

A STUDY ON AWARENESS AND PREFERENCE FOR CHAT BOTS AMONG UNDERGRADUATE STUDENTS W.R.T. KDMC REGION

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Abstract:

This paper discusses the awareness among undergraduate students in regard to available chatbots. The study also examines preferences of the students of chatbot tools for academic and non-academic tasks. Implementation of NEP, modified examination and evaluation pattern, personal smartphones and internet connectivity are few factors that paved the way to use chatbots for learning. College students use chatbots to help with learning and administrative tasks. Chatbots can help students find course details, get help with difficult concepts, and get personalized feedback. Data was collected from undergraduate students belongs to streams of Commerce, Arts and Information & Technology through Google Form.

Keywords: Chatbots, AI, academic tasks

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Introduction:

In the era of Artificial Intelligence, it is very difficult to engage the students with traditional education system in their academics, progression to higher studies, mentoring, and to withstand in global competitions. Worldwide Corona Pandemic and technological advancements has already brought transformative wave in the education sector. The wave has introduced remarkable innovation in the form of Chat bots. A chatbot (originally chatterbot) [1] is a software application or web interface designed to have textual or spoken conversations. These AI Generated virtual platforms provide the students automating support in quick and useful learning experience on their fingertips. Chatbots can be used to gather information for academic notes, reference materials and even for readymade solutions. Multilingual support allows the students to communicate in the language of their choice, allowing them to get faster solutions to queries and reduced wait times. ChatGPT, Open AI, Gemini, Google assistant, Meta AI, Apple Siri are few examples of known chat bots. Advantage of AI chatbots is their availability 24/7, allowing students to seek assistance at their convenience. This round-the-clock accessibility aligns well with the modern, fast-paced academic environment where students often juggle multiple responsibilities.

Objectives:

- To know the awareness of chat-bots among the undergraduate students.
- To study students' preferences for chat bots for academic and non-academic tasks.
- To examine the positive factors and limitations for the choice of the Chatbots.

Literature Review:

- A Review Article -Facebook's Meta AI: A Potential Boon or Doom for Learning? Nolasco G. and Dicuango J. (2025), The article highlights the potential of Meta AI to revolutionaries the teaching and learning experience in the education sector, but warns against the challenges to be addressed to ensure inclusivity and safeguarding privacy.
- Review Article on “Role of AI chatbots in education”, Labadze L., Grigolia M. Machaidze L. (2023) This article addressed upon the importance of AI chatbots in education sector, both from students' and educators' perspectives. Chatbots is revolution in educational landscape and promising solutions to the drawbacks of traditional education system.
- Blog on Chatbot for Education: How Chatbots are Enhancing Student Engagement, Bhoir J. (2024), discusses on how chatbot for education helps students, teaching fraternity with learning and administrative tasks. Chatbots respond to questions in real-time, guide students through tough concepts, and keep the educational process moving.

Research Methodology:

Area of study: Undergraduate students of Commerce, Arts & Information Technology streams.

Sampling unit: Students pursuing degree within the vicinity of Kalyan-Dombivli

Sample size: 279

Sampling technique used: Random sampling

Type of data used: Primary data and Secondary data

Data Collection tool: Questionnaire (Google Form Based)

Statistical tools used: Chi Square for Hypothesis Testing, Percentage Analysis, Weighted Average Mean and Ranking Techniques.

Hypothesis:

H0 There is no significant relationship between Gender and Preferred Chatbot

H1 There is significant relationship between Gender and Preferred Chatbot

Data Analysis:

The analysis of the collected data covers both descriptive and statistical methods using Microsoft Excel. To test hypothesis, chi-square test is applied to test relationship between the independent variables Gender and Preferred chatbot. The chi square test is suitable as variables are categorical variables.

a) Descriptive Analysis

Table 1.1 Profile of the Respondents

Description		Frequency	Percentage
Gender	Male	72	25.8
	Female	207	74.2
	Prefer not to say	00	0
	Total	279	100
Stream	Arts, fine Arts	20	7.2
	Commerce & Management	233	83.5
	Information Technology	26	9.3
	Total	279	100

The profile of the respondents is presented in the above table Table-1.1, out of 279 respondents, approx. 26 % are Male and 74 % are female students. 7.2 % students are from Arts stream, 83.5 % are from Commerce and Management stream and 9.3 % are from Pure Science & IT, pursuing undergraduate degree program.

