

Timing: 3 to 5 hours

Level: Ages 15 and up

Introduction to UX & UI Design

Activity Overview

User experience (UX) design is commonly defined as the process of designing experiences and interactions with a digital or physical product that are useful, easy, and enjoyable. User interface design (UI) is commonly defined as the process of designing the visual look of the product and the functionality of the interaction.

In this activity, students will be introduced to user experience (UX) and user interface (UI) design, the role of designers, and the product design process. To reinforce UX and UI design principles, students will assess and provide analysis on the design of an existing product.

Activity Objectives

Project management skills

- Defining purpose, goal, and audience
- Understanding the phases of product development
- Understanding roles of UX and UI designers

Design skills

- Understanding and employing UX & UI design principles
- Designing for a specific audience and purpose
- Understanding the role and purpose of usability
- Understanding sketching
- Understanding wireframing
- Understanding the iterative review and redesign process

Research and communication skills

- Researching examples of interactive media
- Evaluating and analyzing various interactive media
- Understanding the role, purpose and use cases for interactive media
- Researching, evaluating and analyzing digital and physical products
- Critiquing designs

Technical skills

- Understanding the Adobe XD planning to production workflow

Project Assets

- [Adobe XD tutorial series.xd](#)
- [Tutorial image assets](#)
 - The provided Adobe XD tutorial file contains a series of tutorials for all of the activities in the XD series. The tutorial series is set up so you lead students through a specific tutorial and then, using what they learned, they create their own content in a proceeding exercise.
 - You can choose to allow students to work ahead at their own pace, or close the XD tutorial file, and return to it together as a class in later activities.
 - In this activity you will use the Activity #1 tutorials: *Final sample student portfolio* and *Planning-to-production workflow*

Background preparation resources

[Technical and content information](#)

Activity Steps

1. Introduce this activity and explain that students will be learning about user experience (UX) and user interface (UI) design, the role of designers, and the design process. To reinforce UX and UI design principles, they will assess and provide analysis on the design of an existing product.
2. Introduce the Heinz ketchup bottle meme used to explain the difference between User Experience (UX) design and User Interface (UI) design. Before going into detail about the nuances of UX and UI design, show them the meme and discuss the following:
 - The ketchup bottle is the interface. Ask them to give a few examples of other interfaces - both physical and digital.
 - Ask why they think this meme image was created to explain the difference between UX and UI design?
 - Ask them if they think this meme is a good way to differentiate between UX and UI design?
 - Ask them if they agree with the "UX versus UI" nature of the meme? How do you think UX and UI design can/should work together?
 - Ask if they think this design solution of the ketchup bottle works? What else can UX and UI designers do to improve this experience? To help with this step ask students to think of ways the "improved" upside down bottle has design issues (for example, the ketchup gets goopy or pools and sprays out as soon as you open the lid).
 - Can they think of their own designs, or solutions they've seen in upside down plastic bottles, that can improve the user experience?
3. Introduce UX design and UX designers by explaining and discussing the following:
 - User Experience (UX) design:
 - Relies heavily on an understanding of users needs, identifying goals and purposes, and creating basic outlines of designs.
 - "User Experience" encompasses how humans interact with something – digital or physical – and bridges the gap between how something appears and how it works or feels.
 - UX design principles can be applied to the design of a wide variety of things - websites, mobile apps, automobiles, a museum exhibit, or even your own life, to name just a few.
 - UX Design is the process of designing so the experience and interaction with the digital or physical product is useful, easy, and enjoyable.
 - Optional: Watch [this video](#) of Don Norman, who coined the term UX.
 - UX Designers:
 - Do the thinking up front, so that when a user comes to a finished project, how it works and how they interact with it makes sense, is pleasurable, and is usable.

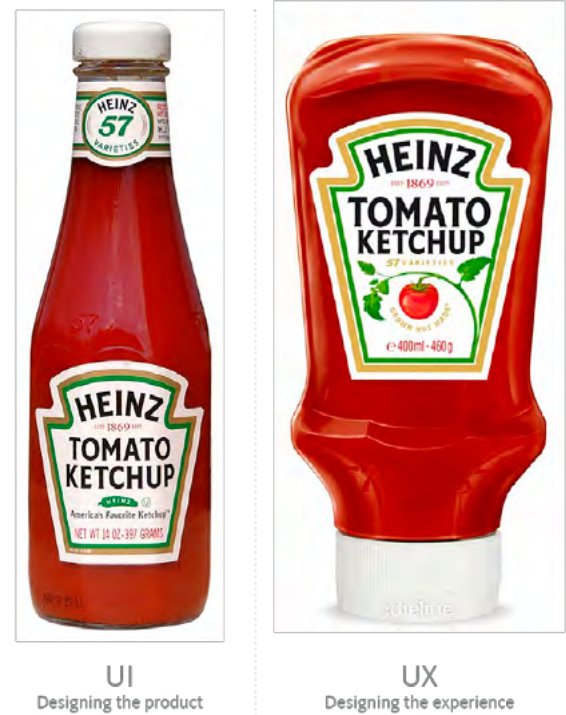


Photo Credit: Lauren Proctor, [medium.com](#)

