



Group Project Report: Milestone 1

Human Computer Interaction (CSE 4451)

Section - A

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Part-01

Here we discussed our team's specific problem statement and also specified our team's specific user group.

Problem Statement:

In the traditional academic support system, students often struggle to find accurate and timely responses to their academic inquiries(thu et al. 2023 integrating). Students also struggle during their exam preparation

journey. To empower students with personalized assistance and overcome this problem we introduce the power of ChatGPT, our AI Expert, combined with the invaluable guidance of human experts(askari et al. 2023 test).

As chatGPT is on developing face we have a lot to explore so, initially, our target user group is CSE undergraduate students(askari et al. 2023 test).

Target group:

Student, Teacher, Human Expert .

Necessary Background:

The users will need to have prior knowledge about chatGPT and how other question answer platforms work (e.g., chegg, course hero etc.) but in case if they don't have any idea our platform will have a user friendly interface that will help them navigate and use our platform for their queries.

Challenges:

1. Accuracy and Reliability of AI Responses

Issue: ChatGPT may generate biased, outdated, or false information, compromising learning outcomes due to its limited understanding of concepts(grassini 2023 shaping).

2. Academic Integrity and Plagiarism

Issue: ChatGPT's ability to generate seemingly original content can evade plagiarism detection tools, encouraging academic dishonesty(grassini 2023 shaping).

3. Human Interaction and Empathy

Issue: ChatGPT lacks human-like interaction and empathy, impacting students' motivation and potentially diminishing the quality of education(grassini 2023 shaping).

4. Privacy and Security Concerns

Issue: Handling and securing personal data shared during interactions with ChatGPT raises concerns about privacy and compliance with regulations(grassini 2023 shaping).

5. Resistance and Adaptation to New Technology

Issue: Anxiety or resistance among users unfamiliar with AI technology can hinder effective integration into education systems(hong 2023 impact).

Citations

Thu, C. H., Bang, H. C., & Cao, L. (2023). Integrating ChatGPT into Online Education System in Vietnam: Opportunities and Challenges. (<https://osf.io/preprints/edarxiv/hqyut/>)

Grassini, S. (2023). Shaping the future of education: exploring the potential and consequences of AI and ChatGPT in educational settings. Education Sciences, 13(7), 692. (<https://www.mdpi.com/2227-7102/13/7/692>)

Hong, W. C. H. (2023). The impact of ChatGPT on foreign language teaching and learning: opportunities in education and research. Journal of Educational Technology and Innovation, 5(1). (<https://jeti.thewsu.org/index.php/cieti/article/view/103>)

Askari, A., Aliannejadi, M., Kanoulas, E., & Verberne, S. (2023, October). A Test Collection of Synthetic Documents for Training Rankers: ChatGPT vs. Human Experts. In Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (pp. 5311-5315). (<https://dl.acm.org/doi/abs/10.1145/3583780.3615111>)

Part-02

Here a detailed description of our data collection process is provided.

What research methods do you use? Why?

The research methods we have used are Survey and Interview. We needed lots of information and opinions from a large number of students. So survey was an efficient way reach a broad audience within a short time. But We also needed deeper insights and a better understanding of individual perspectives for our problem statement and its solutions. So We selected few individuals from the survey group and conduct interview with them.

How do you reach out to your target user groups?

As we are trying to create an academic support system so our targeted group is student. For now we are focusing on university students. We approached classmates after the class times and other students in campus. Using survey forms we managed to reach a large number of students where it was possible to reach students from other institutes also.

Briefly describe demographics of your participants.

For academic support system, thoughts and opinions of students were required. Students divided into two groups, one is using online resources for academic supports like many QA academic websites. A number of students are using Ai for their academic supports and a very few students are not dependent on online platforms or Ai for the academic activities.

What types of data are generated from your data collection process?

We managed to get lot of qualitative both from interview and survey. Deep insights and thoughts about what could be solution for the problems where students face during academic inquiries before their examination where accuracy of the resources and response time is big issue and how students feel about using paid online resources. We also gathered opinions and thoughts of using Ai as main source of learning and if also will it be beneficial for the students to use Ai integrated academic system along with human expertise.

How do you record collected data? (e.g., notes videos, photos, audio recordings, memos, etc.)

Survey data are collected from the online forms and data collected from interviews are recorded in audio forms and notes. Some of the interviews are conducted online so those are recorded as videos.

Specify any challenges faced during data collection. How did you overcome those hurdles?

Using Survey is easy to reach people but chances of getting accurate answer is low here as number of participants do not provide thoughtful answer to complex questions and some also provide careless answers so we had to filter out those data and mainly focused similar answers given by the majority and unique answer are checked thoroughly.

In interview, it's time consuming and required effort so students were not willing to participate in interview. As they were most of the time busy with their classes and academic activities making time for interview was difficult. So for number of participants we conducted online interviews so it can be done in flexible time and it was easy to record but it was also make it challenging to

fully grasp participants' reactions. Another challenge is participants may give answers they think are socially acceptable, rather than their true opinions. So we asked same questions from different aspects to render out the actual insights.

