



## **UNIT 1. MEDIA ACCESSIBILITY**

### **ELEMENT 3. UNIVERSAL DESIGN**

#### **USER NEEDS**

### **Video Lecture Transcript**

#### **Slide 1**

This is unit 1, Media accessibility; element 3, Universal design; video lecture User needs.

I am Anna Matamala, from Universitat Autònoma de Barcelona.

#### **Slide 2**

And in this short lecture I will be talking about the importance of understanding user needs when designing products and services.

#### **Slide 3**

Imagine you are a company wanting to offer a new product or service. You adopt a universal design approach, that is, you aim this product or service to “be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design”. The way to design this product or service and to make sure that it is indeed usable is by

doing user research, by talking to users during the design process, by understanding user needs and gathering requirements from users.

“User needs”, as defined by a UK government website (<https://www.gov.uk/service-manual/user-research/start-by-learning-user-needs>), are “the needs that a user has of a service, and which that service must satisfy for the user to get the right outcome for them”.

## **Slide 4**

When you do user research, you observe and talk to users, you understand what users want to do with a service or a product, why they want to use it, what the problems are. You need to understand the users and identify their goals and values.

## **Slide 5**

These user needs are then translated into requirements, which are more formal descriptions of what the service or product must do. As explained by Kujala, Kauppinen and Rekola in the article “Bridging the gap between user needs and user requirements”

(<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.103.808&rep=rep1&type=pdf>), requirements are divided into user requirements and technical requirements. User requirements are written from the point of view of the user and describe functions, constraints and properties that must be provided to satisfy the user needs. Technical requirements describe how the product or service will be implemented to meet the user requirements.



## Slide 6

There are multiple methods for carrying out user research. You can gather different people and carry out a group discussion in what is called a “focus group”. You can interview users. You can observe them while performing a task. You can ask them to fill in a survey. The possibilities are manifold and books such as “Observing the user experience” by Goodmand, Kuniavsky and Moed or “Measuring the user experience” by Tullis and Albert will help you learn about different methods. What is really important is that you carefully plan any user test: you need to know what your goal is, how you will recruit your users, how the test will be developed, and how the data will be analysed. And, of course, all this needs to be done following ethical procedures.

## Slide 7

I will illustrate the process of gathering user needs and requirements by referring to the Immersive Accessibility project. ImAc —this is its acronym— was an H2020 project that ran during 30 months from 2017 until 2020. One of the questions we tried to answer in the project was: how can we make immersive media accessible? What should subtitles, audio descriptions and sign language interpreting in 360° videos look like? How should they be created?

ImAc adopted a user-centred iterative design. We identified two categories of users: professional users creating the content, and home users consuming the content. Then, we described user scenarios based on the technical components to be developed.

Very early, even before developing any accessible services or tools, we talked to users by means of focus groups. And then we talked to them again and again the moment we had prototypes.

All these allowed us to identify user needs, which were translated into requirements, and all this informed the development of the technologies and the services.

## **Slide 8**

This user-centred methodology should be behind any new development or improvement. It could even be taken a step further into participatory design, in which users are co-designers in the process. In any case, involving users in any process is fundamental. Remember: “Nothing about us without us.”

## **Slide 9**

This video lecture has been prepared by Anna Matamala, from Universitat Autònoma de Barcelona. You can reach me at [anna.matamala@uab.cat](mailto:anna.matamala@uab.cat).

## **Slide 10**

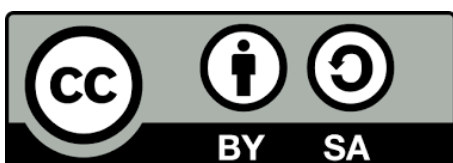
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