Pedagogical innovation

Course: Human-Computer Interaction (HCI)

Academic Year: 2023-24

Prepared by: Deepti Barhate

1. Objective of the Project

The project aimed to enhance the learning and teaching experience in the Human-Computer Interaction (HCI) subject by incorporating visual tools such as storyboards and word clouds. These tools were used to improve student engagement, conceptual understanding, and practical application of HCI principles.

2. Rationale and Relevance

- HCI Principles: The HCI course covers fundamental concepts like usability, user-centered design, and interface design. Visual tools like storyboards and word clouds aid in clarifying complex ideas, making them more accessible and relatable.

3. Methodology

The project was implemented in three phases:

1. Preparation Phase:

- Introduced storyboarding and word cloud generation tools to students.(mentimeters)

- Provided resources and tutorials for using Storyboard That (for storyboarding) and WordClouds.com/Mentimeter (for creating word clouds).

2. Execution Phase:

- Students created storyboards that mapped key user interactions in HCI contexts, such as mobile application use or web design.

- Students generated word clouds from course materials to highlight critical HCI terms and concepts.using mentimeter

3. Analysis Phase:

- Collected student work and feedback to evaluate the effectiveness of these tools in enhancing engagement and understanding.

- Analyzed the clarity of visual representations and how they helped contextualize theoretical HCI concepts.

4. Key Tools Used

- Storyboard That: A digital tool used for creating storyboards to visually represent user interaction scenarios. It was employed by students to showcase user flows and design processes.

- WordClouds.com: A tool for generating word clouds from texts, helping students visualize the frequency and importance of key HCI-related terms.

5. Outcomes and Results

- Student Engagement: Surveys and feedback from students indicated a positive response to storyboards and word clouds. Students reported increased engagement and a better understanding of HCI concepts.

- Conceptual Understanding: The use of storyboards helped students better grasp the interactions and the user-centered design approach. Word clouds assisted in emphasizing important terms and theories in HCI.

- Academic Performance: There was a noticeable improvement in student performance, particularly in assignments and tests related to usability principles, user interfaces, and interaction design.

6. Impact on Learning

- Visual Learning: Both tools significantly contributed to visual learning, making abstract HCI principles more concrete. Storyboards, in particular, allowed students to actively engage with real-world user interaction scenarios.

- Critical Thinking: Word clouds helped in reinforcing key terms, prompting students to think critically about the vocabulary and terminology used in HCI, aiding in their ability to express and apply these concepts.

7. Feedback from Students

- Storyboards: Students found the storyboarding process highly beneficial in visualizing the user interaction lifecycle, especially when dealing with complex systems like mobile applications and websites.

- Word Clouds: Students appreciated how word clouds simplified the understanding of key concepts and encouraged collaborative discussions around the most significant terms in HCI.

8. Evaluation of Tools

- Storyboards: Highly effective for depicting interaction flows and visualizing user experiences. Students found it especially useful in understanding user-centric design principles and problem-solving in design processes.

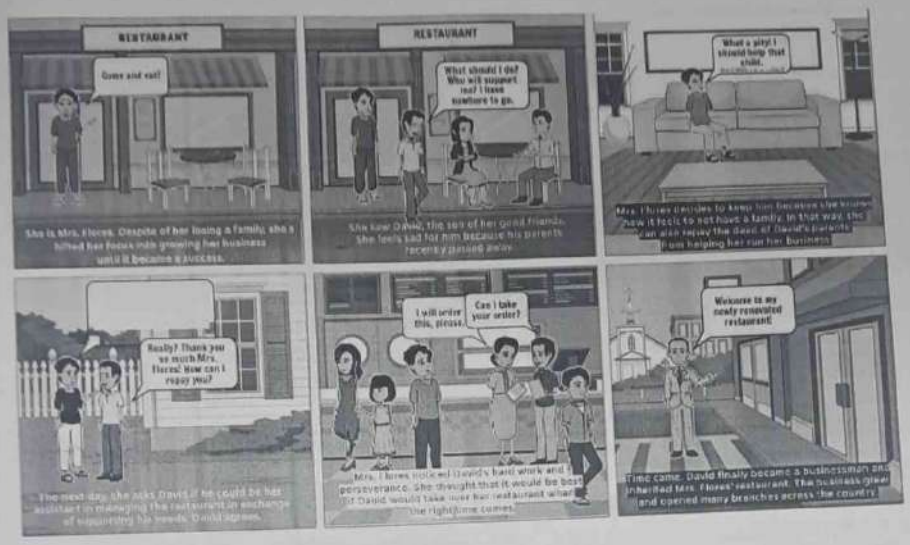
- Word Clouds: Served as a good tool for summarizing and revisiting key HCI terminology. It was an efficient method for reinforcing important concepts discussed during lectures.

