

Misconceptions About
User Experience Design
and Why There is no Universal Definition



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In recent years, there has been a rise in the number of design professionals not originating from a design education background. In fact, many professions and fields are able to evolve and improve because of exposure to skills and concepts not entirely original to them.

What UX design is has become confused among those not familiar with the field. Even more concerning is the amount of professional UX designers unable to define the role themselves.

Standard UX Research is composed of a wide range of methods, many of which originate from fields not design related.

A misunderstanding about what UX design is and the purpose of creating a user experience is primarily the result of an inability to define what it is a user experience designer actually does.

Problem

A misunderstanding what UX Design is the result two factors; the first being that professionals cannot come to a general agreement about what UXD is, therefore a ubiquitous definition cannot be created. Or the second, and far more troublesome and likely reason, is because people, including those responsible for designing user experiences lack an understanding of what they are tasked to do.

If what it means to be a user experience designer continues to be misunderstood, then a decline in the quality of user experiences is only inevitable.



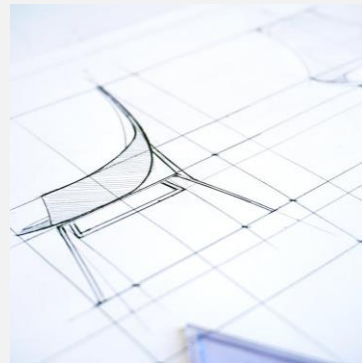
The History of **User Experience Design**

User Experience Design "as we understand it today, is a relatively young discipline. It is generally recognized that it emerged as an activity during the Industrial Revolution of the mid-eighteenth century." (Milton, Rodgers 19)

It is worth noting that the emergence of UX and the process of thinking accordingly coincides with the Industrial Revolution. At a time when objects became mass produced and the actual production became more mechanical, design thinking and the way users interacted with products actually became more thoughtful.

Since the emergence of product design as a profession, the discipline has been characterized by a spirit of reform. A number of individual designers, self-styled movements and writers have attempted to establish its role in society.

The shift in how designers thought about users when creating products did not happen by chance but was born out of necessity, another impact of the Industrial Revolution. One of the defining impacts of the Industrial Revolution is how the overall quality of life improved with the emergence of new technology.

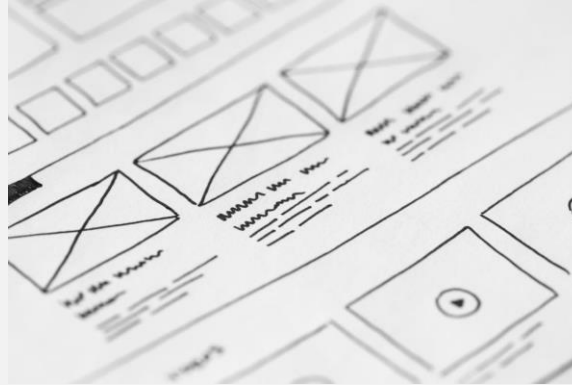


The job of product designers was to meet the needs of users through the creation of products because, need-fulfillment is what makes an experience pleasurable" (Hassenzahl)

With the perpetual needs of people arising product design continued to evolve and products were designed "using knowledge and experience of the user, using symbols and signs." (Djadadinigrat, Wensveen, Frens, Overbeeke 295)

Product Design and creating the user experience became more intuitive as users began to gain an understanding of semiotics and shared experiences. If it were not for the user then user experience design would not have continued to evolve.

An experience that is foreign to a user or requires substantial effort to learn will not be perceived as enjoyable. It was important to consider the pace at which users evolved with products when designing said products.



Familiarity

Even in a new experience, familiarity is something that provides comfort to people while also serving as a stepping stone into the unknown to learn new systems in order to evolve as users.

Today, user experience design is primarily associated with digital products. Product design and UX "is a concept that has gained the attention of modern research and become the center point of the modern HCI community." (Abbasi, Lew, Rafique, Li 41)

It is understandable why Human-Computer Interaction has become so tightly woven with UX given the amount of digital products being developed. Interaction between users and digital devices and products is an incredibly important field of study because often times the device serves as a vehicle for the user experience.

The device, while providing an experience and product is also a separate product itself and provides the user with its own user experience.

