Matthew Mason Interaction Design And The User Experience: TMA 02

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Question 1

The design problem I've chosen to tackle is redesigning a Dungeons&Dragons mobile app that allows users to manage a character's creation and stats as the game progresses. The apps main stakeholders consist of two main types of users; those who have never experienced the game before and require a simple and accessible introduction to the game and those who are more familiar with the rules and wish for a more convenient and efficient way to track character and story progression providing a much more satisfying and fun experience that doesn't constantly interrupt the games pacing. There are a number of other stakeholders including beneficiaries; those who might be employed to work on the app, providing maintenance and updates for future editions, environmentalists as use of the app would encourage less paper waste and those who it might negatively affect such as the company that produces physical editions of the books as it could reduce sales. Contributors could include potential users, graphic designers, programmers, the company who publishes the physical guides and lawyers, all of whom could act as decision makers too.

The main activities the app supports are the entering and frequent manipulation of alphanumeric data such as changing a characters current health points or adding items to an inventory, selecting options from a list, for example, when choosing which spells to prepare, increasing and decreasing numeric data and checking boxes or radio buttons using the phones keyboard or touch screen. These actions require users to have reasonable manual dexterity, fine motor skills, flexibility and good eyesight to read the on-screen text. Other activities include loading pre-made and saved character profiles, uploading images for character profile pictures, shaking the screen to roll on-screen dice, or voice-to-text recognition for taking quick notes about important events in the story. All these activities require attention to detail, memory, reasoning, and the ability to respond to change and should aim to make the experience of the using the app much more exciting, efficient and easy to use.

The environments the app will be used in will vary greatly, from the comfort of a quiet area at home where attention can be fully focused on the process of creating a character, to being in the middle of a combat encounter surround by your friends at a boardgame café, pub or convention full of other distractions. It could be used outside at a park on a sunny day or even on a long train journey. All these different environments can greatly affect the activities of using the app. However, the project aims to address this by having the app work in conjunction with the game. This allows for a more convenient, efficient and unencumbered way to manage a user's D&D experience which doesn't distract and interrupt the flow and pace of the game, providing a better user experience than using physical books and its interactive nature allows feedback about choices made and specific rules and situations to be looked up more effectively. It should aim to be a companion that enhances the experience and makes playing more fun and exciting.

I decided to change the preferred project to be developed - the D&D app. It would be easy to create prototypes (slideshows, cardboard models, sketches, storyboards, materials used) I have a better understanding of the scope and tasks that need to be carried out, constraints aren't limited as there isn't a defined set of icons or consistency across apps, e.g. specific icons for menus. And colours. (580)

Question 2

(a)

One physical capability that is relevant to my design problem is a user's ability to grasp and manipulate small objects which includes attributes such as manual dexterity, grip, strength and flexibility. This is relevant because the app is designed to run on a mobile phone, so the user would need to be comfortable pressing physical buttons on the phone, using the touchscreen to input data or gesturing with the device to produce an effect, such as shaking the phone to activate the gyroscope and roll a dice within the app rather than having to press buttons to carry out the same function.
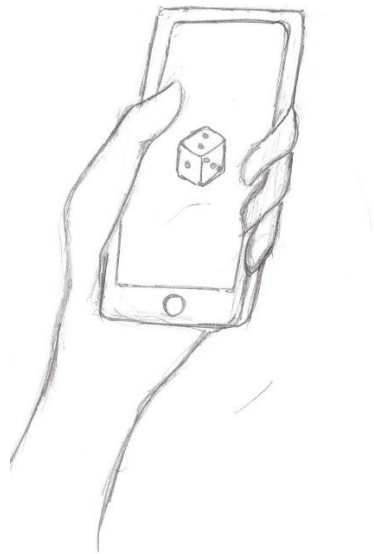
One sensory capability relevant to the design is sight which is needed to both see the controls and receive visual feedback. Users visual ability can vary greatly from those who have no issues to those who have impairments such as needing glasses, different types of colour blindness, and conditions like tunnel vision, rapid uncontrollable eye movements, and cataracts. It's therefor important to take these capabilities into account to make the app accessible through methods such as compatibility with screen readers, the ability to adjust text size and customise the colour scheme to provide every user with the best experience possible.
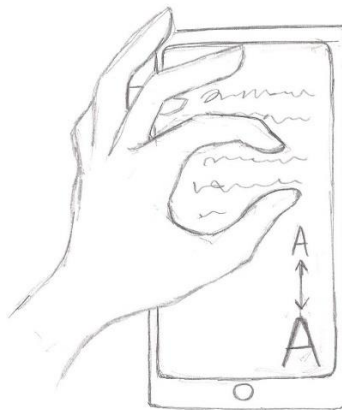
One cognitive capability relevant to the design is reflective cognition which includes problem solving, planning, reasoning and decision making. This is especially important as creating a character can be a complex task with many decisions that can have consequences further along in the game which affects the user experience. This means the app will need to be easy to learn which can be done using a guided interactive tutorial and safe to use, letting users change all aspects of their character should they need to. It would also need to provide feedback when making decisions and relevant information about the choices being made and how they can affect other aspects of the character creation process.
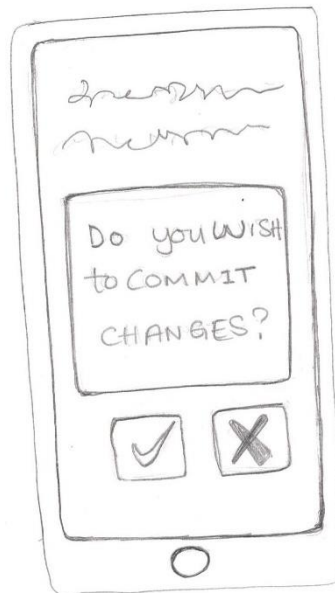
(b)

