The Dirty Dozen: A Guide for American Consumers

Team #3 - Three's a Charm:

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IDT 535 – Dr. Sangeetha Carmona

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Scope of Project

This e-learning module is a guide to help the American consumer of fruits and vegetables to make informed decisions when purchasing fruits and vegetables. Focusing on an annually published list known as the "The Dirty Dozen" of produce, the instructional designers will create a learning solution that includes: (a) an overview of what the "Dirty Dozen" is; (b) why it is important to know; and (c) common factors found in the dirty dozen that consumers should be aware of when buying and consuming produce. Links to additional resources to promote consumers' awareness to consider beyond the scope of the learning module will also be included to encourage learning to continue after the course is complete.

Adobe Captivate 2017 will be used to create the learning solution. Average learners identified from our target audience should be able to complete the learning module in approximately 15 minutes. Although the designers recommend the elearning module is taken in the prescribed sequence presented, learners can elect to navigate slides non-sequentially if they are interested in skipping ahead to a particular section, or if they would like to review key points of interest after the initial learning experience is complete.

Goals

This learning module is designed to help the users learn about what factors to consider when making their selections at the market. Other topics include the proper ways to wash and prepare fruit and vegetables, and what makes specific fruit and vegetables riskier for consumption. Ultimately, the learner will be able to consider all factors when purchasing and preparing produce, and show their learning through knowledge checks throughout the module.

Learning Objectives

By the end of this course, the learners will be able to:

- Identify the fruits and vegetables that make up the "Dirty Dozen" list for 2018.

- Explain how the "Dirty Dozen" list is compiled as well as the common factors these fruits and vegetables share.

- Use suggested guidelines to select healthier produce options for purchase and consumption.

- Demonstrate the proper technique for washing produce.

Description of Learners

This learning module is designed for adult consumers who are health conscious and seeking a healthy lifestyle for themselves and their loved ones. Learners may be concerned about the negative side effects of pesticides in food and therefore have an interest in buying organic fruits and vegetables. They may also be supportive of local farmers, particularly organic ones, and the farm-to-fork freshness that only local regionally grown farms can offer.

This tutorial will benefit a wide range of adult learners. Figure 1 is a detailed chart of learner characteristics as recommended by Alessi and Trollip (2001, p. 439).

Figure 1: Learner Characteristics			
Item	**Weaker Learners**	**Average Learners**	**Stronger Learners**
Age	18-20	20-30	30+
Educational Level	High School	Some College	College Degree
Reading Level	Grade 7-9	Grade 10-12	College
Motivation	Low	Medium	High
Prerequisite Knowledge	Little to no knowledge of pesticides in fruits and vegetables	Some knowledge of pesticides in fruits and vegetables	Much knowledge of pesticides in fruits and vegetables

Prerequisite Skills	No prior experience with buying fruits and vegetables	Prior experience buying fruits and vegetables	Prior experience buying fruits and vegetables
Facility with a Computer	Basic	Basic	Basic
Familiarity with the Web	Basic	Good	Very Good
Typing Ability	Basic	Basic	Basic
Access to Computers	Good	Good	Good
Access to Web	Fair connection; some connection interruptions	Good connection; few if any connection interruptions	Fast and reliable connection
Time Availability	N/A	N/A	N/A

Description of Andragogy

When developing this course social constructivism, cognitivism, and Malcolm Knowles' 4 Principles of Andragogy were used as guides. All three give the learner the best opportunity to learn and retain the information given throughout the course.

By creating a course regarding the "Dirty Dozen", two of Malcolm Knowles' 4 Principles of Andragogy were used as a framework. Not only is the course problem-centered and not content-oriented, but the information regarding the dangers of the "Dirty Dozen" makes the course immediately relevant to the life of the learner. Both of these are Principles of Andragogy according to Knowles. Also, our summative assessment - the "Produce Emporium" - in which the learner will be asked to make healthy produce selections, plays on another of the Principles of Knowles regarding experience, mistakes, and how they should provide the basis for learning activities.

This course takes a social constructivist approach by giving the learner the ability and freedom to control the learning process. The course will mostly be self-guided giving the learner the ability to go through the presentation at their own pace. Not only will the learner be able to

control the pace of the module, but there will also be ample opportunity for interaction with the content being presented. Although the module is sequential, with social constructivism in mind, the learner always has the ability to jump around and visit any part of the module.

Along with social constructivism, the course also takes a cognitive approach by "chunking" the content into short time intervals. Content will be dispersed in short intervals and include interactivity throughout. We will incorporate different types of assessment at the end of each short interval. Delivering content in short time intervals with interactivity and assessments at the end gives the learner the best possible opportunity to learn and retain information.