Part-03

Here a description of our data analysis process is given below.

final insights:

- instant and fast answer is necessary but 30mins time stamp for getting answer for questions is also okay.
- ChatGPT is very helpful but at sometimes it takes number of attempts to get the accurate academic answers.
- Timely and accurate answer is highly required.
- personalized support system can be more helpful. Also when it comes users are not able to express or ask their desire queries. Its a better choice for more relatable Q/A.
- verify the answer by reading/manually and understanding the concept. Here if user ask we can use source proving method/why and from where the Ai answered the question.
- Disrupts creativity and avoids using these platforms to learn better and be more creative
- Human expert (Teacher) and in class interactions as well as human interactions are very important for learners
- Combining will detect correct answer, if AI gives wrong answer. Human expert can see if the answer is correct or not and correct it if necessary.
- As a necessity that I need AI to help my academic query. I provide personal data. Or else I wouldn't give personal data.
- Image to text and AI answer would be very helpful.
- Usually learns in class but uses AI or other platforms for researching those topics and also reviewing my class studies.
- AI will be implemented even more in the near future. If AI gets more helpful and knowledgeable.
- Most of the Ai assistance provide textual answers for academic support but video tutorials and diagrams can be more helpful
- Main obstacle is most of the support system is paid and while getting answer one need to login with personal details.

Our findings:

- ChatGPT is very helpful but at sometimes it takes number of attempts to get the accurate academic answers.

- personalized support system can be more helpful. Also when it comes users are not able to express or ask their desire queries. It's a better choice for more relatable Q/A.
- verify the answer by reading/manually and understanding the concept. Here if user asks we can use source proving method/why and from where the AI answered the question.
- Human expert (Teacher) and in class interactions as well as human interactions are very important for learners
- Combining will detect correct answer, if AI gives wrong answer. Human expert can see if the answer is correct or not and correct it if necessary.
- As a necessity that I need AI to help my academic query. I provide personal data. Or else I wouldn't give personal data.
- Image to text and AI answer would be very helpful.
- Usually learns in class but uses AI or other platforms for researching those topics and also reviewing my class studies.
- Most of the AI assistance provide textual answers for academic support but video tutorials and diagrams can be more helpful

Confirmed suspicions:

- Instant and fast answer is necessary but 30mins time stamp for getting answer for questions is also okay.
- Timely and accurate answer is highly required.
- Disrupts creativity and avoids using these platforms to learn better and be more creative
- AI will be implemented even more in the near future. If AI gets more helpful and knowledgeable.
- Most of the AI assistance provide textual answers for academic support but video tutorials and diagrams can be more helpful
- Users mostly use phone and laptop.
- Online platforms are helpful most of the times but it can be very time consuming for looking into lots of websites to get the desired answer. A platform where all answers are given will be more helpful.


Report link

[Section A, Visual Workspace for innovation\(miro.com\)\)](#)

Part-04

A persona is given below.

Kousika Rodela



AGE

22

EDUCATION

Bachelor in Science

DEPARTMENT

BScse

UNIVERSITY

United International University

TECH LITERET

High

LOCATION

Mirpur 14

Bio

She currently studies at United International University. A 4th year Cse student. She loves to assist her friends with any academic support. She also explores the online realm for academic assistance.

Needs

- A personalized academic support system. That will help her to understand what she needs to understand and assist her through her academic journey.
- A free or affordable system that is combined with Ai Expert and Human Expert. Where the AI expert will answer immediately and the Human expert will answer within a certain amount of time with a proper explanation.
- Error-free and safe academic support system.



Frustrations

- Most of the online support systems are paid.
- Many times provide incorrect answers. Also doesn't give a proper explanation of topics.
- Take more time than usual to answer questions.
- Not all study materials are available.
- Searching multiple online sources for academic support is time-consuming.



Website

- Chegg
- Course Hero
- Geeksforgeeks
- ChatGPT
- Studypool
- Quizlet

Payment medium

bKash   Nagad

Device

Mobile  Laptop 

“ I am used to the online support system and usually do academic queries on different platforms. Now I also use chatGPT for my academic help and to understand any topics.

Part-05

1 scenario and 1 storyboard is given below.

1. Scenario →

Rakib, a third year student in his university who breezed through the semester without paying much attention to his studies. With the final exams around the corner, he's in panic mode. He's underestimated the workload and now finds himself with a mountain of syllabus to cover.

Desperate to clarify concepts and get doubts resolved, he attempts to reach out to his teachers, only to realize that the classes has ended and they're unavailable at this moment. His friends, who are studying for their own exams, are too busy to assist him. Eventually, he searches online for solutions for his problems but it provides a barrage of information, but it's overwhelming and he is not sure if it's reliable or not. Rakib stumbles upon several academic resources, but most

require paid subscriptions, which he can't afford. Recently, he heard about the new ai chat bot as it is famous for assisting people with many things. So he gives it a try but he becomes confused as the chat bot is unable to provide him the academic focused answers he is looking for. He takes multiple attempts on it but he realizes it's not effective at this moment.

Frustrated and running out of time, he wishes for a miracle—an easily accessible, free, and trustworthy platform that can assist him in his time of need. Which could answer to his questions in a very short amount of time.

2. Storyboard →