- Design the function behind the visuals — the process that makes products work well for the people who use them.
4. Introduce User Interface (UI) design and UI designers by explaining and discussing the following:
 - User Interface (UI) design:
 - Where users and a digital or physical product or system communicate and interact.
 - For computers and mobile devices this is called the graphical user interface (GUI).
 - UI is the visual look of the product and the functionality of the interaction.
 - UI designers:
 - Design the visuals and interface.
 - They take all of the content and make it look pretty and make sure it works properly.
 5. Introduce and discuss some best practices and design principles that UX and UI designers rely on:
 - UX Design:
 - Empathy: Understand the end user and be empathetic to their needs, but don't ever think of yourself as the end user.
 - Problem-solving: Identify the reason to build the product and what problems it solves for the user.
 - Simplicity: Keep it simple with clear navigation and actions.
 - Functionality: The user's expectations are met and function informs fashion.
 - Consistency: Adapt the experience for all contexts and provide a consistent experience. For example making sure things work properly and the same across, mobile, tablet and web versions.
 - Flexibility: Test > iterate, test > iterate, and test > iterate some more.
 - UI Design:
 - Alignment: create order and organization and visually connects elements.
 - Hierarchy: visually giving extra weight, or emphasis, to the most important message or item.
 - Contrast: allows for emphasis on an element by juxtaposing opposing elements. For example, black and white or horizontal and vertical.
 - Space: the distance between, around, above, below, or within elements; both filled and empty space are important.
 - Proximity: creates relationships between elements by grouping them together or connecting them visually.
 - Balance: comparing or estimating two things, one against the other, and the contrast between.
 - Repetition: ties together different elements to create association and consistency.
 6. Discuss the workflow between UX and UI designers by explaining UI designers are responsible for taking all of the steps taken by the UX designer (development, research, content and layout) and make a product or application that is an attractive, guiding and responsive experience for users.
 7. Show a finished example(s) of an app design or prototype. The provided Adobe XD file includes a fully-functioning student portfolio prototype for mobile, tablet, and web layouts.

XD guide: Adobe XD tutorial series.xd (Activity #1 - Final sample student portfolio)

Note: For additional examples you can show digital projects from [XD tutorials](#). You can also use the Adobe Live sessions videos for examples of physical projects.

8. Walk students through the design and development process. Use the table below to identify each phase of development, the associated tasks, and who works on those tasks. Some important items to introduce and discuss about process are:
- How UX design usually encompasses UI design in the larger design process.
 - Identify which phase normally falls into UX design, UI design, and when they work together.
 - Explain that often designers are hired by clients to design for them and this process takes on additional steps when working with a client.
 - Optional: discuss the differences between product designers and marketing designers, agency designers and in-house designers.
 - Optional: discuss that usually there is a team working to build a product or service and introduce additional roles such as project/product manager, programmers, content experts, and so on.
 - Design is an iterative process that should encompass reviewing and redesigning steps, as well as, user feedback. Discuss how an ongoing, iterative design process might work between UX and UI designers.
 - The scale of the product or service being designed - for example, if it is a physical product, the product and packaging might be separate yet connected design and development processes. You can use the example of an iPhone or Android device, where the design of the technology and the design of the hardware occur in tandem.

Phase	Task	Role
Define	<ul style="list-style-type: none"> • Determine product or service • Determine goals • Research (similar products/services, market needs, user needs, etc.) • Identify content • Client interview (if applicable) • Create project plan and delivery requirements for the project 	UX Designer
Structure	<ul style="list-style-type: none"> • Analyze findings from research • Identify information architecture • Create user personas and scenarios • Sketch mockups of experiences and design solutions • Create low fidelity flowcharts and wireframes 	UX Designer
Design	<ul style="list-style-type: none"> • Identify aesthetics and create mood board(s) • Create high fidelity version(s) of sketches and wireframes • Produce images and graphics • Review of comps with team and/or client • Review and redesign based on feedback 	UX & UI Designer
Build and Test	<ul style="list-style-type: none"> • Create fully-functioning prototype • User test prototype • Revision based on test results • Produce updated project • Conduct technical and usability testing, recording bugs and design-change requirements • Revision based on test results • Technical and usability testing of revised design • Final presentation and final revision 	UX & UI Designer
Delivery and Launch	<ul style="list-style-type: none"> • Final delivery • Project launch plan (if applicable) 	UX & UI Designer

Note: You may want to review the [Introduction to project planning, project management, and teamwork](#) activity to dig deeper into the concepts and best practices used for project planning, production phases, project management and working in teams.