Forms of Assessment

The types of assessment used in the Dirty Dozen e-learning course will be both formative and summative. The formative types of assessment include closed-style questions such as multiple choice and matching. These interactive assessments will be utilized at the end of each module. For example, this type of assessment will be administered when checking learners' knowledge of how to properly wash produce. Learners will be provided with immediate feedback about whether or not the learning objective is being met. Feedback will be given to the learner using verification, explanation, and elaboration where appropriate.

The learner will also be evaluated using a summative assessment. This will occur after completing all course modules. This final assessment will be tied to all learning objectives and provide an opportunity for the learner to apply what he/she has learned throughout the course. Learners will be directed to a "Produce Emporium" where they will grab a shopping cart and begin the process of making their produce selections. Some are healthy, some are not. It is up to the consumer to use what they have learned to make healthy choices. The use of hints, cues, prompts will also be provided as additional feedback during this shopping scenario.

This approach is in keeping with Bloom's Taxonomy, a categorization of expected skills for students during a learning process. This framework is used to develop learning outcomes with the lowest tasks characterized by processes such as simple recall, and successive tasks requiring higher-order thinking skills so that the learner is then able to analyze, evaluate, and create using the knowledge they have acquired.

Constraints

The constraints we considered for this learning solution include the following categories of constraints described by Piskurich (Piskurich, 2015, p. 117).

Constraint Categories	Constraint Considerations
Logistical	Logistical considerations for the ***initial launch of the learning solution*** (see notes under Training Methods in this table) will be limited to those defined by the MSIDT-530 Fall 2018 project assignment directives and reflect available logistical options delineated by the course: **Trainees:** ● Number of trainees reflect the number of registered students in course. ● Although the learning solution is designed for a much broader audience for future iterations, the optimum number cannot be determined at this time due to logistical, stakeholder, and resources unknown that would take place outside the MSIDT classroom. **Training setting:** ● Learning solution will be completely online; in person attendance will not be a consideration. ● Training setting for learning solution will leverage the MSIDT-530 Moodle classroom. ● Technical hardware and delivery needs reflect the parameters defined by CSU Fullerton MSIDT program student requirements (for full details, access the CSU Fullerton MSIDT website). **Budget:** ● We do not have a budget for this project. ● Instructional design team will use available ID resources, software, and delivery options offered through CSU

	Fullerton MSIDT-530 course.
Stakeholder	**Sponsor:** The acting sponsor of the project is Dr. Sangeetha Carmona. We expect Dr. Carmona to provide input, direction, and final approval on: • Learning solution parameters, schedule, and completion rubric for each deliverable milestone and final deliverables as defined by the syllabus and project assignment materials for MSIDT-530, Fall 2018. • Initial learning solution topic. • Team member assignments. **Primary sponsor contact:** The primary contact person for the sponsor is Charlotte Van Wagner. **Subject-matter expertise** • Learning solution content expertise will be accessed via reputable resources available online.
Training Methods	**Method:** This learning solution will be a fully online, self-directed product. The learning solution is an elective module designed to meet the needs of consumers who are curious and seeking a personal enrichment learning activity. Because of this, tools to manage accountability for learning or completion tracking will not be included in the initial learning solution design and deliverables. **Timing:** The anticipated learning solution has been designed to take approximately 15 minutes. However, due to resource and scheduling limitations, the project deliverable will be a small section of the total course. Due to these constraints, a portion of the total learning solution will be fully designed, developed and assessed with a total running time of approximately 3-5 minutes.
Resources	**Team resources:** Resource constraints have presented considerable challenges for this project team. Because the team is comprised of students both self-assigned and assigned by instructor, the number of resources has fluctuated considerably over the lifecycle of the project design and development. This has impacted logistical considerations and our ability to schedule team deliverables effectively. **Trainers:**

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	Because this learning solution is designed as a self-directed learning product, trainers are not required. The project team will be available to facilitate the initial phases of development and roll-out in order to assist end-users as needed. **Design and develop subject-matter experts:** Instructional design subject-matter expertise will be available to help with design and and material development through the following resources: ● Dr. Carmona (project sponsor and instructional design expert) ● Self-directed instructional design learning resources (including text books and other supporting materials) ● Students in the MSIDT-530, Fall 2018 course

Projected Cost

As described in the Constraints > Logistical Considerations section of this design document, we do not have a budget for this project because it is a student assignment. However, we have provided a projected cost breakdown to reflect on what we would consider if the project moves to a state where a detailed budget is required. Our assumption is that this project can be managed, designed and developed by a single, professional instructional designer with average industry skill level using Adobe Captivate 2017 software. We also assume that production and development meetings will be held online which will avoid travel costs (internet and hardware/computer costs will be assumed by the Instructional Designer). It should be noted that implementation costs have been omitted since we do not know the logistics, parameters or constraints of implementation outside of the CSUF Moodle classroom and will need to be addressed at a later time. Time estimates are based on the Association for Talent Development recommendations for designing and developing a Level 2 eLearning module (Defelice, 2018). Level 2 eLearning is defined by ATD as a learning experience with limited interactivity with simple responses to instructional cues (Defelice, 2018). The professional cost estimates are based

on rate projections in the San Francisco Bay Area for a professional Instructional Designer

representing the 50th percentile of the field (The Creative Group, 2018).