Awareness and Preferential Choice of Chatbots for Academic and Non-Academic Tasks:

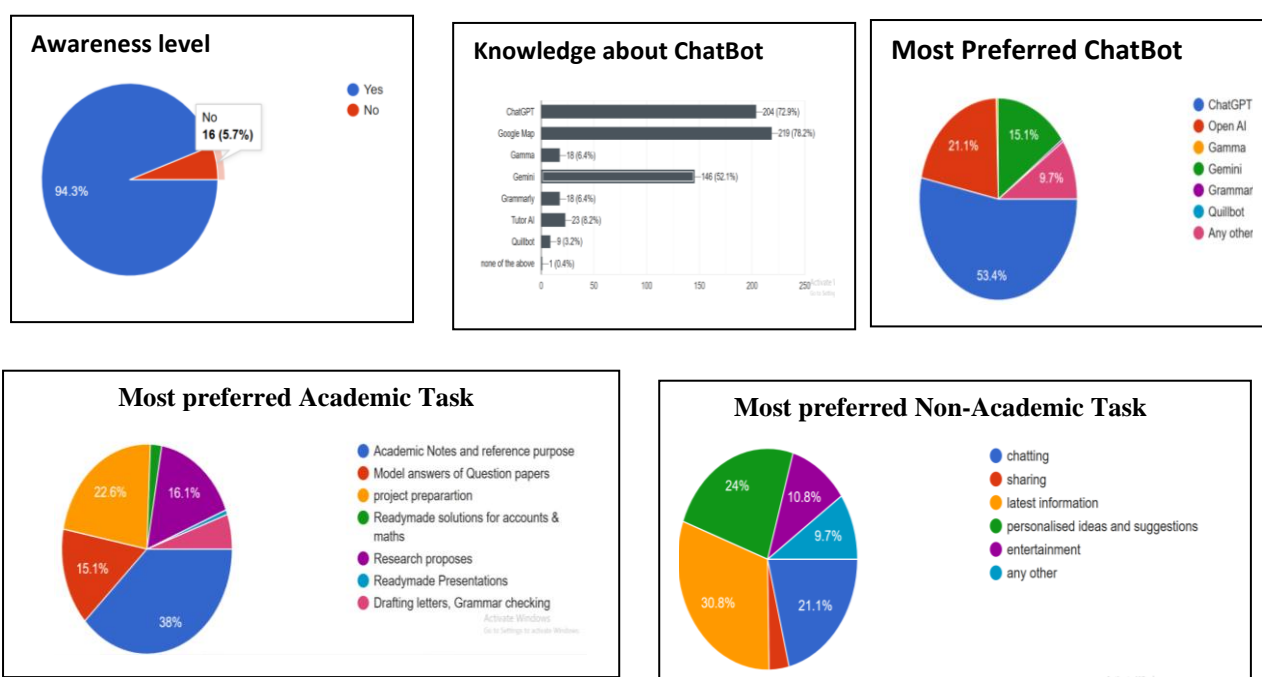
Total 279 responses were selected for data analysis. The respondents have been asked about the known chat bots and the most preferred chatbots. Respondents were also asked about the use of chat bot for most frequent academic tasks and non-academic tasks.

Table 1.2: Awareness and Preferential Choices by the Respondents

Descriptive		Frequency	Percentage
Awareness about Chat bots	Yes	263	94.3
	No	16	5.7
	Total	279	100
Knowledge of Available chatbots	ChatGPT	203	72.8
	Open AI	218	78.1
	Gama	18	6.5
	Gemini	145	52
	Grammerly	18	6.5
	Tutor AI	23	8.2
	Quilbot	9	3.2
	Any other	1	0.4
	Total	279	100
Most Preferred Chatbot	ChatGPT	149	53.4
	Open AI	59	21.1
	Gemini	42	15.1
	Any other	27	9.7
	Gamma	1	0.4
	Grammerly	1	0.4
Most Preferred Academic Task with chat bot	Academic Notes and reference purpose	106	38
	Total	279	100
Most preferred non-academic task with Chat Bot	Latest information	86	30.8

It has been observed from Table 1.2, that 94.3% respondents are aware about Chatbots and 5.7% respondents are not aware. Significant no. of respondents are aware about ChatGPT (72.8%) and Open AI (78.1%), Gemini (52%). Most preferred Chatbot, has been observed in the responses is ChatGPT (53.4%) followed by Open AI (21.1%). Percentage analysis further reveals that in academic task most respondents use Chatbot for Academic Notes and References (53.4%), whereas in non-academic task, students use Chatbot for Latest Information.

