6.0 **Module 6**
Fundamentals of Interface Design:
18 hours (12 in school and 6 at home)

Design Skills

Design Sensitivity

Exposure 1 - Introduction to User Interface Design
Exposure 2 - Ergonomics
Exposure 3 - User Centered Design

Overall Task   **Observation and Problem Identification**

Task 6.1 (at School + Home)   - Understanding User Interface

Task 6.2 (at School + Home)   - Developing Graphical User Interface

Task 6.3 (at School + Home)   - User Research

Task 6.4 (at School + Home)   - Product Interface Design

Final Output   - Make presentations with appropriate visuals

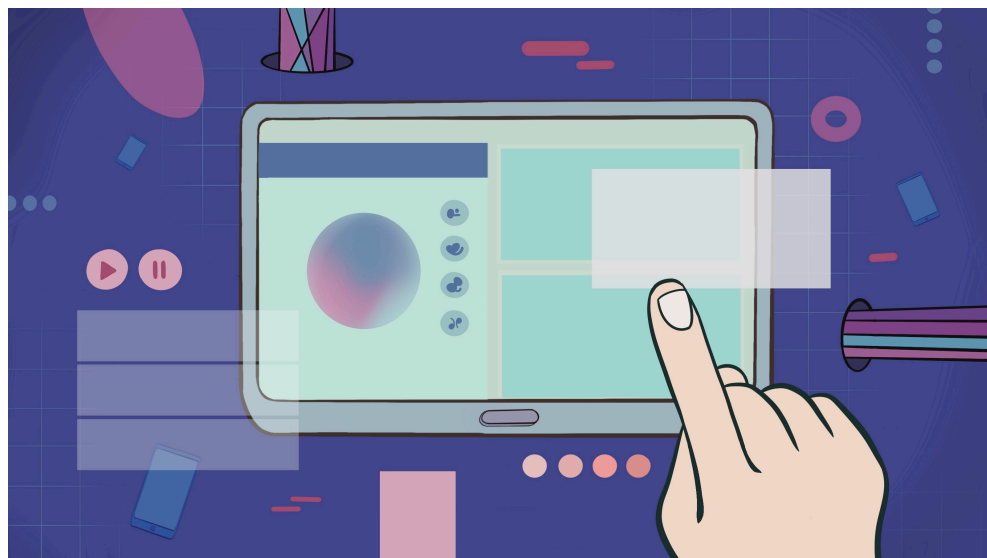   + Reflections, Self Assessment and References

6.0 Module 6

Fundamentals of Interface Design

(12 hours at school + 6 hours at home)

Design Skills

Design Sensitivity

Introduction

Interface Design is the design of an interface between a user and a digital device. It involves designing digital products, digital systems and digital services. Interface design takes into consideration the ease of use, communication abilities, personalization and function. It makes use of text, images, audio, animation, interactivity and touch.

Interface designers work in the digital computing industry to make their products and services easier, aesthetic and functional to use.

Aim of the Course

Aim of the course:

To expose school children (Grade 11) to basic fundamentals of Interface design. It should make students aware of how users interact with products and applications. The course will teach students about how design can help in making conscious decisions for users and how conscious design itself can help ease the decision making process for the users with the least cognitive load. It will also explore the ideas of user experience relating to digital products and empathy/user-centered design.

Place:

Place: Task 6.1, 6.2, 6.3 and 6.4 done at School and at home

Grouping:

Grouping: Class tasks are done in groups of 3-4 and Home tasks are individually

Equipment:

Equipment: Sketchbooks for sketching and taking notes, A3 Size papers, Chart papers, Color Pencils and Color Pens. Students may use digital devices like computers or tablets (if available, but not necessary)

Students might require further resources like printers for taking our prints for references and smartphones to take pictures.

Exposures

Exposure 1: Introduction to User Interface Design
- User
- What is interface
- Different types of User Interface: Product interface, Command interface, Graphic user interface, Voice controlled UI, Gesture based UI

Exposure 2: Ergonomics
- User and experience
- What is ergonomics
- Factors defining ergonomic
- Ergonomics in products

Exposure 3: User Centered Design
- User- centered design
- Understanding user
- User journey
- Product and interface

Design Thinking & Innovation Process involvement:

This task involves the following phases of the DT&I Process:
Phase 1. Observe/Empathise/Research (observation user interactions)
Phase 2. Understand/Analyse/Define (analysing user requirements + organizing information for interface design)
Phase 3. Ideate/Alternate/Create (trying creative alternatives)
Phase 4. Build/Prototype/Detail (making the output and the presentation)
Phase 5. Evaluate/Reflect/Implement (feedback from others)

Mapping SDG Goals:

The following SDG goals need to be considered while solving this task. While documenting elements and expressions, do think of gender equality and reduced inequalities and concern for life on our planet.