Role	Notes	Rate Estimate	Cost Estimate
Instructional Designer	Estimate: 120 hours	~$37.50/hour	$4500.00
Graphic Design Resources	Notes: ID will leverage imagery and design resources from Canva.com	● $12.95 service fee per month ● ~ $1.00 per design asset	$162.95
Software Costs	Full Captivate 2017 license	$1299.00	$1299.00
		TOTAL:	$5961.95

Flowchart
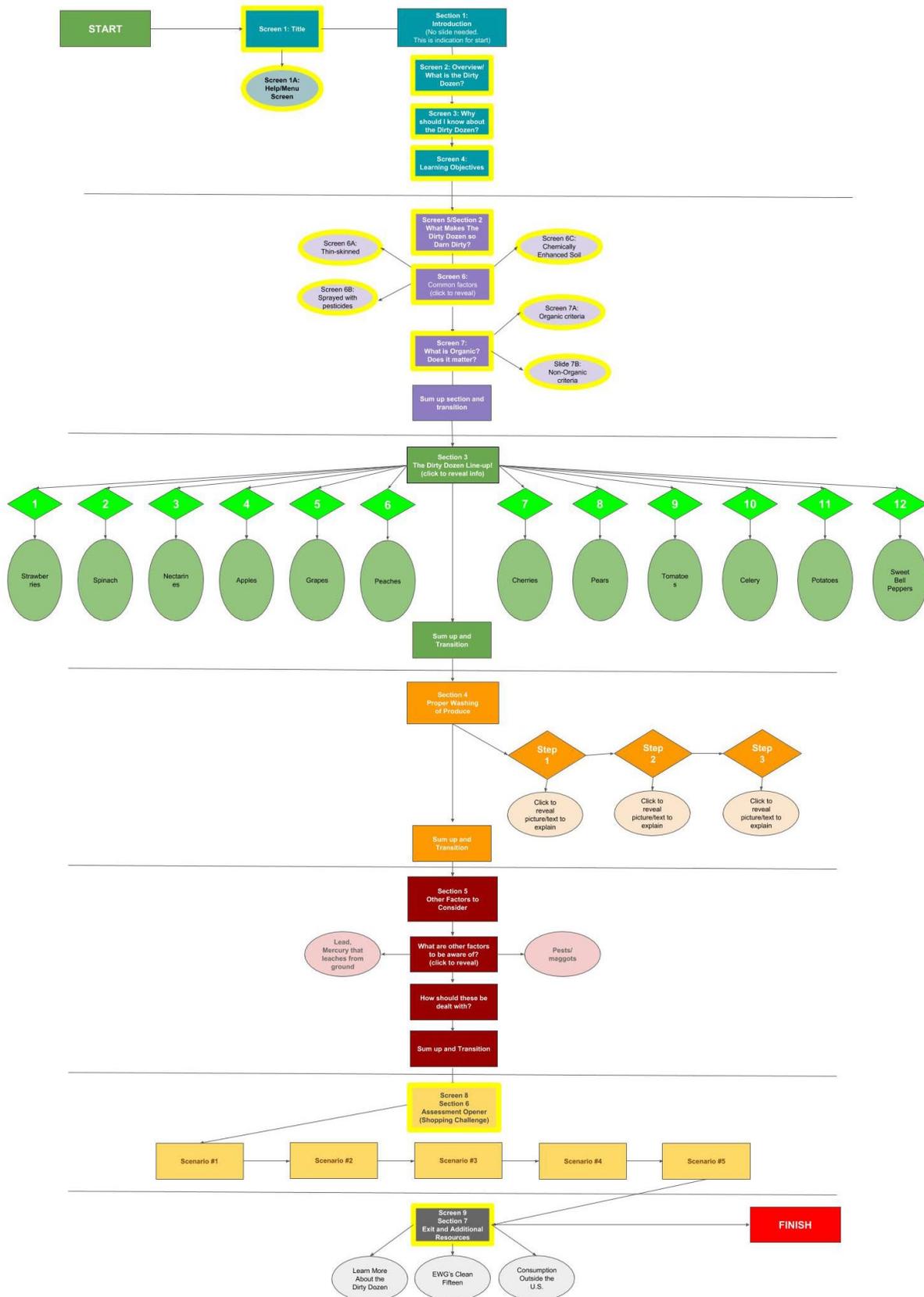
Storyboard and Style Guide

Separate Document Attached

Team Assignments and Responsibilities

	Char	Luci	Diana	Sal
Planning Documentation				
Project Management Timeline	X			
Team Assignments and Responsibilities	X			
Define Scope		X		
● Goals & Learning Objectives			X	
Define Audience (Learner Analysis)				X
Description of Andragogy				X
Description of Forms of Assessment	X	X	X	
Establish Constraints		X		
Estimate Costs / Detailed Budget		X		
Supplementary Materials (if needed)	TBD			
Design				
Create Flowchart	X	X	X	
Research Topic and Write Content (On Screen Text)	X	X	X	X
Write Script (Audio/Video) (if applicable)	TBD			
Develop Rough Layout and Style "Look and Feel"	X			
Create Storyboard	X	X	X	

Create Style Manual	X			
Development				
Produce Narration (Recording) (if applicable)	TBD			
Develop Alpha Prototype	X		X	X
• Usability Testing Procedures	X		X	X
• Evaluation Form			X	
• Synthesize Results				X
• Make Alpha Revisions	X		X	X
Develop Beta Prototype	X		X	X
• Usability Testing Procedures	X		X	X
• Evaluation Form			X	
• Synthesize Results				X
• Make Beta Revisions	X		X	X
Develop Final Gold Prototype	X		X	X
Publish Final Project Tutorial	X			
Polish and Submit Final Paper	X			

Project Management Timeline

Task	Description	Date(s)
Team Meeting	Brainstorm on ideas for team topic.	9/6/2018
Decide Team Topic	Decide team topic and submit for approval.	9/8/2018
DUE:	**Final Topic**	**9/8/2018**
START Project Planning Build project planning documents	**Preparation Phase / Iterative Design Phase** Team members to work on their assigned tasks throughout this period. Documents will be shared on Google folder. Regular Zoom meetings will be conducted to share progress and inform next steps.	9/10–09/30/2018
Team Meeting	Review topic, identify areas of research and determine team assignments for planning documents.	9/11/2018
Team Meeting	Present flowchart, rough layout and determine content needs.	9/16/2018
Team Meeting	Catch up meeting for those who could not attend meeting on 9/16.	9/19/2018
