the logical side of the brain does not always prevail. Rather than forcing the elephant down the learning path it makes more sense to get his attention and engage him through stories and surprises. We propose the use of a story from a graduating senior facing loan repayment, and/or statistics such as the following published in the 2016 edition of the College Board's Education Pays series.

The median age for a four year college graduate to benefit from their education is age 34, as compared to high school classmates who began working shortly after their high school graduation rather than pursuing further higher education (College Board: Education Pays, 2016).

The introductory video would be followed by the presentation of loan and interest concepts to ensure students have a basic understanding of loans, interest and how to evaluate the future impact of anticipated payments on their student loans. Information with regard to alternative choices to securing funds would follow.

To reinforce the loan, interest, and alternate financing concepts, as well as incorporate the feedback concept of the CCAF model, the next section would contain scenario-based situations where students have choices, and a descriptive explanation outlining result of their choice is revealed as they click on options. This might include scenarios like a choice to take out one loan amount vs. another, or working a part-time job vs. opting for a higher loan. The decision to include scenario-based situations is based on a study done by McClenney, Marti, and Askins (2012) that indicates there is an increased probability that students will achieve goals by engaging with course content. The use of scenarios requires them to evaluate and engage in memorable way by seeing the results of their choices in a non-threatening way. There is also the added benefit of seeing the concepts from a different viewpoint which will be discussed later in term of transfer to long-term memory.

The final section of the e-learning module will include a learning game to evaluate student comprehension and retention. The use of gamification has been somewhat controversial,

however in their preface Boller and Kapp note that there has been a significant amount of research to show that games are more effective than lectures, and material becomes more personal as the learner interacts with the game. *(*Boller, S., & Kapp, K. M., 2017, p.*v*). Allen considers the view that although learning is serious, games are not seen as serious. We play games voluntarily because they are fun and we are thrilled when we win or at least improve. He poses the question as to whether fun and effort natural ingredients aren't useful for both play and learning?! **(**Allen, M. W. 2016**).**

When considering whether the use of a video, scenario based learning, and gamification is overkill an argument can be made for facilitating the transfer of new concepts to long-term memory. The early stages of rollout of the financial wellness plan offer us the opportunity to tap the students only minimally during their first year as a student loan recipient therefore every opportunity to enhance retention counts. By electing to adopt three avenues to engage the student with the material (learning concepts, scenario based activities, and gamification) we utilize Dirksen's concept that memory is similar to shelves and the more shelves we can use to classify something the more likely we are to remember (Dirksen, J. 2015). This reinforces the decision to include games not only as an avenue to increase engagement but also to increase retention. The games not only provide another shelf for classification of new concepts and increase the likelihood the information would transfer to long-term memory, but they increase the likelihood that students will return to play the game again, thereby increasing engagement and retention.

Financial Wellness Storyboard Overview	
Course Type:	Financial Wellness learning module 1
Description of Learning Solution:	An introductory financial wellness learning module to introduce calculating interest on a loan and recognition of it's long term effect on finances. The learning module will be presented via an online e-learning module with video introduction, learning content divided into conceptual learning sections, scenario challenges for each section, and an evaluative game at the conclusion of the learning module to evaluate retention.
Course Title:	The Impact of Loans and Interest
Audience:	College freshman and first time loan recipients
Projected Hours:	Completion of this module estimated at ninety minutes.
	This initial storyboard will cover 30 minutes of content. We will work from the beginning of the module. An introductory video will be used to gain learner attention and tap into motivation. We will then move to a focus on presenting the learning content and scenario exercises for objective 1. The storyboard will wrap up with an overview of the assessment game that will be placed at the end of the learning module, the game will include questions from all learning content and objectives.
SME's:	Victor Goldberg, Mari Foisy, Rebekah Zaborek, Jennifer Graves
Project Manager:	Victor Goldberg
Assigned Developer:	Shawna Stushnoff

INFORMATION ARCHITECTURE

Objectives

Students are able to recognize the impact of loan interest and future payments on finances.

1

Students will be able to calculate interest and anticipated payments due on a loan.

2

Students identify optional expenses and evaluate financial impact to promote conscious spending decisions.

3

Students can determine the number of work hours needed to finance optional expenses.

4

Instructional Approach

The use of Michael Allen's CCAF model (Context, Challenge, Activity, and Feedback) will determine the path of focus to create a learning environment that captures learner attention, engages them in the same environment they will use the knowledge in, presents and reinforces learning concepts, and facilitates transfer to long-term memory through activities, challenges, and feedback.