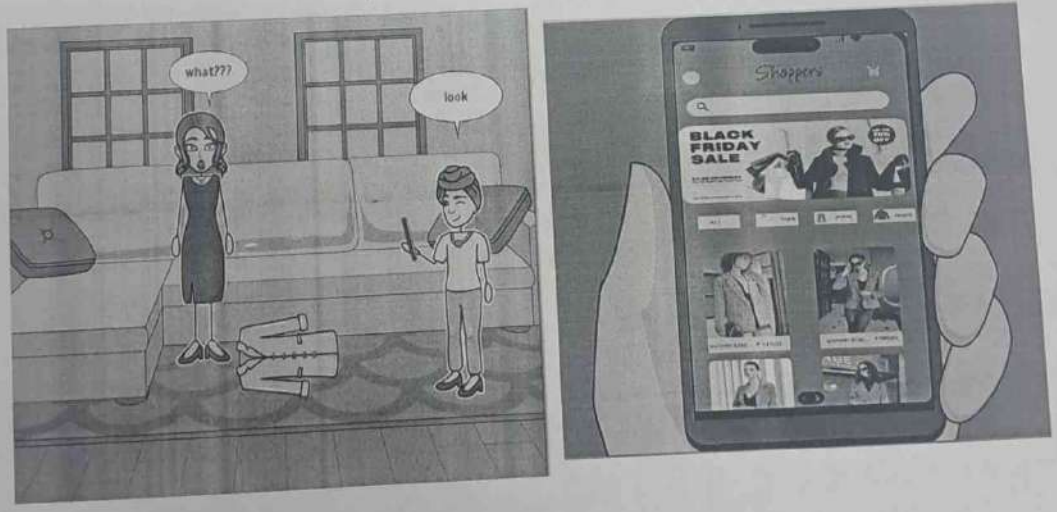
9. Conclusion

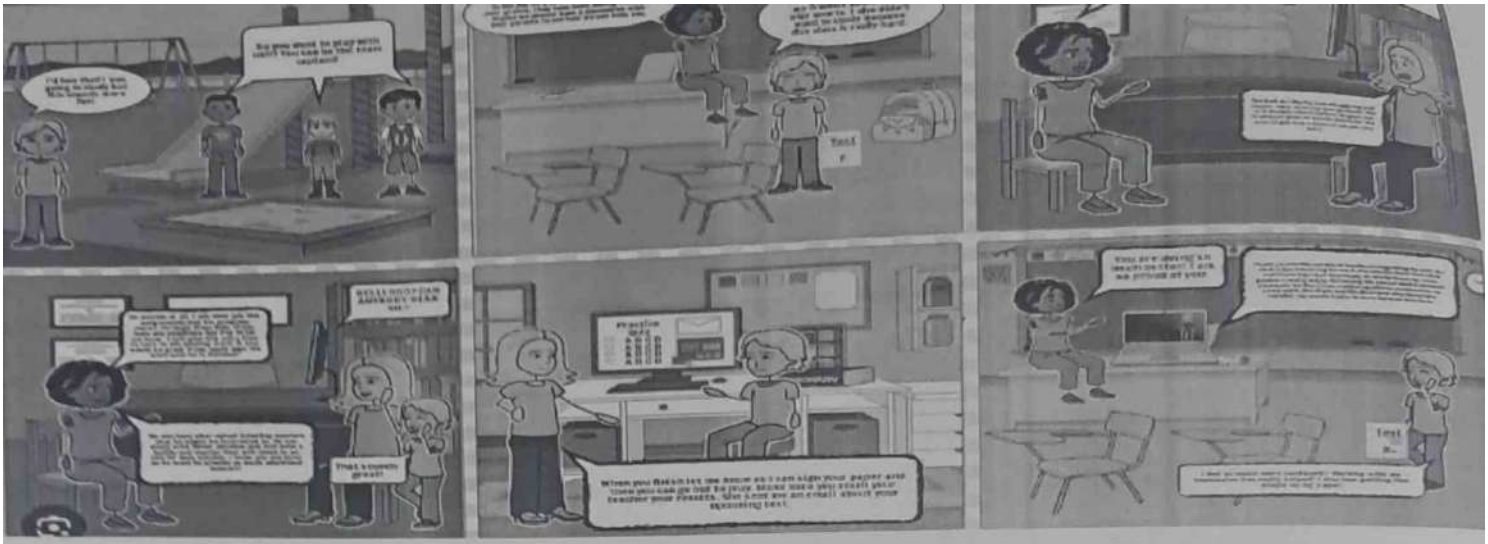
The integration of storyboards and word clouds in the Human-Computer Interaction (HCI) course has successfully enhanced student learning, engagement, and comprehension of key concepts. The tools helped make abstract HCI principles more tangible and provided students with creative ways to express and apply their knowledge.