Team Meeting	Progress report and review first draft of Design Proof.	9/22/2018
Team Meeting	Progress report. Continue to revise all planning documents as determined.	9/26/2018
Team Meeting	Review of all planning documents. Continue to revise until ready to submit. Team leader will submit.	9/29/2018
DUE:	**Provide feedback in Google doc to your teammates no later than 9/28, allowing them time to make final revisions.**	**9/29/2018 11:59 PM**
DUE:	**Submit Project Planning Documents**	**9/30/2018**
START Project Feedback	Provide feedback on assigned project plan.	10/1–10/7/2018
Team Meeting	Review planning documents of assigned team and collectively complete evaluation.	TBD
DUE:	**Project Feedback to assigned team**	**10/7/2018**
START Alpha Prototype	**Iterative Development Phase - Alpha** Designated team members to work on development of prototype for Alpha release as well as corresponding usability testing procedures and evaluation forms.	10/8–10/14/2018

Team Meeting	Discuss development of prototype and usability testing procedures and forms. Continue to make revisions.	TBD
Team Meeting	Review work. Continue to revise until ready to submit. Team leader will submit.	TBD
DUE:	**Alpha Prototype**	**10/14/2018**
CONDUCT <u>Alpha Evaluations</u>	Complete Alpha evaluations of assigned team.	10/15–10/21/2018
DUE:	**Alpha Evaluations**	**10/21/2018**
START <u>Beta Prototype</u>	**Iterative Development Phase - Beta** Review and summarize Alpha evaluation results to inform Beta release. Designated team members develop prototype for Beta release as well as corresponding usability testing procedures and evaluation forms.	10/22–11/4/2018
Team Meeting	Discuss development of prototype and usability testing procedures and forms. Continue to make revisions.	TBD
Team Meeting	Review work. Continue to revise until ready to submit. Team leader will submit.	TBD
DUE:	**Beta Prototype**	**11/4/2018**
CONDUCT <u>Beta Evaluations</u>	Complete Beta evaluations of assigned team.	11/5–11/11/2018
DUE:	**Beta Evaluations**	**11/11/2018**
START <u>Gold Prototype</u>	**Iterative Development Phase - Gold** Review and summarize Beta evaluation results to inform final Gold release.	11/12–12/2/2018
Team Meeting	Discuss development of prototype and continue to make revisions.	TBD
Team Meeting	Review work. Continue to revise until ready to submit. Team leader will submit.	TBD
DUE:	**Final Gold Prototype and Project Plan**	**12/2/2018**
DUE:	**Individual Reflection Paper**	**12/14/2018**