One activity that my interactive product would support is with the complex task of determining the characters ability scores. These are numbers that represent a character's strength, dexterity, constitution, intelligence, wisdom and charisma in the game. This involves rolling a dice with 20 sides, 4 or more times and recording the total of the highest three numbers to give you a score which is assigned to one the abilities. Repeat this process 5 more times for each of the other abilities. There are various ways to determine ability scores which can complicate the activity, the example above is just one specific method. Other methods include using pre-set scores to assign to abilities or a points-based system where you are allocated 27 points to spend on ability scores. Different users may consist of players, the person running the game, referred to the Dungeon or Game master, or even those who want to use the character creation for purposes outside of the game for example creating a character for a novel or as an idea for something to draw. This variety of uses will change the requirements significantly based of the different user's perspectives.

The environment for this example will be in a quiet home setting where attention is directed towards the app. The main factors of the environment that affect the apps use is the size of the room, the space available in it and any visual or audio distractions such as music, TV's or other electronic devices that compete for attention. The environment and its potential distractions require that the app be engaging enough to hold the user's attention and easy to learn so it prevents the user getting frustrated and bored, in turn suggesting requirements that consider the apps ease of use and accessibility.
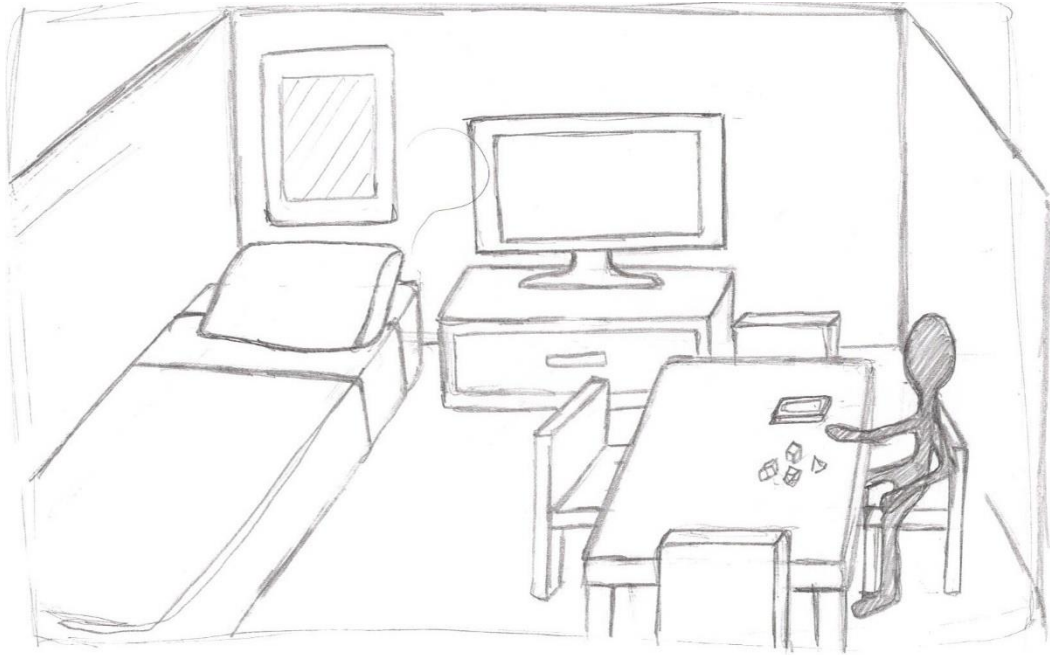
(612)