Task 6	**Task 6 = 6.1 + 6.2 + 6.3** School Hours: 12, Home hours: 6 🏫 + 🏠

Task 6.1
(done at Home)

🏠

Task 6.1:
Home hours: 2, done individually

Topic Title:

Observe and analyse the Interface of a Digital Device at home:

1. Select a digital device or product of daily use at home with an interface to interact with for operating/using it (these could range from mobile phone, to digital clocks, to TV, washing machines, etc.)
2. Study the interface and note down its elements – text, images/icons, audio, buttons, knobs, displays, etc.
3. Make a chart with the sequence of steps required to operate it
4. Note down point on how the interface could be improved and made easy to operate

Output 6.1: Analysis of the interface as notes and points on how it could be improved

Task 6.2
(done at Home)

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Task 6.2:
Home hours: 4

Topic Title:

User Research:

Understanding user (Children / Elderly/ Parent)
The digital device for this task is the remote control of the TV.

1. Converse with your target user on their experience with the TV remote product
2. Converse with a minimum of 5 users on both quantitative and qualitative aspects (users at your home and neighbourhood)

Quantitative aspects examples:
- *How much time do you spend watching tv?*
- *How many remotes do you have?*
- *Which buttons do you use most often?*
- *How do you access your favourite channels?*
- *etc.*

Qualitative aspects examples:
- *What are your problems while using a remote?*
- *What are the features you want on a remote?*
- *Do you like the quality of the remote?*
- *Is it easy to use?*
- *etc.*

Remember to ask why they have specific problems and try to get to the source of the problem (refer to research methodologies)
3. Do a brief analysis of the data collected from the target audience

Understanding interface
Analyse the interface of the TV remote
1. Use the remote to navigate through different channels/ functions and identify problems
2. Identify the basic interface
3. Identify how easy it is to reverse your actions
4. Identify elements you don't use
5. Identify buttons you did not understand
Output 6.3: Summary of User Research (both quantitative and qualitative) + Analysis of the Remote Interface

Task 6.3
(done at School + Home)

Task 6.3:
School Hours: 4, done in groups of 3-4

Topic Title:
Product Interface Design:
Task Objective
- Understand user
- Understanding product interface
- Research / analysis /synthesis
- Developing project brief
- User interface design

1. Make a group of 3 to 4 according to users
2. Exchange your findings on the remote control
3. Identify common insights/ problems/ findings
4. Make an ergonomic chart of the product
5. Redefine your brief
6. Redesign the remote control in terms of its form and interface
Output 6.4: Make a final render of the product with the necessary UI

Task 6.4
(done in School)

Task 6.4:
School Hours: 2, done individually

Topic Title:
Developing Visual Icons for Graphical User Interface:
Task Objective:
- Understand graphic user interface
- Analysis and development of symbols

In an interface, visual Icons make it easier to recognize a facility or function without the use of a language.

1. Develop 3 icons/symbols for any of these phone/mobile applications (note that the students should be encouraged to develop their own without access to the internet)
- children
- pet
- adults
- banking
- market
- social network
- games
- copy
- paste
- erase
2. Do note that the design of icons is quite simple and made easy to recognize
3. First sketch several alternate ideas
4. Finalise and make it using simple shapes. It could be black and white or in colour
Output 6.4: Present the final design

Task 6.5
(done in School)

Task 6.5:
School Hours: 6, done in groups of 3-4

Topic Title:
Developing an Interface in the Digital Space:

Task Objective
- Research / analysis /synthesis
- User experience mapping
- Information architecture
- Group collaboration
- Graphic user interface design

Option 1
Your school is starting a social site with different club activities
Design a social app/ platform for the students to interact and experience it online.

Option 2
Studying from home is the new norm.
Your school is digitizing every subject in school.
Design an interface for students to study and experience the platform.

1. Choose your Topic
2. Understand the content of the Topic by making a mindmap of all its related aspects
3. Identify the different users and the different ways the user would need this information
4. Converse with the different users and understand their requirements with respect to the problem you are solving
5. Prioritize your content and classify according to its importance level
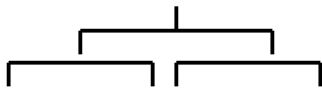
(information hierarchy)

6. Ideate of different possibilities for making a useful digital space for your chosen topic

7. Decide whether your solution would be accessible on a desktop/laptop, mobile or on both – choose the platform

8. Make the content architecture (architecture defines the structure of the interface and how different contents are linked to each other)

9. Figure out the navigation flow of the content of the interface

10. Take a chart paper and make the wireframe of each of the interface screens

11. Make a paper prototype of your solution by drawing each of the interface screens on different pieces of paper with shape and size of the screen

12. Make high fidelity (as much as real) of the different interface screens

13. Do a walkthrough of the solution by presenting the screens one after another as one would navigate through the different web pages

Output 6.5: Each of the groups presents the walkthrough of the final solution

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References

How to make a website:
https://www.youtube.com/watch?v=UaVOBy13beo
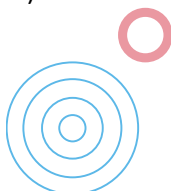
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Reflection:

Questions to ponder:
- What are the most interesting phases of the Interface Design process that you liked?
- What area of application would you like to make use of interface design?
- Would you like to become an interface designer/ interaction designer/ information architect?