Practice Opportunity

Learning scenarios placed after presentation of the learning concepts for each objective serve to encourage the learner to explore the results of their choices based on options presented. Use of scenarios incorporates the concept of immediate use as well as challenging the learner, thereby increasing engagement and transfer to long-term memory.

Assessment Item

A learning game utilizing a road map to financial success will find the learners traveling down the road of life as they progress through questions. Their score at the end of the game will determine conceptual understanding and the ability to make financially sound choices. The opportunity to increase their score will serve as an enticement to revisit the game to further instill concepts introduced and promote transfer to long-term memory.

Slide Title:	**Course Video Introduction**	**Duration: 5-6 minutes**	Slide Numbers: 1 & 2
Slide Focus:	To open learning module with attention getting real-life stories to promote engagement with the learning environment.		
Objective:	2. Students recognize the impact of loan interest and future payment on finances		

An attention grabbing videos to introduce the topic and engage the learner. Interview content and student interviewees to be provided by either the university or the instructional design team.

Instructional Design team to film and edit video content for inclusion in the Articulate Storyline learning module.

Number of Interview/Statements: 1-2

  Interview 1: A welcome and purpose statement
    presented by a student, followed by their reflections
    on loan statistics and length of time for payback of
    student loans post graduation.

  Interview 2: A recent graduate or senior
    facing graduation and loan repayment.

Duration: 2-3 minutes per interview/statement,
    maximum 5-6 minutes.

Slide Title:	**Why Am I Here?**		**Duration: 2 minutes**	Slide Number: 3
Slide Focus:	**Students are Introduced to Course Goals**			
Learning Objective:	N/A			

Learning Framework & Graphics:

Welcome and Overview of Course Objectives and Content

- Introduce Interest Concepts
- Learn Calculations
- Identify Optional Expenses
- Review Alternatives to Loan Financing

Designer Notes:	Learning slides to be animated text with the potential to add a learner character or facial expressions sketched into each slide. See idea example sketch on slide 5.

Slide Title:	**Looking At Loan Interest**	**Duration: 5 minutes**	Slide Numbers:	4 & 5

Slide Focus:	**Student Recognition of the Importance of Financial Wellness**
Objective:	1. Students recognize the impact of loan interest and future payments on finances

Learning Framework & Graphics:

Did you know….
- Average student loan debt overview
  - Minimum payment is $50 a month for most student loans
  - Explain example with payoff goal of ten years
  - Longer timeframe = lower payment = more interest paid
  - Subsidized loans do not accrue interest while you are enrolled in classes full-time, other loans begin accruing interest immediately
  - Next Slide Intro: Let's look at how the interest adds up

- Compound interest & APR vs. APR
  - Interest is calculated daily
    - Interest is calculated each day and added to your principal
    - This method adds to the principal balance daily resulting in a higher interest figure each day.

Are You Ready For This ?

Average Debt	$28,400
Stafford Loan Interest Rate	6.8%
Loan Term	10 Years
Monthly Payment	$326.83
Total Payments	$39,219
Total Interest	$10,819

Your Future Is Now!

APR — *The Rate They Advertise*
Annual Percentage Rate

vs.

COMPOUND INTEREST

APY — *The Rate You Really Pay*
Annual Percentage Yield

Slide Title:	**Loan Interest – Where Will It Find You?**	**Duration: 3 minutes**	Slide Numbers: 6 & 7

Slide Focus:	**Interest on the Interest**
Objective:	1. Students recognize the impact of loan interest and future payments on finances

Learning Framework & Graphics:

Payback Realities
- Know your salary requirement
    - Does it match your field of study?

- Understand the value of making payments while you are still in school or before the loan goes into repayment status

- Recognize the value of extra or additional payments
    - Paying an extra $25 a month
    - Paying an extra $100 a month

- Recognize that a lower over all loan amount has a substantial impact on compound interest

Early payoff calculation example cite included on slide
http://www.finaid.org/calculators/scripts/loanpayments.cgi

Anticipated Salary Need.......

If 10% of your Gross Income went to payments you would need a salary of at least $39, 219.60 to be able to make the monthly Payment

COMPOUND INTEREST

How to avoid some interest on the interest....

An extra $25 a month shortens the repayment period by a year and saves you $1150

If you can manage it make some payments now, or pay extra during the repayment period.

An extra $100 a month shortens the repayment period by 3 years and saves you $3469

http://www.finaid.org/calculators/scripts/loanpayments.cgi

Slide Title:	**Dinner & Movie?**		**Duration: 5 minutes**	Slide Number: 10

Slide Focus:	**Scenario Based Practice Opportunity: Analysis of Concepts Learned**
Objective:	1. Students recognize the impact of loan interest and future payments on finances.