- Introduce Adobe XD as a tool for both UX and UI designers. Show students the provided XD file that includes the sketches used to create the finished student portfolio you just reviewed. Explain that students won't work with XD just yet, but that as they prepare to prototype their own app it's important to understand what designers can do in XD. Explain and discuss the following, using the XD asset as a reference:
 - In XD designers can design and prototype digital experiences and share these fully-functioning proto-

types to get user feedback to then iterate and improve the design.

- After a design is finalized in XD it is shared with Web developers, App developers and programmers to code and/or create the final app, website, product, or experience.
- XD allows UX and UI designers to track design iterations and versions in one single file. They can test, revert, and see the complete evolution of their project.
- UI designers can create the look and feel of what will become the final product.
- UX designers can repeatedly test and record interactions of users using the prototypes to continually refine and improve the design.
- XD is especially helpful when working with clients to show them each step along the way and get feedback as they build out their interactive design project

XD guide: Adobe XD tutorial series.xd (Activity #1 - Final sample student portfolio)

11. Using what they have learned allow students time to explore 1 or 2 products - digital or physical - that they think are designed well. Explain that they are to critically analyze and document the following:
 - Why is it designed well?
 - What UX and UI considerations do they think were made in creating the product?
 - How could the product be better?
12. Explain that they will present their findings, so allow students time to prepare a short presentation. Ask each student to present the app(s) they selected and their analysis.

Note: You can have students create a presentation in [Adobe Spark](#).

Assessment:

	0 – Does not meet expectations	3 – Meets expectations	5 – Exceeds expectations
Analyzing digital apps	Absent or incomplete.	Student identifies how the product is well designed. Student makes one or two connections between the product and when and where they think UX and UI design was applied.	Student identifies why and how the product is well designed. Student makes three or more clear connections between the product and when and where they think UX and UI design was applied. Student provides two or more ways the product can be improved using principles of UX and UI design to make the improvements.

Background preparation resources:

- To view video tutorials aligned with the skills required to complete this project, visit [Adobe Learn](#).
- For more teaching and learning materials on the topics in this project, search for materials from the community on the Adobe Education Exchange: <https://edex.adobe.com>.
- For an overview of the interface and for more information on the technical aspects of *Adobe XD*, see [XD Help](#).

UX Design

- What you should know about User Experience: <https://blogs.adobe.com/creativecloud/what-is-ux-and-why-should-you-care/?segment=design>
- What Does a UX Designer Actually Do?: <https://blogs.adobe.com/creativecloud/what-does-a-ux-designer-actually-do/?segment=design>
- Do This, Not That. UX Dos and Don'ts if You're Just Starting Out: <https://blogs.adobe.com/creativecloud/do-this-not-that-ux-dos-and-donts-if-youre-just-starting-out/?segment=design>
- UX Process: What It Is, What It Looks Like and Why It's Important: <https://blogs.adobe.com/creativecloud/ux-process-what-it-is-what-it-looks-like-and-why-its-important/?segment=design>
- 5 Simple UX Principles to Guide your Product Design: <https://www.sitepoint.com/5-simple-ux-principles-guide-product-design/>
- Master Your UX Vocabulary With These 50 Must-Know Terms: <https://blogs.adobe.com/creativecloud/master-your-ux-vocabulary-with-these-50-must-know-terms/?segment=design>
- Fundamental Principles of Great UX Design: <https://www.uxmatters.com/mt/archives/2014/11/fundamental-principles-of-great-ux-design-how-to-deliver-great-ux-design.php>

UI Design:

- What Every Graphic Designer Thinking About UX Should Know: <https://blogs.adobe.com/creativecloud/what-every-graphic-designer-thinking-about-ux-should-know/>
- 8 Basic Principles of Design: <https://spark.adobe.com/blog/2016/07/27/8-basic-design-principles-to-help-you-create-better-graphics/>
- The principles of design: <http://www.j6design.com.au/6-principles-of-design/>
- Design principles: <https://edex.adobe.com/resource/23191da5/>
- The core principles of UI design: <https://www.invisionapp.com/blog/core-principles-of-ui-design/>

UX & UI Design:

- UI vs UX... What's the difference?: <https://medium.com/@lauren.proctor/ui-vs-ux-what-s-the-difference-cb921e237425>
- My response to the ketchup bottle UX vs UI meme: <https://medium.com/northern-dynamics/my-response-to-ketchup-bottle-ux-vs-ui-meme-56c1a14a6f98>

For more information

Find more teaching materials for using Adobe software in your classroom on the Adobe Education Exchange: <https://edex.adobe.com>.



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