Question 3

The first requirement gathering method for my interactive product is studying documentation. Due to the physical player handbook consisting of 311 A4 pages, with character creation taking up over half of the book, there are large variety of decisions to be made regarding the process and they ways in which each part of the process can be accomplished. For example, the different ways ability scores can be achieved. Studying documentation allows for a better understanding of the domain, the projects scope, the activities that users are potentially already accustomed to and prepare for other forms of requirements gathering methods such as interviews in the form of qualitative and quantitative data.

The second method would be to conduct semi-structured interviews with potential users. As the interactive product is being designed for use by a single person at a time, gaining an understand of how it can make the character creation accessible, easy to use and enjoyable requires a more exploratory method, especially if the user has never attempted the process before using the physical books. Conducting interviews with already existing products and prototypes would yield qualitive results in hopes to reveal personal preferences and explore alternative methods for carrying out tasks with the sessions audio being recorded, notes taken, and photos of artefacts taken per consent from the interviewee.

Finally, using focus groups benefits the requirements gathering process as Dungeons&Dragons is very much a social game so having multiple users share their thoughts highlights areas of agreement and conflict regarding the proposed app. It can bring together people of different perspectives and help inform and develop issues that may be missed during individual interviews or other methods of requirements gathering and produce mostly qualitative data. The method could be used to find out what common consensus there is regarding current methods of character creation and what they find challenging or difficult to understand.

By using multiple techniques for gathering data it's possible to get a much richer understanding of the design problem and understand the problem from different perspectives that weren't clear or apparent from a single method. Studying documentation helps to understand the domain, interviews assist with usability goals and exploring unique perspectives to make the interactive product engaging, easy to learn and enjoyable while focus groups help share good and bad experiences using current methods such as physical books with pen and paper.
(394)

Question 4

The goal of gathering data for the design problem is to understand how technology can play a part in the character creation process and make it accessible for new players while still allowing appropriate customisation options and be feature rich enough for existing players.

The interviewee I have chosen is clearly identifiable; they are someone who has had a limited experience playing Dungeons&Dragons through using pre-made characters, however they are now interested in expanding their experience by joining a new game and they want to use a character that they have created themselves.

As the relationship between myself and the interviewee is of a personal nature, the location would take place in our home. This is beneficial as it provides a more comfortable, relaxed and familiar environment and with the semi-structured nature of the interview, helps to encourage a more honest and open response. It also enables the session's audio and video to be recorded providing the interviewee is comfortable with this and allows exploring prototypes through different mediums such as physical artefacts and online media.

1. Have you ever made a character before? Follow-up: If yes can you elaborate on your experience, if not, was there any reason that you haven't attempted it?
   This question is mainly to probe the level of experience the user already has and to gain an understanding of the reasoning behind what they liked about making their own character or what they found difficult, confusing or off-putting about the activity.

2. If I asked you to come up with a premise for a character now, where would you draw inspiration from? Follow-up: Do you think you would find it easier to rely on the characters in the book as a starting point or would you come up with something entirely your own and apply those features to your characters?
   This question is based around the idea of the user imagination and how much help they need in the process of making their character. This might have the effect of needing to include a tutorial or guide for first time users where they create a pre-made character from scratch to help foster some ideas for their own character. On the other hand, if the user has an active imagination, the defined character in the book might limit their ideas so this question helps to discover how much customisation needs to be available to those users without being confusing for beginners.