Learning Framework & Graphics:

Scenario Learning - 1

- Scenario Presented

  You enjoy your weekly Friday night movie and dinner. It's ok that you dip into your extra student loan funds to treat yourself right?! It's how you relax after a long week.

  But do you know the long-term effects?

- Scenario Options for Review/Consideration
  - It's only $25 a week, I'll treat myself during my first year of school
    - Result Star: Present calculated cost and interest

  - I'll eat at McDonald's to cut down on cost, that's about $15 for my Friday night out
    - Result Star: Present calculated cost and interest

  - I'll get a part-time job to fund my weekly dinner and a movie
    - Result Star: Great Choice! Work 2-3 hours a week and save the interest!

Result

Better but not ideal. $60 a month, $480 for the year + interest Total: $663 Interest: $183

I'll eat at McDonald's to cut down on cost, that's about $15 for my Friday night out.

NOW SHOWING

You enjoy your weekly Friday night movie and dinner. It's ok that you dip into your extra student loan funds to treat yourself right?! It's how you relax after a long week. But do you know the long-term effect?

It's only $25 a week, I'll treat myself during my first year of school.

That'll be $100 a month, $800 a year + interest Total:: $1104 Interest: $304

Great Choice!. Work 2-3 hours a week & save the interest

I'll get a part-time job to fund my weekly dinner & a movie!

Result

Slide Title:	**Let's Go Skiing!**	**Duration: 5 minutes**	Slide Number: 11

Slide Focus:	**Scenario Based Practice Opportunity: Analysis of Concepts Learned**
Objective:	1. Students recognize the impact of loan interest and future payments on finances.

Learning Framework & Graphics:

Scenario Learning - 2

- Scenario Presented

  You are contemplating using loan funds to buy a ski pass. You own your skis, you can take a free bus up to the ski hill exercise is healthy. The only additional cost would be lunch. What do you decide?

- Scenario Options for Review/Consideration
  - Cost of a ski pass is $400 vs. $71 for a single day. I'd only have to go 6 times to get my money's worth!
    - Result Star: Present calculated cost and interest
  - A 4-pack is $159, or $39.75 a day. I won't be here over the holidays and I could work part-time to pay for it!
    - Result Star: Work Study Minimum Wage is $7.25. You'd need to work about 25 hours to pay for four trips and four lunches.
  - Lunch is $10, six trips is $60. That's not bad!
    - Result Star: Present calculated cost and interest

Slide Title:	**Traveling The Road to Financial Wellness**	**Duration: 10 minutes**	Slide Number: TBD
Slide Focus:	**End of Module Learning Game to evaluate understanding and retention of learning objectives**		
Objective:	N/A		

Learning Framework & Graphics:

- Articulate Storyline Board Game
  - Player's bicycle moves to next area on the board after answering each question
  - Feedback is provided with regard to answers and alternate options when applicable
  - Score is tallied based on correct answers

- Sample question concepts for objective 1 To be phrased in multiple choice format
  - Adding even an additional 1% to your loan payment results in paying significantly less interest over time and a shorter repayment period.
  - Compound interest affects loan balances by increasing balances due based on the daily calculation of interest which is then added to the principal balance.

On The Road To Financial Wellness

Great Choice! You are on your way to Financial Wellness!

Click play to move to question 2.

Play

https://community.articulate.com/download/storyline-2-board-game

Designer Notes:	The learning game is the last item in the learning module. It will cover concepts from all objectives via use of multiple-choice questions and provide feedback to students for both correct and incorrect answers. See game parameters on next page.

ASSESSMENT LEARNING GAME DETAILS

QUESTION SETUP

Number of questions:

10

Will each question provide instant feedback or no feedback?
Instant feedback will be provided for each question.

How detailed is that feedback (right/wrong/why)?
A hint will be provided for incorrect answers with the goal of enticing the student to retake the quiz to obtain a higher score.

Is the question's answer provided to the learner at any point?
Yes, correct answers will be provided with details as to how the answer is obtained will be provided during the second attempt.

QUIZ BEHAVIOR

Is the learner able to see their test details at the end, or just their score?

Learner will be able to see test details.

Passing score requirements:

80%

How many retakes can the user have?

Learner can take the quiz as many as they like.

Can the user immediately retake the test or must they retake the entire course?

Learner can retake the quiz immediately.

Will the quiz answers be saved and display for future tries?

Yes

Can the user navigate backwards in the test, and if so can they change their answer?
Navigating backwards is allowed and learners may change their answers.