Self Assessment:
Task 6.1
Understanding
Interface Elements
(Individual Task)

Assessment Criteria (Task 6.1) – Assess yourself:

Concept Development:
- The students were able to study the interface and note down its elements

☐ *Beginning* ☐ *Developing* ☐ *Promising* ☐ *Proficient* ☐ *Excellent*
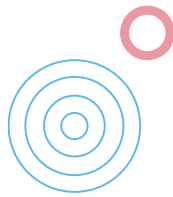
Involvement/Participation:
- The students actively analyzed the interface and made suggestions on how it could be improved

☐ *Beginning* ☐ *Developing* ☐ *Promising* ☐ *Proficient* ☐ *Excellent*

Self Assessment:

Assessment Criteria (Task 6.2 + 6.3) – Assess yourself:

Task 6.2 + Task6.3
Understanding Form
(Individual Task)

Concept Development:
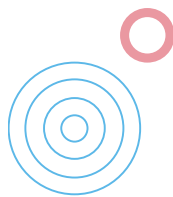- The students explored enough in terms of developing the icons

☐ *Beginning*   ☐ *Developing*   ☐ *Promising*   ☐ *Proficient*   ☐ *Excellent*

Involvement/Participation:
- The students actively participated in the discussion/task and tried different exploration

☐ *Beginning*   ☐   ☐ *Promising*   ☐   ☐ *Excellent*

Self Assessment:
Task 6.3
User Research and
Interface Design
(Group Task)

Assessment Criteria (Task 6.2) – Assess yourself:

Research Analysis:
- The student did the research thoroughly and analysed the gathered data from the target audience/of the user

☐ *Beginning*   ☐ *Developing*   ☐ *Promising*   ☐ *Proficient*   ☐ *Excellent*

Interface Analysis
- The student has done the analysis thoroughly of the product

☐ *Beginning*   ☐   ☐ *Promising*   ☐   ☐ *Excellent*

Concept Design
- The students (as a group) have developed enough ideas and concepts leading to redesigning of the remote interface

☐ *Beginning*   ☐   ☐ *Promising*   ☐   ☐ *Excellent*

Involvement/Participation
- The students actively participated in the discussion/task and tried different exploration

☐ *Beginning*   ☐   ☐ *Promising*   ☐   ☐ *Excellent*

Final Presentation
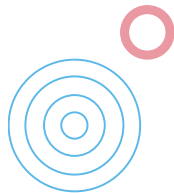- The final work submitted documents the whole process well and the final design is well finished

☐ *Beginning*   ☐   ☐ *Promising*   ☐   ☐ *Excellent*

Self Assessment:

Task 6.4
Developing Icons
(Individual Task)

Assessment Criteria (Task 6.4) – Assess yourself:

Concept Development:
- The students explored enough in terms of developing the icons

☐	☐	☐	☐	☐
Beginning	*Developing*	*Promising*	*Proficient*	*Excellent*

Involvement/Participation:
- The students actively participated in the discussion/task and tried different exploration
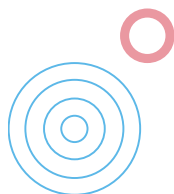
☐	☐	☐	☐	☐
Beginning		*Promising*		*Excellent*

Self Assessment:

Task 6.5
Interface in Digital
Space
(Group Task)

Assessment Criteria (Task 6.5) – Assess yourself:

Concept Design
- How well is the user experience represented by the group with the help of wireframe/flowchart

☐	☐	☐	☐	☐
Beginning	*Developing*	*Promising*	*Proficient*	*Excellent*

Graphical User Interface (GUI) Design
- How well are the visual cues, interface designed
- Whether the student has developed enough ideas and concepts

☐	☐	☐	☐	☐
Beginning		*Promising*		*Excellent*

Involvement / Participation
- The students actively participated in the discussion/task and tried different exploration

☐	☐	☐	☐	☐
Beginning		*Promising*		*Excellent*

Final Presentation
- The final work submitted documents the whole process well and the final design is well finished

☐	☐	☐	☐	☐
Beginning		*Promising*		*Excellent*

Other References:

Other suggested References:

1. Product Information Design:
https://www.smashingmagazine.com/2018/01/comprehensive-guide-product-design/

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