3. If you started to make your own character, which is the first aspect of it that you'd focus on? Follow-up: How much time would you consider spending on creating your character?
   There are many different ways and starting points for creating a character, some people might focus on race first, others on their class, or even the characters ability score, traits, background, etc… This question will help to find the most common starting point but also to establish if a set structure for creating a character is the best option as opposed to allowing users to pick a section, fill it in, then return to another section. It also helps determine how efficient the process needs to be as the attention span of some users might be significantly less than others along with how fun and engaging it is to keep users from getting bored or frustrated about the time it takes to complete.

4. Hand the user a pre-made character sheet, tell me what are your initial impression of the information required to create your character? Follow-up: How much of it can you understand without needing to refer to another source for help, and if you were to create

your character how much depth would you go into about them.
This question helps to determine the amount of detail the user finds necessary and what the minimum about of information is needed to be deemed complete in their opinion. It also helps find out how willing the user is to go searching for information should it not be available to them in the present moment which in turn could affect the usability and experience of the whole process.

5. What would you like to see as a feature in the app to help assist you with creating a character?
This is a more exploratory question to get an opinion of how the app can be unique and cater to their personal ideas and perspective.
(731)

Consent form for the participation of the user in the study and exploration of a character creation mobile application

I give permission for the following data and procedures to be used as part of the study and exploration of using an interactive product to create characters for the game Dungeons&Dragons and other purposes outside of the game (please check all that are appropriate):

- o   I agree to participate in the initial study and that my details will not be passed on to third parties during or after the study has finished.
- o   I agree that I am over 18 years of age.
- o   I wish for my details to be removed and not be contacted again after the initial study has been completed.
- o   I agree to participate in further research that I consider appropriate, depending on availability throughout and after this study.
- o   I wish to have my details removed and not be contacted again after the further research has been completed.
- o   I agree to my details being held on record for future participation after further research has been completed.
- o   I agree to have the sessions audio recorded.
- o   I agree to have the session videotaped.

If you are happy with the options you have checked and are happy to proceed, please sign and date below.

Name	
Signature	
Date	

Question 5

While discussing question 5 during the interview, one scenario that arose was about the conceptualisation of a character and its abilities. Sometimes it can be difficult to know where to start with making a character as it's a very creative process so having an initial idea can be the most time consuming and frustrating part of the experience. One idea that was mentioned was the ability to have a character randomly generated at the press of a button and using that as a basis for something that can be elaborated upon and customised until the user was happy with the outcome.

One challenge the interviewee encountered when first creating a character was having to refer to the physical book for finding specific information and not knowing exactly where to look. They had a great deal of trouble finding the exact information they required and found it extremely frustrating and time consuming. The other challenge that the interviewee came across was sometimes character features and ideas can fall outside the scope of the games basic rules meaning that an idea the user really wants to incorporate can't be included which can provide a disappointing experience. There are many more advanced rulesets and stories that are part of the Dungeons&Dragons world, but that are outside the scope of this interactive project.

Three requirements that stemmed from the interview are as follows:

1. The application should link to a reference guide that allows users to quickly access specific and relevant information. As mentioned previously, having to refer, back and forth within the pages of a book slows down process so having a built-in guide where a search function and links to specific sections provides a much more efficient user experience.
2. There should be an option to make a character with randomised attributes at the press of a button. As some users may have difficulty developing an entire character with a backstory and uniqueness, having a button to make a randomly generated character helps provide some ideas from those who find the creative process difficult.
3. The process of creating a basic custom character where all data is provided by a user should take no more than 30 minutes. If a user wants to create a character from scratch, then the app needs to be efficient enough and fun enough to allow played to get set up with minimal effort.

Two question to help better understand requirement number 1 above could be as follows:

1. How would the reference guide be accessed through the app? This is relevant as there are a number of different ways this aspect could be approached, for example, clicking a highlighted word in the app takes the user out of the app to the specific page of a website that contains an online reference guide. It could also be that guide is simply accessible within the apps itself or that a separate reference guide app must be downloaded due to size constraints.
2. Will the reference guide contain exactly the same content and structure as the physical edition? Due to copyright laws and permissions, it may be necessary to change the content of the guide unless explicit consent has been given by the party who owns the material. While ideally the reference guide would be part of the app to provide efficiency and a more enjoyable user experience, this may not be possible, and an alternative may have to be considered.
(573)