"UXD work tends to be distributed throughout the entire development process, requiring continuous research, design and evaluation. This implies a need to share the results of UX work with the whole team on an ongoing basis, allowing the team to build a shared understanding." (Silva, Silveira, Maurer 2)

The collaborative nature of modern UXD is necessary given how many layers modern products, especially digital, have. However, with so many people working on one product and one 'user experience' the definition of what a UX designer is begins to become blurry.

The definition of a UX designer becomes too broad or too narrow depending on who is asked.

UX Research

Design research, as a field of study, "is a relatively young discipline and does not possess a well-established knowledge base when compared to more recognized disciplines. Thus, a lot of design research has tended to draw on existing methods, techniques, and approaches from the physical and social sciences." (Lanius, Weber, Robinson 352)

A study conducted for one product may not provide the same value or insight when developing another.



User Surveys

User surveys are one of the only methods used in almost every user experience research study. Surveys provide insight into user's attitudes and feeling when using a product.

Why are user surveys so important?

Surveys provide insight into user's attitudes and feeling when using a product. This information provides UX designers the information needed to improve the design and experience.

How are surveys conducted?

A user survey usually consists of surveyed users giving open-ended answers about their experience using a product as well as additional "yes or no" questions about the product's usability.

Experimental studies are another type of method used when testing product usability. Participants are randomly assigned treatments to assess how users respond to different variables throughout their experience. Experimental studies are typically conducted after a survey when responses about facets of the product are varied.

A correlational study is used to examine if there is a connection between two variables. A correlational study may study "the relationship between usability and likelihood to recommend. This relationship tends to be strong and positive (people with higher perceived usability tend to provide higher LTR ratings)." (Sauro, Lewis 12)

A completion rate study is conducted to observe how intuitive the UX of a product is and arguably one of the most important metrics when measuring product usability. "Also called a success rate is typically collected as a binary measure of task success (coded as 1) or task failure (coded as 0)." (Sauro, Lewis 13)

Studies such as experimental, correlational, and completion rate metrics are some of the methods of research that measure more scientific and technical aspects about the user's experience.



Colin Gray, "a professor of design and technology at Purdue University in 2016 interviewed 13 UX practitioners about their methods found that they primarily mentioned personas, interviews, and focus groups as consistent methodologies." (Lanius, Weber, Robinson 353)

Cocreation

Designers will also often exercise cocreation when designing a product. Cocreation "is the process during which consumers take an active role and cocreate value together with the company." (Kohler, Fuller, Matzler, Stieger 733) This enables consumers to get involved in their own design process.

Goal of Research

User research is conducted in order to understand the people using the products as well as how the product is interacted with. "One of the primary goals of conducting user research is to establish some casual relationship between a design and a behavior or attitude." (Sauro 2013)

Improvement

UX Research

Given the fact that UX Research primarily relies on approaches from other fields it is understandable why designers are met with confusion.

However, "perhaps the quickest and most blatant improvement to UX research would be a field-wide expectation, regardless of discipline or journal, that generalizable UX research be guided by distinct questions or hypothesis. These and other steps will help the multidisciplinary field of UX develop consistent, productive research methods." (Lanius, Weber, Robinson 369)

By defining a universal set of methods that UX researchers use, at least as a stepping off point, it may be possible for UX design to be easier to define.

Giving the profession an identity through unique and ubiquitous approaches to collect data, the field may be able to adapt to provide greater services than currently being developed.



UX Design & **Misconceptions**

The adoption of research methods from other fields of study can be useful when revising a product's design, but conceptually do not provide any clarity on what UX design is.

Similarly, the evolution of the products being developed since the dawn of the term, especially the abundance of digital products have made the field so intertwined with computing.