Graphical Presentation:



a) Inferential Analysis:

Hypothesis :

H0: There is no significant relationship between Gender and Preferred Chatbot

H1 There is significant relationship between Gender and Preferred Chatbot

To test the above hypothesis, Chi Square Test is performed. Level of significance is determined at 5%.

Observed (O)	ChatGPT	Open AI	Gemini	Gamma	Grammarly	Any other	Total
Male	48	9	10	1	1	3	72
Female	101	51	32	0	0	23	207
Total	149	60	42	1	1	26	279

Expected (E)	ChatGPT	Open AI	Gemini	Gamma	Grammarly	Any other	Total
Male	38.45	15.48	10.84	0.26	0.26	6.71	72
Female	110.55	44.52	31.16	0.74	0.74	19.29	207

Xsquare (Calculated Chi Square Value)

(O-E)^2/E	ChatGPT	Open AI	Gemini	Gamma	Grammarly	Any other	Total
Male	2.37	2.72	0.06	2.13	2.13	2.05	11.47
Female	0.82	0.94	0.02	0.74	0.74	0.71	3.99

/df (Degree of Freedom) = 5

Xsquare = 15.46

Critical value of χ^2 at degree of freedom 5 = 11.07

if χ^2 calculated > critical value of alpha, then null hypothesis is rejected and alternate hypothesis is accepted.

Chi square test result reveals that χ^2 calculate value is greater than critical value i.e. $15.46 > 11.07$.

Hence, null hypothesis is rejected and alternate hypothesis is accepted.

H1: There is significant relationship between Gender and Preferred Chatbot

b) Factor analysis by using weighted average mean:

Ranking of Positive Factors of most preferred ChatBot

Factors	Strongly Agree (5)	Some what Agree (4)	Agree (3)	Some what Disagree (2)	Strongly Disagree (1)	Total	Mean	Rank
Quick response	159(795)	38 (152)	76(228)	6(12)	0	1187	4.254	1
Easy to use	161(805)	34/(136)	78(234)	4(08)	2(2)	1185	4.247	2
Reliable and useful information	118(590)	75(300)	77(231)	7(14)	2(2)	1137	4.075	3
Anytime assistance	124(620)	54(216)	81(243)	12(24)	8(8)	1111	3.982	4
Free of cost service,	130(650)	41(164)	66(198)	28(56)	14(14)	1082	3.878	5
Elaborative (विस्तृत)	74(370)	78(312)	105(315)	22(44)	0	1041	3.731	6

Respondents were asked to record their experience for Chat Bots Positive factors on the basis of likert's 5 Scale. Respondents experience for the most preferred ChatBots were quantified by the Ranking technique. "Quick response" has been ranked first with a mean 4.254, followed by "Easy to Use" Factor with mean value 4.247

Ranking the limitations of other ChatBots

Factors	Strongly Agree (5)	Somewhat Agree(4)	Agree (3)	Somewhat Disagree(2)	Strongly Disagree (1)	Total	Mean	Rank
Brief information	31(155)	48(192)	86(258)	69(138)	45	788	2.824	1
Limited Assistance	34(170)	36(144)	91(273)	60(120)	58	765	2.742	2
Subscribed services	39(195)	44(176)	57(171)	72(144)	67	753	2.699	3
Delayed Response	29(145)	41(164)	50(150)	78(156)	81	696	2.495	4
Inaccuracies information	18(90)	49(196)	50(150)	85(170)	77	683	2.448	5
Useless suggestions	27(135)	35(140)	53(159)	78(156)	86	676	2.423	6

As per respondents experience for the other ChatBots were quantified by the Ranking technique. “Brief information” has been ranked first with a mean 2.824, followed by “Limited assistance with mean value 2.7242.

Conclusion:

This research paper has revealed that undergraduate students are well aware about the AI Chatbots and using it for academic as well as nonacademic tasks. The paper has also revealed the widespread usage of ChatGPT among Undergraduate students. The students are motivated to use Chatbots by quick response and user friendly and multi lingual features. With the help of Chatbots, the learning experiences would be enhanced and it will reduce the stress of traditional research methods. The study has also encountered the limitations of other chatbots than ChatGPT like inaccuracies in information and limited conversational abilities. The use of ChatGPT and other chatbots in education among students is already mainstream and likely to stay.

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