This project aligns with the NBA's accreditation focus on fostering interactive and innovative learning environments. Based on positive student feedback and improved academic performance, we recommend continuing and expanding the use of these tools in future HCI curriculam

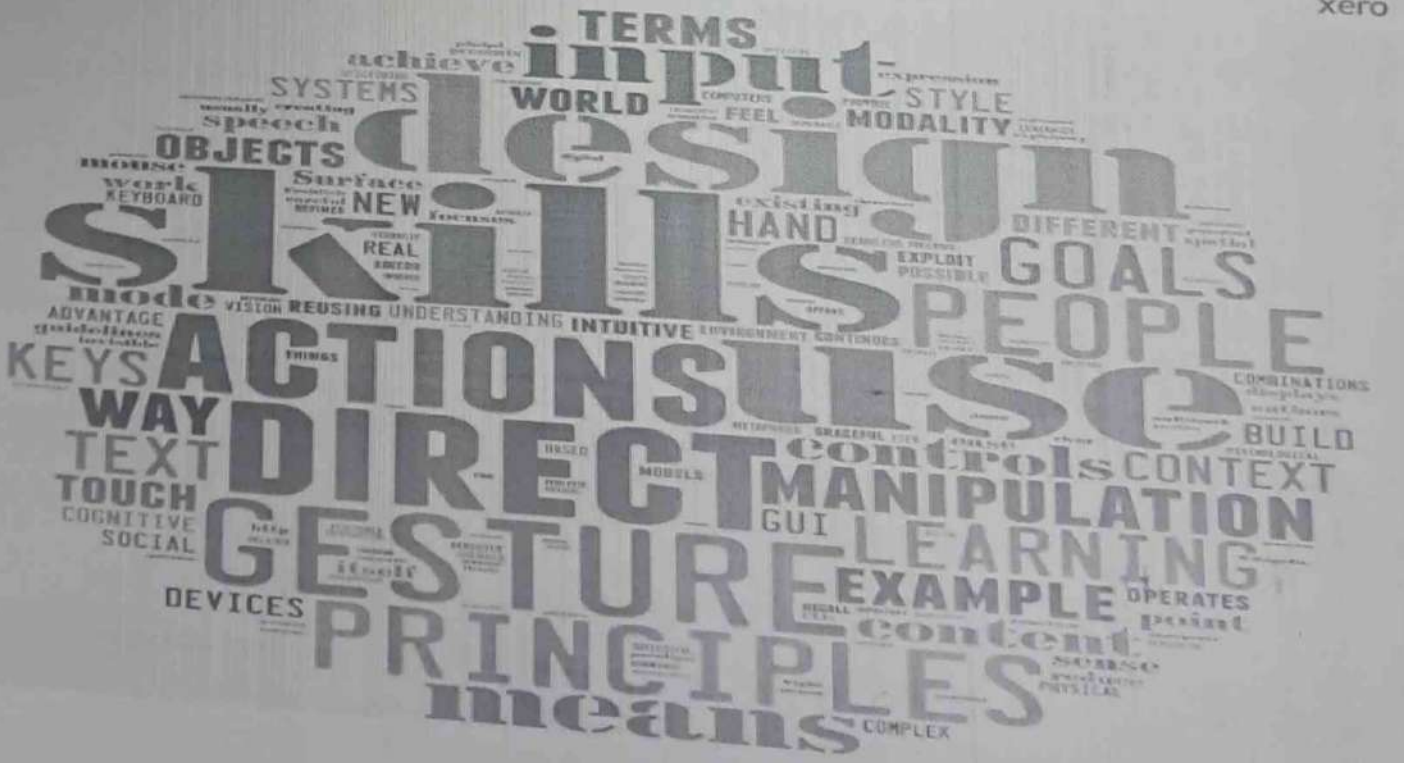
A: Sample Storyboard Created by Students