Digital Dominance

Dominance of digital products in our lives has led both consumers and professionals in the field to believe that UXD is strictly associated with technology. But, "after more than twenty years of mobile phone design and nearly as long since the definition of ubiquitous computing, there is still no common agreement about what constitutes ubiquitous user experience and who is responsible for it." (Kuniavsky 13)

Lack of a Definition

An lack of a universally agreed upon definition has bred confusion about what it means to be a UX designer because "it is not clear what skills are required to design in this environment, much less what titles of people who hold those skills should be." (Kuniavsky 13)

Even more concerning is the lack of understanding by professionals who hold the title and the inability to define the jobs that they hold

"Ibargoyen et al. (2013) asked 77 UX professionals to define their discipline and found that even seasoned professionals lacked the vocabulary to describe a discipline in which they partake on a daily basis" (Lanius, Weber Robinson 353)

Additionally, "Jääskeläinen and Heikkinen (2010) conducted a survey and found huge differences in the definitions of UX between practitioners and end users." (Lanius, Weber, Robinson 353)

Common Traits

The fundamental traits required to study and design user experiences are not necessarily unique to UXD but can be found in other industries and fields making them difficult to define.

Diverging Definitions

"UX methods investigated using literature review or surveys of experienced professionals consistently show many diverging definitions of UX as a concept and opinions on the methods used to perform UX." (Lanius, Weber, Robinson 353)

Individuals with a diverse set of skills collaborating are necessary to designing a user experience.

Designing a product, and subsequently a user experience, "involves teams converging ergonomics, cognitive sciences, information quality, etc. Because all these disciplines affect the overall UX in one way or another." (Abasi, Kew, Rafique, Li 41)

It is difficult to imagine a single person with all the abilities at their disposal to perform such a task. Therefore, it is unreasonable to label just one person as a user experience designer when designing a product calls for the skills of an entire team.



UI vs. UX

The confusion between user experience design and user interface (UI) design seems to be present now more than ever with the abundance of digital products.

User Interface Design

UI design is a facet of the user experience and "determines how the various user interfaces fit and flow together as a whole." (Kuniavsky 21) The UI is an important part of the UX but does not form the experience as a whole

The user interface serves as the face of the product and exists as the surface of the UX. The UI is fundamental when creating an experience because a UI that feels unusable will likely produce a less than ideal experience.

However, an experience with intangible assets requires the UI to constantly validate the user's needs in order to make the experience enjoyable. This results in variation of how the UI is addressed from product to product.

The user interface can be a part of the product that delivers the intangible pleasant experience but it must be designed so users are content. The UI is not the whole experience but helps shape it

Beyond a Screen

A product does not have to be digital in order for it to deliver a positive user experience. In fact, the notion that UX design is unique to digital products may actually be the very thing that makes delivering a pleasant user experience more difficult.

When developing a digital product, "we are particularly concerned with aesthetics of interaction: products that are beautiful in use. Many electronic products are lacking in this respect. Whilst they may look aesthetically pleasing from a traditional industrial design point of view, they frustrate us as soon as we start interacting with them." (Djajadinigrat, Wensveen, Frens, Overbeeke 296)

Evolution of UX

The evolution of product design since the Industrial Revolution has emphasized the importance of an experience associated with a product. Product design and "experience design is about transcending the material. It is about creating an experience through a device." (Hassenzahl)

Evoking positive emotions is just as important as solving the problem the user faces.

Creating an enjoyable experience requires people using the product be actively involved in the problem solving process.

Validating a person's needs by making them a part of the experience and problem solving is what makes a product's UX truly exceptional.

"In fact, most interactive devices clearly show that push buttons need pushing, sliders need sliding, rotary pots need rotating, etc." (Djajadinigrat, Wensveen, Frens, Overbeeke 295).

Recognizing the importance of interactive and tactile elements found in digital products is crucial to how products are designed to validate subconscious human needs.

Stimulating the interaction of tangible objects in digital products allows users to take an active role in the user experience and further affirm the reason for using the product.

A product must also consider how the user can take an active role in producing their experience because "the user experience is of course not just what the users perceive; it's also what they do." (Sauro)

Writing A Letter

The Problem

Writing a letter is a very thoughtful process where a person must think about who they are writing to, why they are writing, and what they are going to say. The experience of writing a letter requires involvement of the person at each step.

Pen and Paper

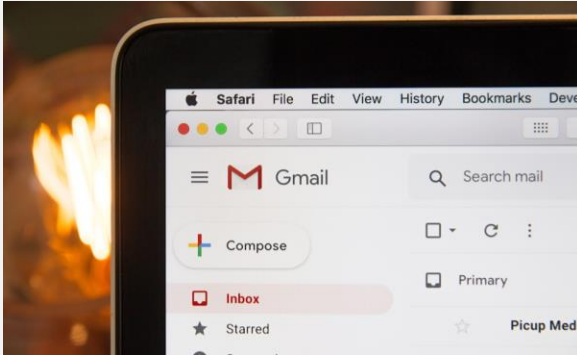
The Experience

When writing the letterforms on a paper, a person must think more consciously about what they are going to say and avoid making spelling and grammatical errors. This part of the experience is arguably the most thoughtful and requires the most engagement.

Sign and Sealed

The Validation

The letter must then be addressed and sent to the recipient. This process is rewarding as it allows people to physically interact with the products and be involved in the experience from start to finish with tangible result and validation.



Mouse & Keyboard

Drafting and writing an email accomplishes the same goal in a fraction of the time but does not evoke the same emotions. Writing an email does not call upon the user to engage in as many tasks as a writing a letter, making the experience feel mundane and similar each time.



Pen & Paper

Writing a letter is validating for both the person writing the letter and the recipient since the steps allow for a greater measurement of an experience. This is because, "an experience is something with a definitive beginning and an end." (Abbasi, Lew, Rafique, Li 45) The experience is first defined by a problem or task needing to be done and requires validation through every step along the way.

"In fact, studies show that experiential purchases (i.e. the acquisition of an event to live through such as a concert, dinner, a journey) make people more happy than material purchases (i.e., the acquisition of tangible objects, such as clothing, jewelry, stereo equipment) of the same value (Boven and Gilovich 2003; Carter and Gilovich 2010)." (Hassenzahl)

A user experience is comprised of a collection of assets that can be both tangible and experiential themselves. The validation that each step provides are what make the user experience positive.

The user experience is really a collection of experiences that assemble feelings to improve the overall quality of life of a person.



Where is UX Design Going?

Research in the field of human-computer interaction will serve important purposes in the development of digital products. Increased interest in the subject will lead to the creation of more user-friendly experiences and interfaces.

"Human-computer interaction requires physical effort, by using body movement to control the scene, animation and so on." (Shi, Guo, Gong, Yang, Zhou 194)



Bridging the Gap

Bridging the physical and virtual worlds to develop a unique user experience is becoming more common and effective at delivering a successful product

Augmented Reality

Augmented reality relies on virtual assets to enhance a real world experience. A device using augmented reality is able to deliver to the user what the world in front of them cannot.

Biometrics

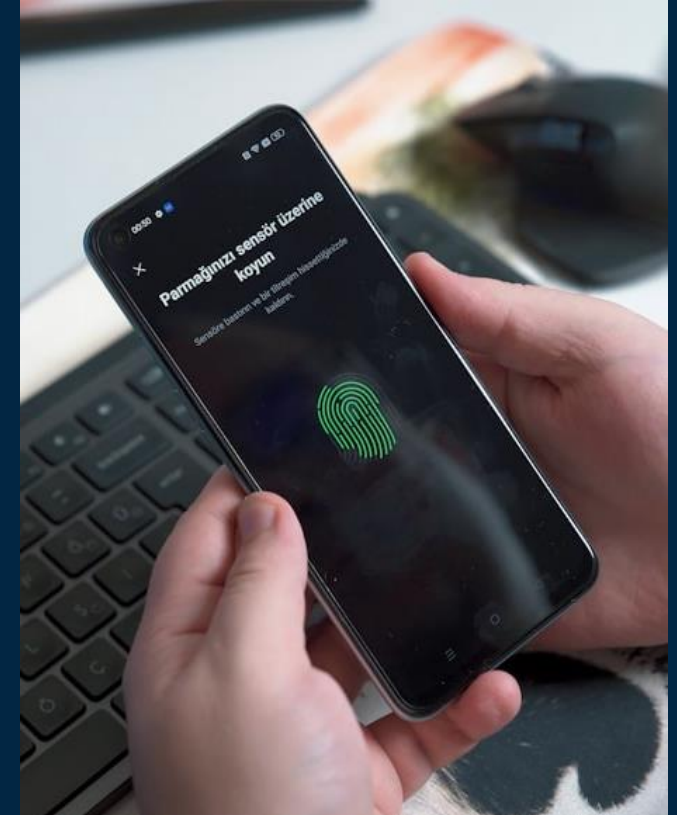
It has now become more uncommon to see personal devices that do not include the option for biometric scans. Finger print and retinal scans have become the standard in the personal device industry and advances are on their way.