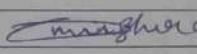
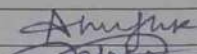
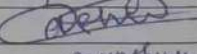
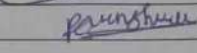
B: Word Cloud Generated from Class Discussions on Usabilit



This report provides a concise overview of the project's objectives, methodology, outcomes, and its alignment with NBA accreditation standards. It demonstrates the effectiveness of visual learning tools in improving the quality of education in HCI and highlights their impact on student engagement and performance.

Following students were present :

Sap No	Roll No	Name	Sign
70552100002	E201	AMIT AGARWAL	
70552100003	E202	BHAVYA SOLANKI	
70552100004	E203	RUDRA VYAS	
70552100005	E204	CHAITANYA SHARMA	
70552100007	E205	PARAM PATEL	
70552100008	E206	MITHALI PATIL	
70552100009	E207	ADITYA PATIDAR	
70552100010	E208	MANVI MEHTA	
70552100011	E209	ISHWARI TILEKAR	
70552100012	E210	DHRUV GORE	
70552100015	E212	SNEH BAGDI	
70552100018	E213	DHRUVIL MAKADIA	
70552100020	E214	YASH CHAUBAL	
70552100026	E215	DEVARSH CHOKSI	
70552100028	E216	KRISHNA GUPTA	
70552100029	E217	TANUSHREE GUPTA	
70552100031	E218	MANAN CHHAJED	
70552100041	E219	PRADHUMN BHARDWAJ	
70552100043	E220	PARTH PATEL	
70552100047	E221	PRIYANSHU AGRAWAL	
70552100054	E222	PRAKHAR SAXENA	
70552100055	E223	ARUJA SHRIVASTAVA	
70552100057	E224	YASH PATEL	
70552100058	E225	KRISHNA MISTRY	
70552100059	E226	VIVEK JAIN	
70552100066	E229	HARSHIT SHAH	
70552100072	E230	PRACHI ROUT	
70552100073	E231	MANN JAUNJALKAR	
70552100078	E232	YASH CHIMNANI	
70552100082	E234	PARINJAY GUPTA	
70552100083	E235	DHYAN JOSHI	
70552100084	E236	KSHITIZ TOMAR	
70552100085	E237	APURVA ALHAT	
70552100086	E238	VANSHAJ CHANDORE	
70552100087	E239	MUSKAN AGRAWAL	
70552100088	E240	TANISHKA MATHUR	
70552100089	E241	SHUBHAM GANDHI	
70552100090	E242	GARGI JAIN	
70552100091	E243	MAHAVEER MANDLOI	
70552100092	E244	ABHINAV SHARMA	
70552100093	E245	AKASH BHARTI	
70552100094	E246	SHREYA JOSHI	
70552100096	E247	VIRAJSINH GIRASE	

70552100097	E248	OMI MISHRA	
70552100099	E249	NIKETA SHARMA	
70552100101	E251	ANUSHKA SRIVASTAVA	
70552100102	E252	ASHUTOSH SINGH	
70552100103	E253	PARNSHREE GAUTAM	
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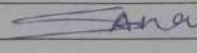
70552100106	E256	SANAT PAREEK	
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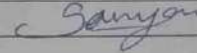
70552100109	E259	SANYAM SHAH	
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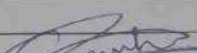
70552100124	E274	SUHANI GUPTA	
70552100125	E275	SAUMYA SONI	
70552100126	E276	DEYAN SHAH	
70552100130	E279	KRISH VERMA	
70552200005	E280	VISHWA BHALODIA	
70552200006	E281	JHANVI BHALODIA