"A modest rise in biometrics suggests that the field is exploring the effectiveness of physiological measures for understanding users." (Lanius, Weber, Robinson 369)
Biometric data arguably makes devices more personal.

However, as product development moves at unprecedented rates "there is both stark commitment and a shared apathy toward newer tools. Users who favor biometrics also tend to favor AR/VR. (Lanius, Weber, Robinson 365)

The increasing use of biometrics in personal devices and digital products has and will continue to invite discourse about usefulness, usability, and how and if the collection of biometric data is ethical.



Personalized UI

Product developers are becoming more mindful of how information is presented to users and personalizing UI design. Smartphone screens have begun to give users the option to personalize the appearance of icons, layouts, and the information displayed on the screens and how it is presented.

"At the moment, the majority of commercially available interactive devices is either too practical or too open-ended. The practical view results in very obvious and uninspiring stories: how exciting is keeping a calendar on a mobile phone. The open-ended view on the other hand just provides functionality." (Hassenzahl)

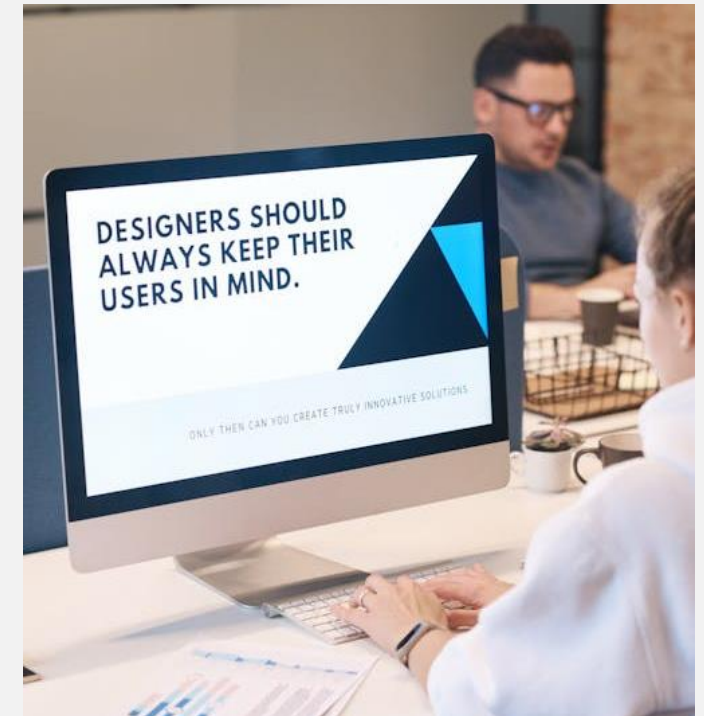


Personalized UX

Giving users the power to take part in designing their user experience provides the feeling that they are able to solve their problems themselves.

Designing a car for example gives users the capability to design their own experience and personalize it based on their needs that may differentiate from others.

Designers and teams must realize that providing the option to personalize assets embedded within a user experience is the next step in the evolution of producing an exceptional user experience for all people.



The Solution

- ✓ **A shift towards more robust research will provide greater insight for designers when thinking about experiences. A clearer more universally practiced set of research methods will also help eliminate incorrect interpretations about UX Design**
- ✓ **Recognizing that designing a user experience requires an entire team of individuals rather than just one will help eliminate misunderstandings about UXD. Given the amount of action that goes into creating a user experience, the title of "UX designer" for an individual becomes unreasonable.**
- ✓ **Collaboration in the UX design process is essential and a "User Experience Designer" is actually an entire team; either everybody involved is a UX Designer or nobody is.**

Conclusion

Designing an extraordinary user experience demands empathy from an entire team of designers, researchers, engineers, marketers, and more to understand the core desires of people and provide the tools to evoke positive emotions and improve their quality of life. This should be universally understood and the industry standard.



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Thank
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